

BELÜGYMINISZTERIUM

Activities and experiences from the perspective of Hungary

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Ministry of Interior



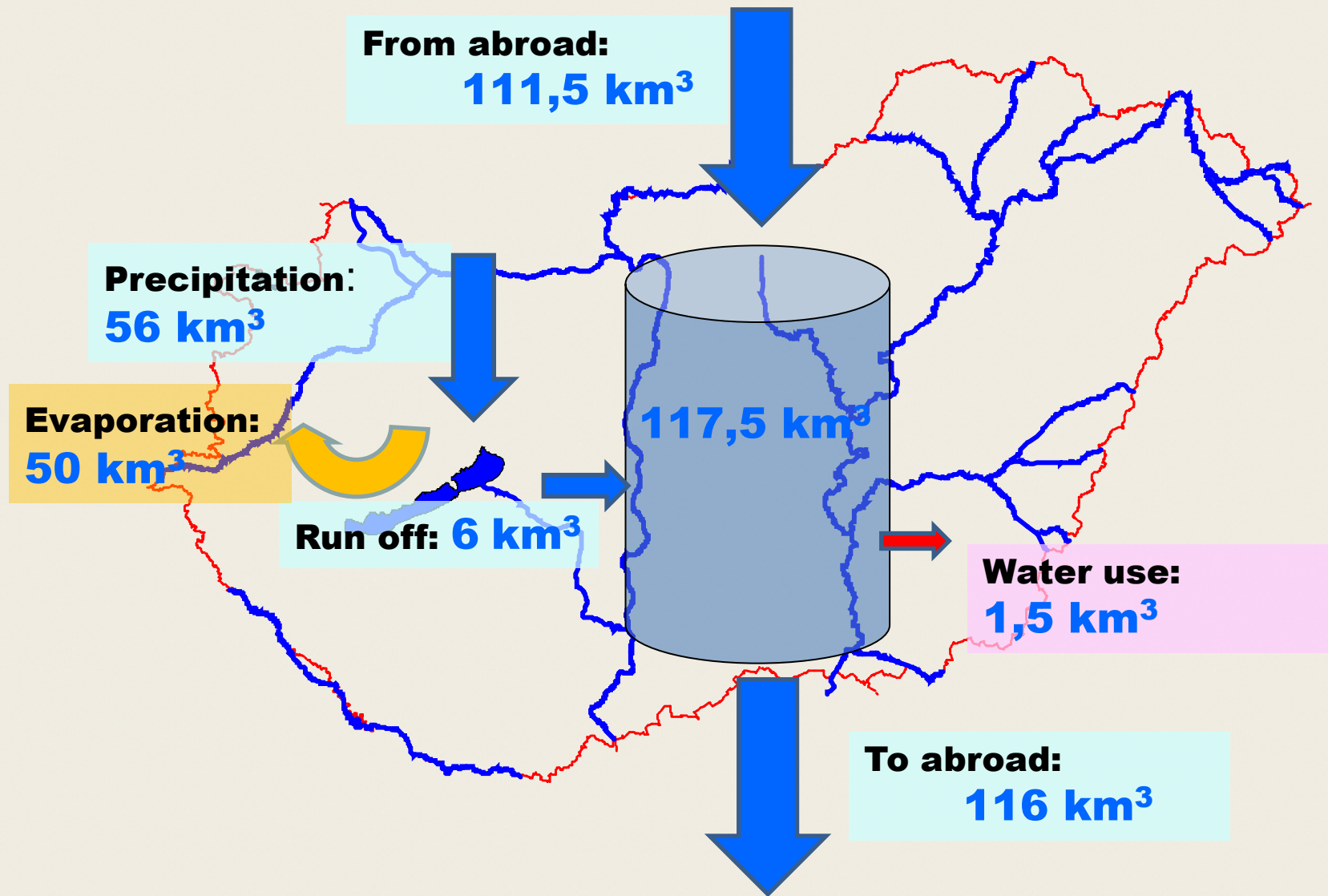
HUNGARY IN THE DANUBE BASIN



**Danube is the most international river basin
800,000 km² 19 countries 81 million inh.**

Jelmagyarázat

- Duna vízgyűjtője
- Duna részvízgyűjtői
- Országhatár



International cooperation

WATER COMMISSIONS with neighbouring countries
bilaterally agreed on joint groundwater bodies


