International Cooperation in Water Management and Pollution Control in the Danube River Basin

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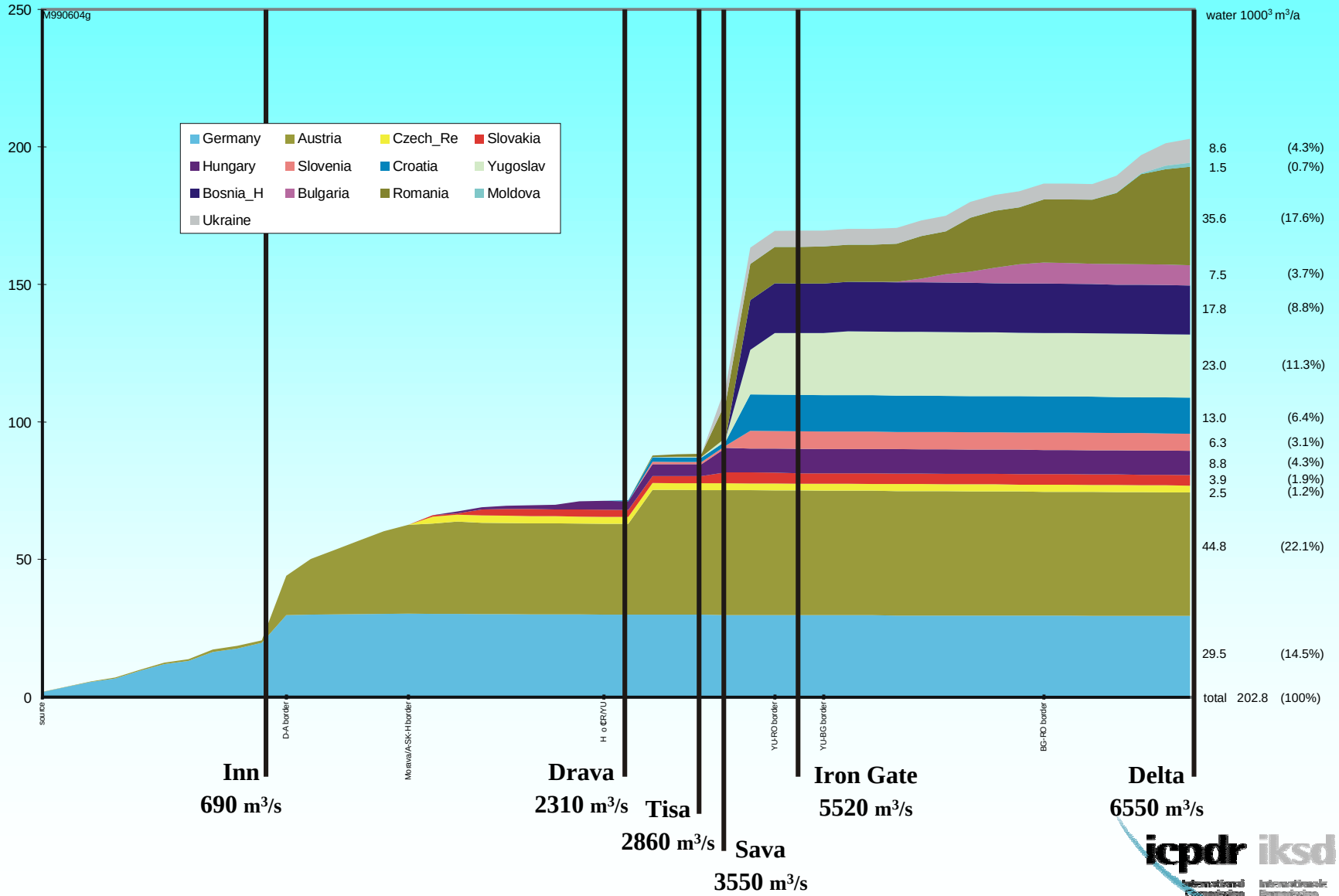
The Danube River Basin,
a cultural and historical centre of Europe

Longitudinal profile of the annual water volume in the Danube
in 1000^3 m^3/a, subdivided over the countries of origin