ICPDR
groundwater
bodies of basin-wide
importance


Transboundary Groundwater Bodies of Basin-Wide Importance

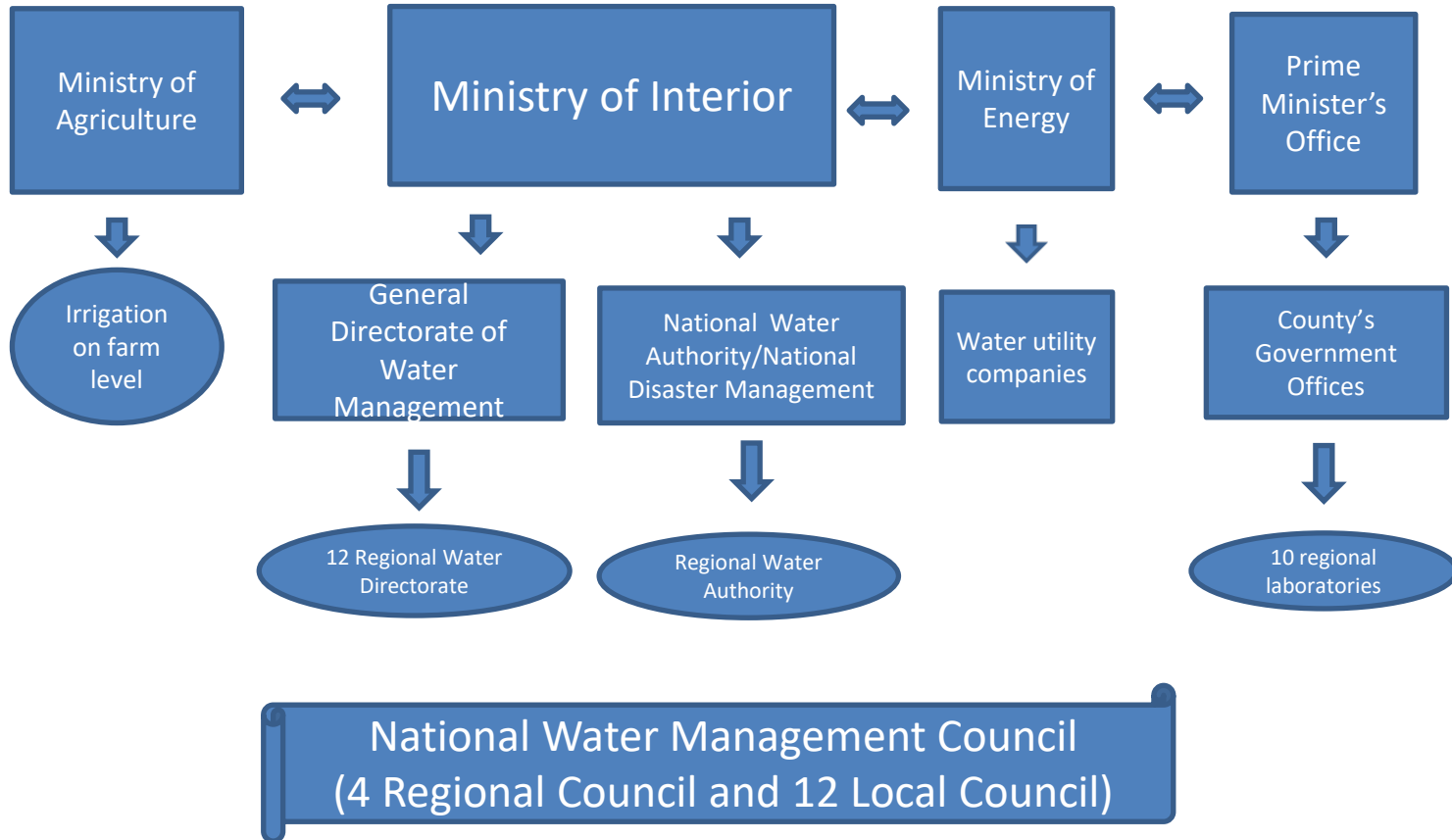
DRBM Plan - Update 2015 - MAP 4



Groundwater – the river's invisible twin





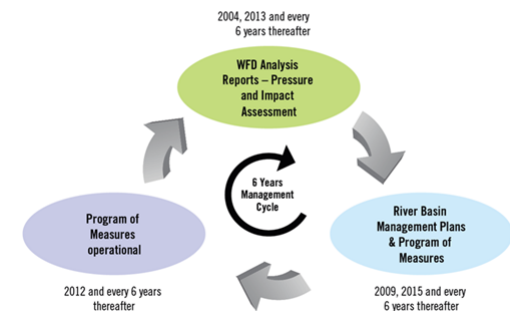




EU Water Framework Directive – Key Principles

- Integrated water management, taking into account and addressing all pressures and impacts