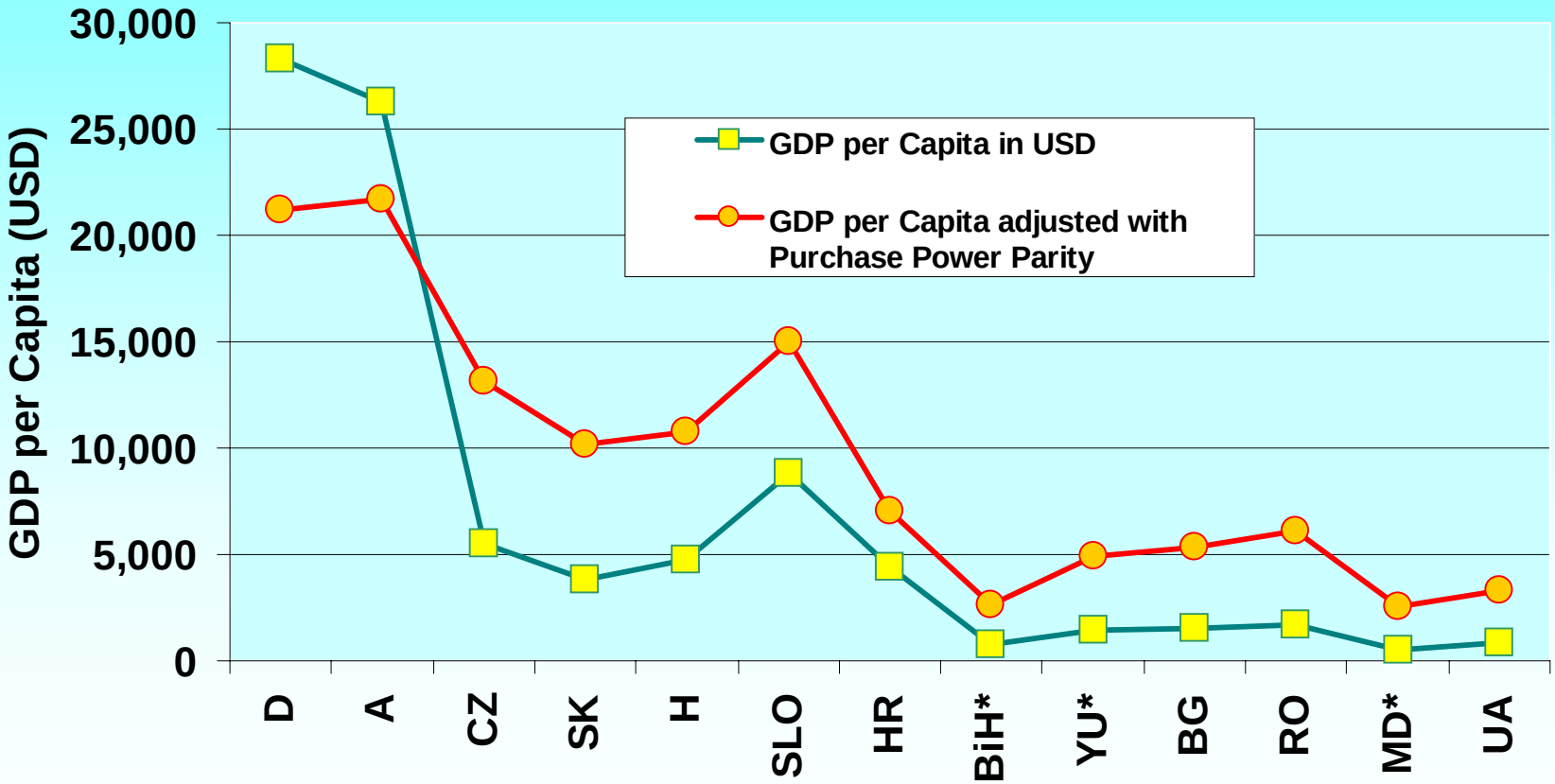
cumulative discharges for the Danube River

The Social and Economic Context in the Danube River Basin

- ➔ Regional social and economic disparities
- ➔ The particular situation of transition countries and the requirements for EU accession

Economic indicators of the Danube Countries

GDP per Capita in USD (1998) and GDP adjusted with Purchase Power Parity



* estimation

The particular situation of the Transition Countries and requirements for EU accession

- ➔ **Restructuring and modernizing the legal and institutional framework and administrative systems;**
- ➔ **Establishing development policies and programmes as well as funding mechanisms in compliance with international standards of modern market economies;**
- ➔ **Initiating privatization and establishing new links for international economic cooperation;**
- ➔ **Further harmonizing of national legislation with EU directives and standards.**

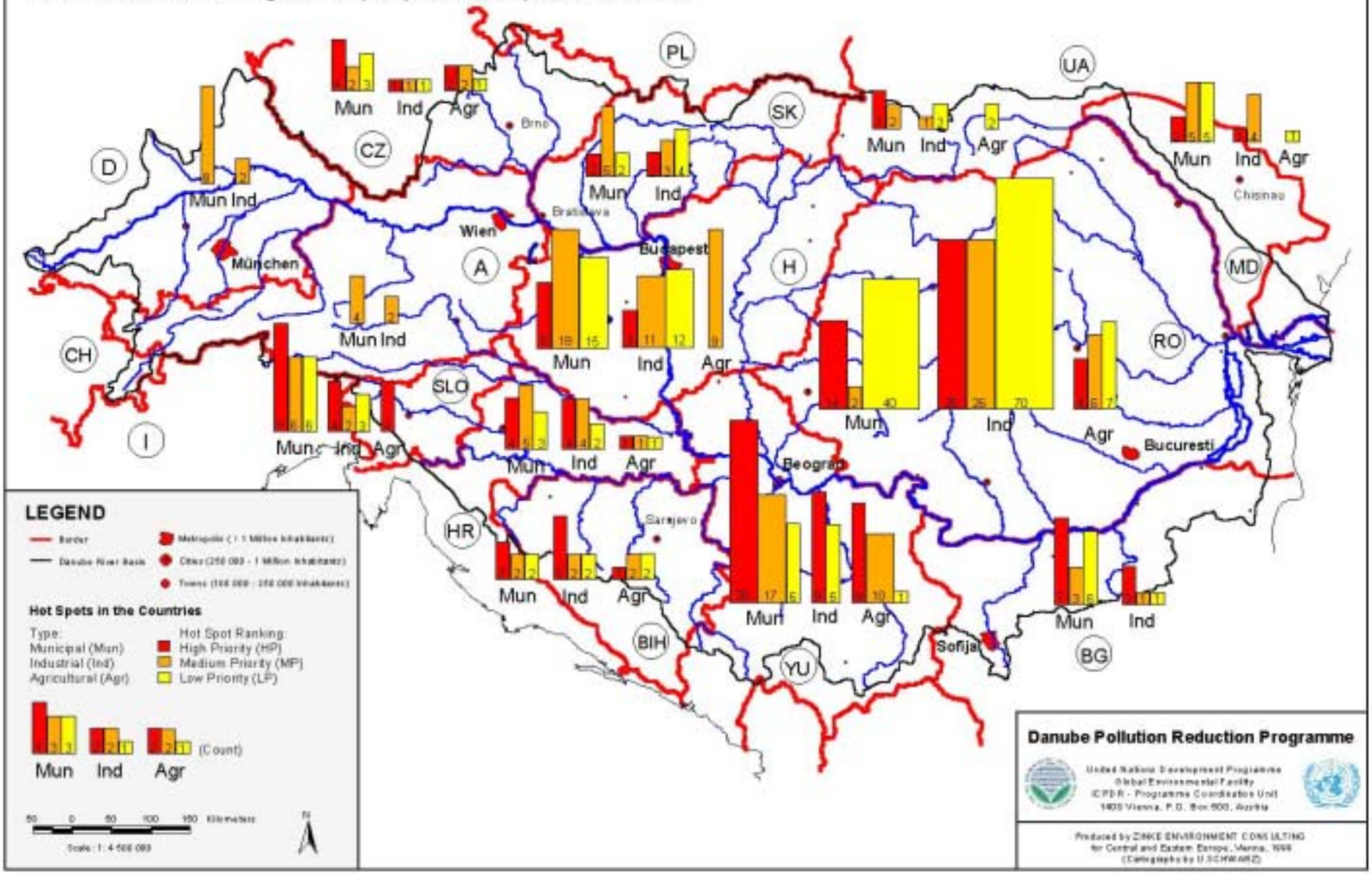
PROBLEM ANALYSIS: Hot Spots and Pollution Loads