- Management unit is the hydrological river basin
- Achievement of environmental objectives (good water status/potential) is a legal requirement
- Development of River Basin Management Plans including Programme of Measures for achieving WFD objectives
- 6 years management cycle
- Public participation requirements

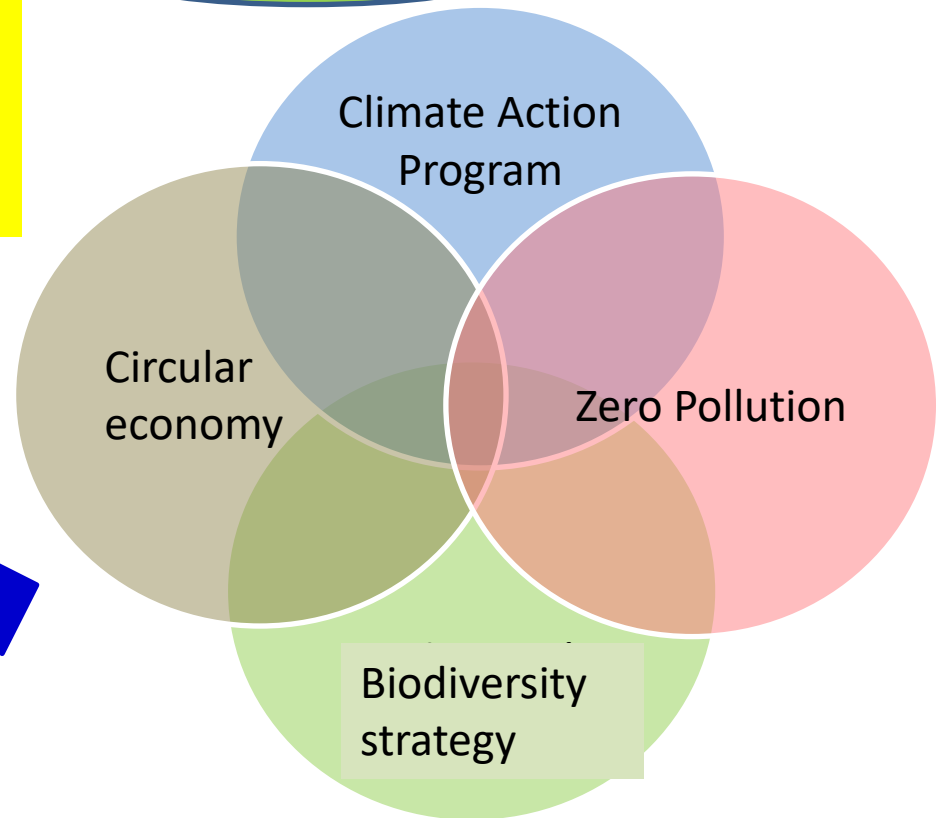
Main implementation steps for the EU Water Framework Directive *FIGURE 1*