Root causes of inadequate water resource management in the DRB

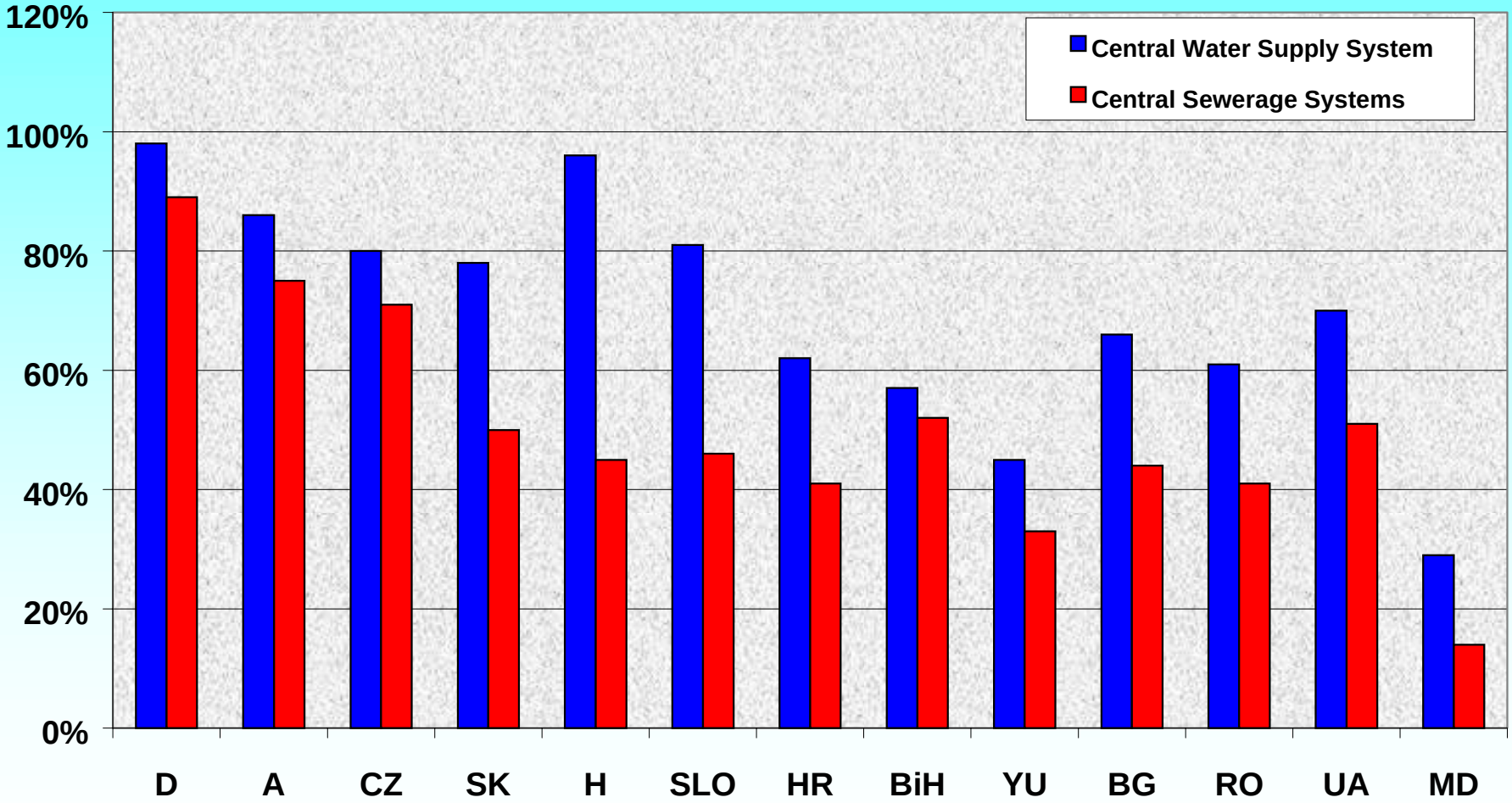
- ➔ **Socio-political transition and economic recession;**
- ➔ **War and displacement of population;**
- ➔ **Incomplete legislation, regulations and standards;**
- ➔ **Low public ecological awareness, education and training;**
- ➔ **Lack of financing mechanisms;**
- ➔ **Inadequate national strategies for water management;**
- ➔ **Inefficient environmental management, enforcement and compliance.**

Map 8: Hot Spots in the Danube Basin Countries

Based on National Planning Workshop Reports 1998, Updates March 1999



Percentage of Population Connected to the Central Water Supply and Central Sewerage Systems



Mechanisms for Cooperation

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The Danube River Protection Convention

A legal frame for co-operation to assure the protection of water and ecological resources and their sustainable use in the Danube River Basin

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Danube River Protection Convention OBJECTIVES

- ➔ **Ensure sustainable and equitable water management;**
- ➔ **Ensure conservation, improvement and the rational use of surface waters and ground water;**
- ➔ **Control discharge of waste waters, inputs of nutrients and hazardous substances from point and non-point sources of emissions;**
- ➔ **Control floods and ice hazards;**
- ➔ **Control hazards originating from accidents (warning and preventive measures);**
- ➔ **Reduce pollution loads of the Black Sea from sources in the Danube catchment area.**

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Contracting parties to the DRPC

- **Austria**
- **Bulgaria**
- **Croatia**
- **Czech Republic**
- **Germany**
- **Hungary**
- **Moldova**
- **Romania**
- **Slovakia**
- **Slovenia**
- **Ukraine** (*waiting deposition*)
- **European Community**
- **Bosnia i Herzegovina** *(observer)*
- **Yugoslavia** *(requested)*

Danube States and Conventions (2001)

	Europe Assoc. or Accession Agreement		Transboundary Water Courses Convention		Black Sea Convention		Ramsar Convention		Convention on bilogical diversity		Danube River Protection Convention	
In force since			**1996**		**1993**		**1975**		**1993**		**1998**	
	Assoc. signed	Acces. ratified	Sign.	Ratif.	Sign.	Ratif.	Sign.	Ratif.	Sign.	Ratif.	Sign.	Ratif.
Germany		X	X	X			X	X	X	X	X	X
Austria		X	X	X			X	X	X	X	X	X
Czech Republic	X						X	X	X	X	X	X
Slovakia	X	X		X			X	X	X	X	X	X
Hungary	X		X	X			X	X	X	X	X	X
Slovenia	X						X	X	X	X	X	X
Croatia	X			X			X	X	X	X	X	X
Bosnia-Herzegovina												
Yugoslavia												
Bulgaria	X		X		X	X	X	X	X	X	X	X
Romania	X		X	X	X	X	X	X	X	X	X	X
Moldova			X	X	X	X	X	X	X	X	X	X
Ukraine					X	X	X	X	X	X	X	X
European Union			X	X							X	X

International Commission for the Protection of the Danube River (ICPDR)

has been established to implement the objectives and provisions and to achieve the goals of the Danube River Protection Convention

Organizational Structure under the Danube River Protection Convention

CONFERENCE OF THE PARTIES

International Commission for the Protection of the Danube River (ICPDR)

- # Implementation of Danube River Protection Convention (DRPC)
- # Decision making, management and coordination of regional cooperation
- # Approval of the budget and annual work programme
- # Follow up of activities and evaluation of results from Expert Groups
- # Joint Action Programme

Programme Management Task Force (PMTF)

- # Co-ordination and implementation of donor supported activities
- # Development of financing mechanisms for project execution

(currently suspended)

Permanent Secretariat (PS)

- # Supporting the ICPDR sessions
- # Supporting the Expert Groups (and PMTF)
- # Co-ordinating the work programme
- # Supporting project development and implementation
- # Maintenance of the Information System

UNDP/GEF Danube Regional Project

- # Creation of sustainable ecological conditions for land use and water management
- # Capacity building and reinforcement of trans-boundary cooperation
- # Strengthening public involvement in environmental decision making
- # Reinforcement of monitoring, evaluation and information system

ad-hoc Strategic Expert Group (S / EG)

- # Strategic issues
- # Legal issues
- # Administrative and financial issues

River Basin Management (RBM / EG)

- # Integrated river basin management
- # Implementation of EU Water Framework Directive

Monitoring, Laboratory & Information Management (MLIM / EG)

- # Trans-National Monitoring Network (TNMN)
- # Laboratory Quality Assu-rance

Emission (EMIS / EG)

- # Emissions from point sources
- # Emissions from diffuse sources
- # Guidelines on BAT