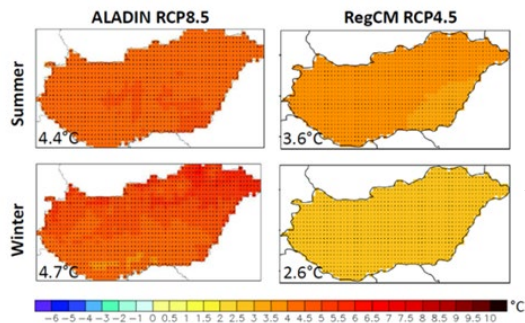




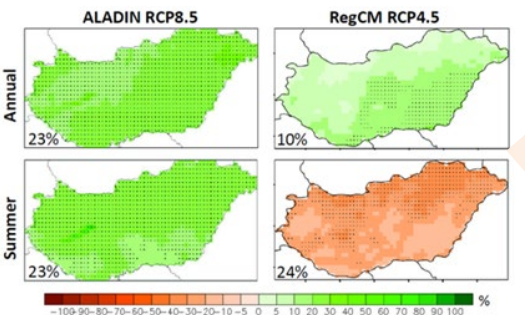
Main Challenges:

- Climate change
- Biodiversity decreasing
- Natural resources are depleting
- Water pollution

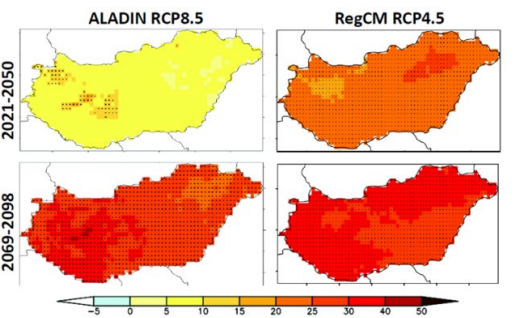




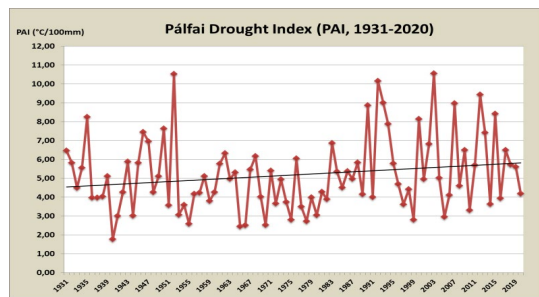
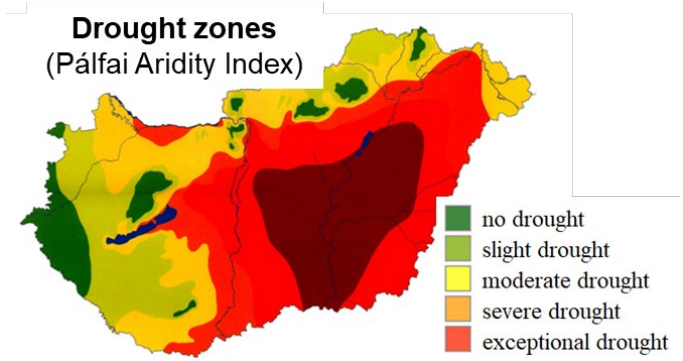
temperature



precipitation



hot days



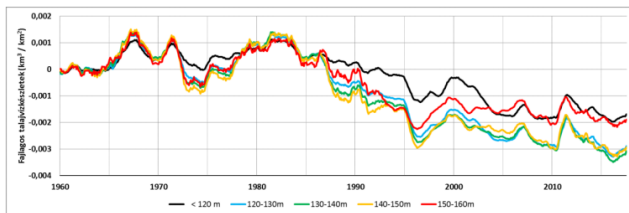
Drought tendencies

- growing frequency, severity, duration
- every 2 years moderate, every 3 years serious droughts
- Increasing drought damage

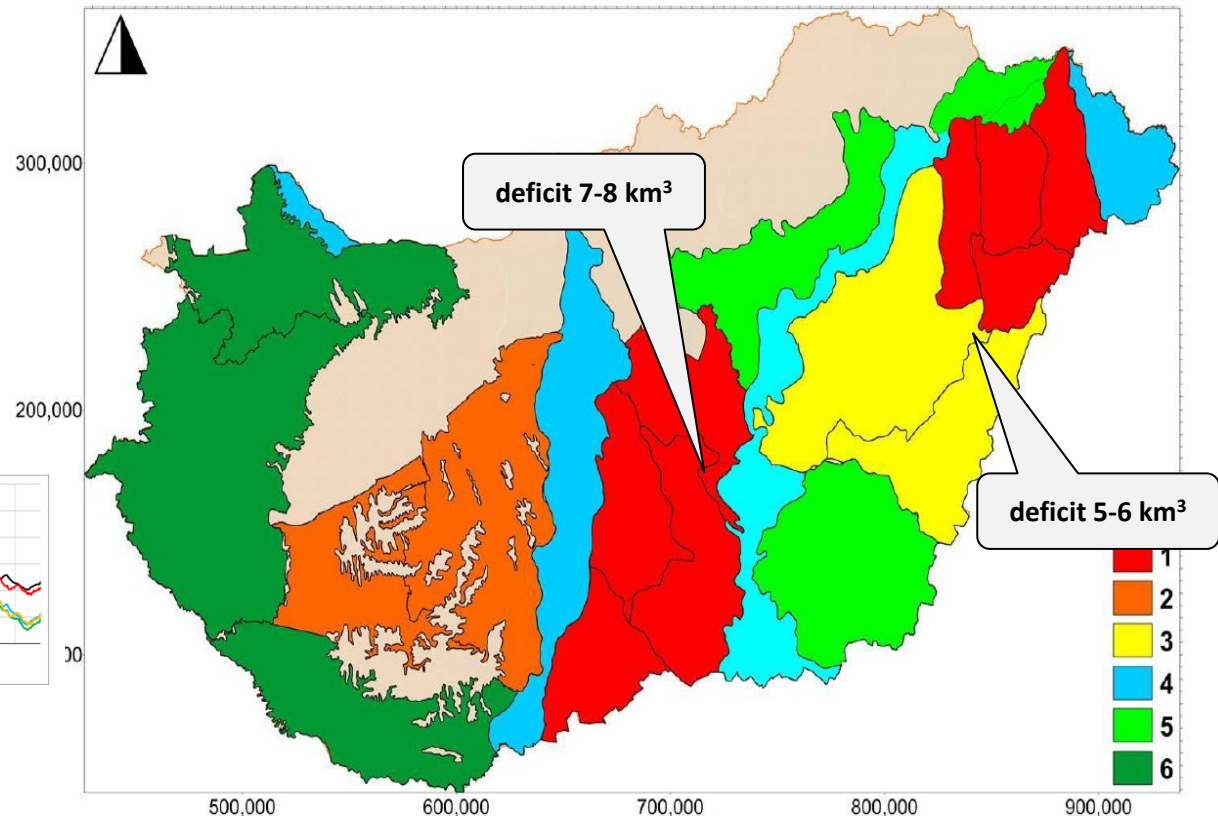


Vulnerability of shallow groundwater resources to climate change and irrigation

1. Highly vulnerable (significant water scarcity)
2. Vulnerable (recovery in years with high precipitation, but quick and significant decrease in water scarce periods)
3. Moderately vulnerable (significant climate impacts but mitigation from the surface – excess water, irrigation)
4. Vulnerability mitigated by large rivers
5. Small vulnerability (recharge from mountainous areas)
6. Less vulnerable (much precipitation, no or little extremities)



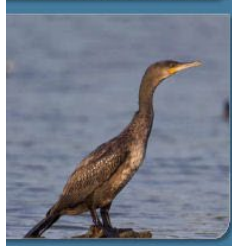
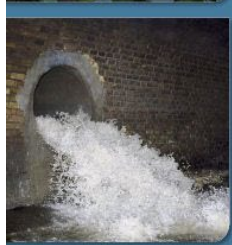
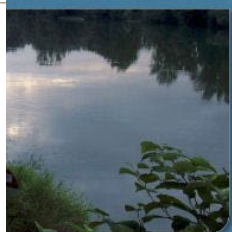
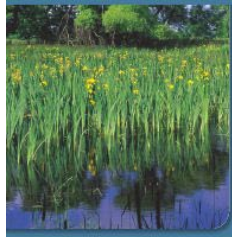
Shallow gw level Nyírség





- Increasing drought damage in agriculture
- Increasing competition for water among sectors
- Lowering of groundwater levels
- Decreasing water flow in rivers, water courses – degradation of ecosystems, water quality problems
- Irrigation from groundwater resources
- ...

- Agricultural risk management system
- Drought monitoring
- Regional water transfer
- Water retention
- Water storage (reservoirs, rivers, watercourses etc.)
- Increase water efficiency
- Restoration of irrigation systems
- Farmers' irrigation associations
- Water saving techniques
- Protection of groundwater resources
- ...



International co-operation in the water sector

- **Bilateral co-operation**
 - Transboundary (neighboring countries)
 - With other countries
- **Multilateral co-operation**
 - International Conventions
 - » (Helsinki, Danube, etc.)
- **European (Union) level co-operation**
 - Common working platform (27 Member States)
 - Common basic legislation
 - Help in implementation process:
 - » Investment funds, projects
 - » Twinning Projects, etc.
- **Global level water co-operation**



Transboundary River Commissions

HU – has TRC with all 7 neighboring country – historical form of cooperation – different structures – identical objectives

AT, SK, UA, RO, RS, CR, SL

- **Flood management, river engineering**
- **Hydrological forecast, data exchange**
- **Water quality protection**
- **Water management, protection of water resources (quality & quantity)**
- **Integrated River Basin Management**





Financing of transboundary cooperation

Core activities financed from **state budget**:

(built in into the budget of the General Water Directorate of Hungary and 12 Regional Water Directorates)

- Regular meetings of the Plenipotentiaries, Sub-commissions, joint water sampling, etc.
- Travel, accommodation covered by the countries, additional cost (meeting room, technic, etc. by the host country)

Additional activities financed from **various sources**:

- By the Government from state budget (financial support)
- Joint project development (EU funds, Danube Transnational Fund, Cross-border Funds)
- Activities jointly financed or by one party



Other bilateral cooperation

HU – Memorandum of Understanding with non neighboring countries

- **Flood management, river engineering**
- **Hydrological forecast, data exchange**
- **Drought management, drought forecast**
- **Water quality protection**
- **Water resources management, (quality & quantity)**
- **Integrated River Basin Management**



BELÜGYMINISZTERIUM

Danube River Protection Convention

29 June 1994, Sofia (Bulgaria)



Protection of water & ecological resources



Sustainable use of water



Reduce nutrients & hazardous substances



Manage floods & ice hazards

ICPDR coordinates basin-wide implementation of EU Water Framework Directive & EU Floods Directive


















REIŢŢIUNEA DANUBIULUI



The Danube River Basin...an International

Family

-  **Germany**
-  **Austria**
-  **Czech Republic**
-  **Slovakia**
-  **Hungary**
-  **Slovenia**
-  **Croatia**

-  **Bosnia & Herzegovina**
-  **Serbia**
-  **Montenegro**
-  **Romania**
-  **Bulgaria**
-  **Rep. of Moldova**
-  **Ukraine**
-  **European Union**



EU Member States (9)
Non-EU Member States (5)





3 pillars for our action



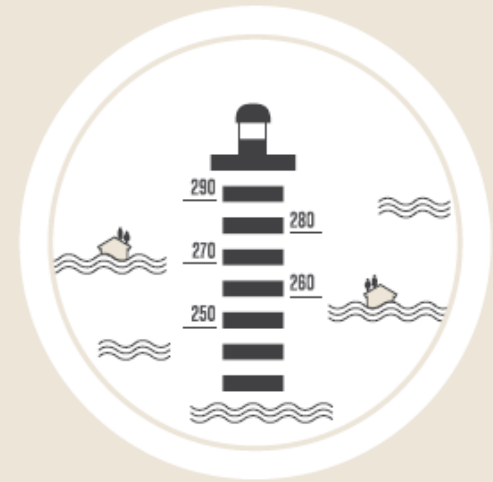
Cleaner

cleaner water



Healthier

a healthier home for aquatic
animals and plants



Safer

a safer environment for people to
live without the fear of floods



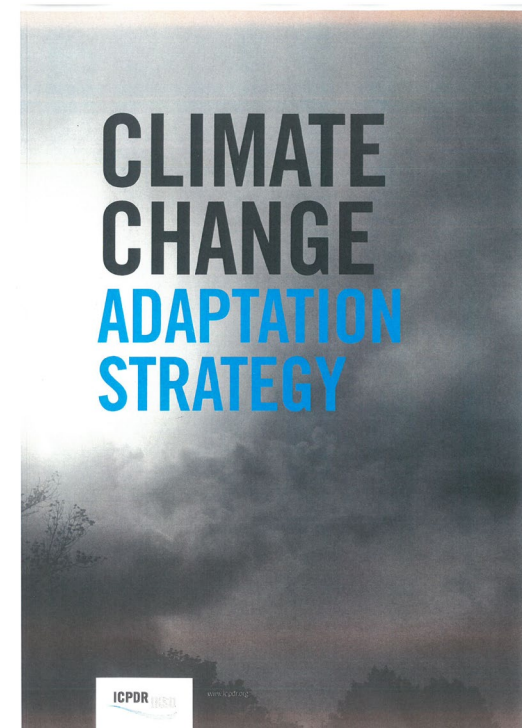
ICPDR co-ordination

Milestones:

Climate Change adaptation 2009 Strategy revised in 2019

Climate Change Effects (including drought management) become a

Significant Water Management Issues (2019 HU Presidency of ICPDR)





ICPDR and the EU Water Framework and Flood Directive

- ▶ Implementation legal requirement for 8 EU Member States
- ▶ Political commitment of 6 Non-EU Member States to work towards a coordinated Danube River Basin and Flood Risk Management Plan

Milestones: Adoption of 3rd Danube River Basin District Management Plan and 2nd Danube Flood Risk Management Plan in 8 February 2022, during the 4th Danube Ministerial Meeting (on-line) .

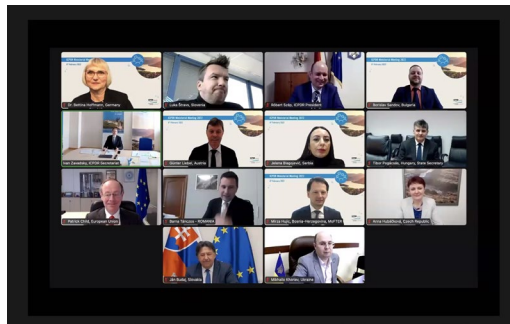




Endorsement at the highest level: the Danube Declaration

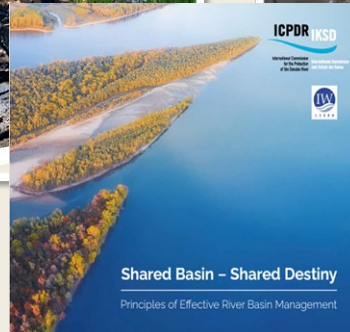
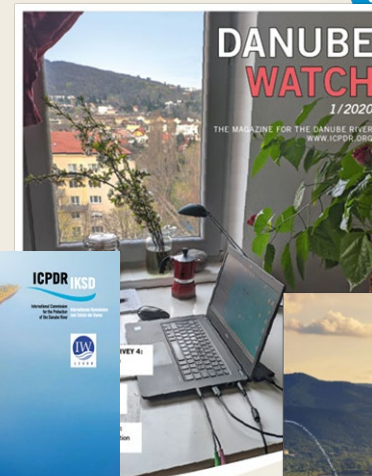
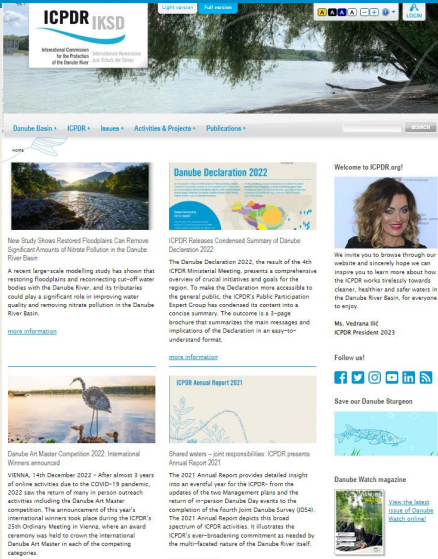


- Adapting to Climate Change
- Addressing Pollution
 - Surface Waters
 - Groundwater
- Addressing Ecosystems
 - Hydromorphological alterations
 - Groundwater
 - Navigation
 - Nature protection
 - Hydropower
 - Marine Environment
- Addressing Flood Risks
- Cooperation and Public Participation
 - Highlighting JDS4 as an example for cooperation, research, and outreach activity
- Our Way Forward





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