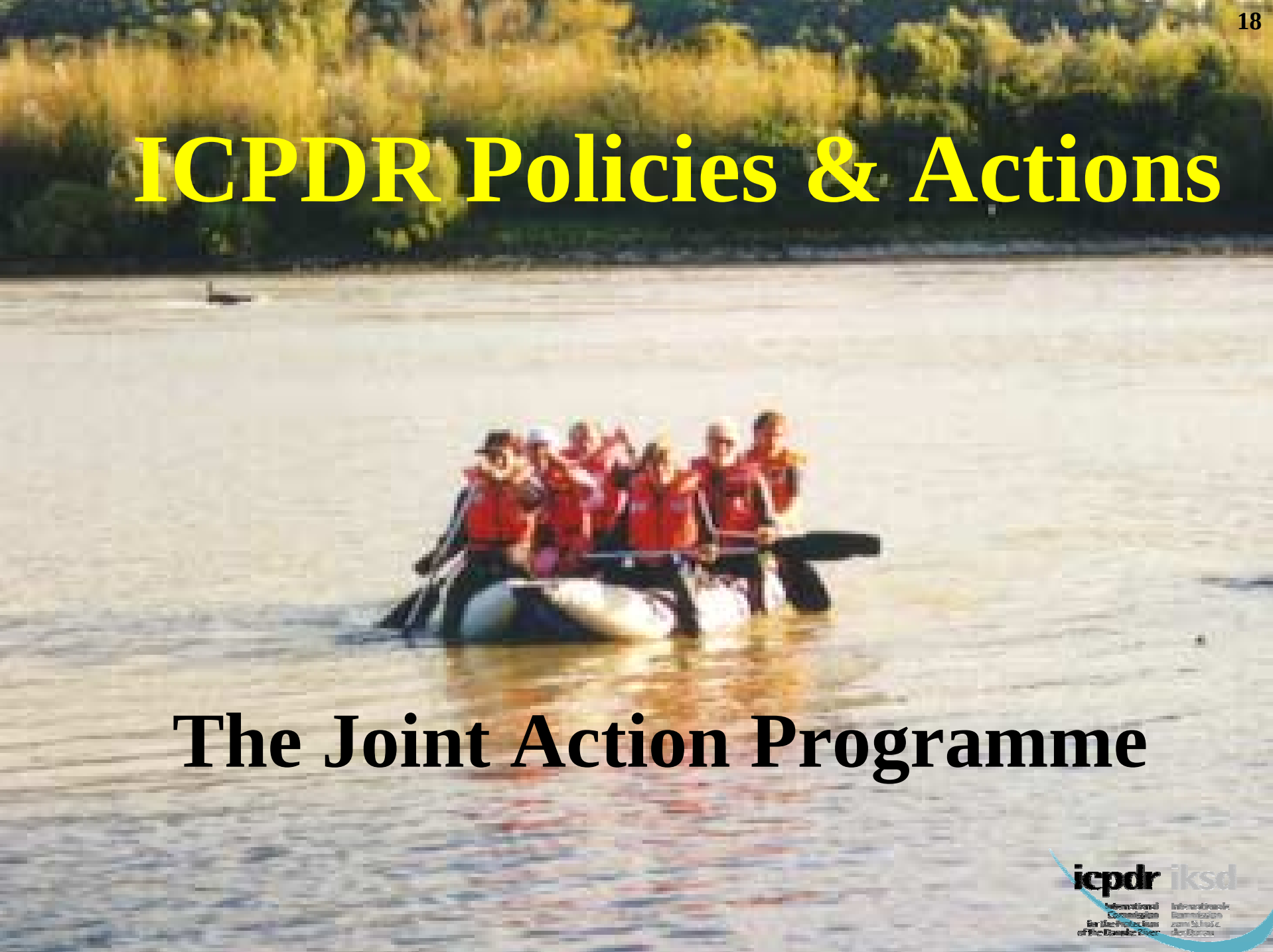
Accident Prevention and Control (APC / EG)

- # Accidental pollution incidents
- # AEWS operations
- # Accident prevention

Ecology (ECO / EG)

- # Habitats and species protection areas
- # Management of wetlands and floodplains

ICPDR Policies & Actions



The Joint Action Programme

Policies and Strategies of the JAP

- ➔ River Basin Management and implementation of the EU Water Framework Directive;
- ➔ Emission inventory and pollution reduction;
- ➔ Restoration of wetlands and flood plains;
- ➔ Transnational Monitoring Network (TNMN) and extended water quality standards;
- ➔ Priority substances / recommendations on BAT & BEP;
- ➔ Accident warning system (AEWS) and prevention;
- ➔ Flood control and sustainable flood prevention;
- ➔ Domestic and basin wide water balance.

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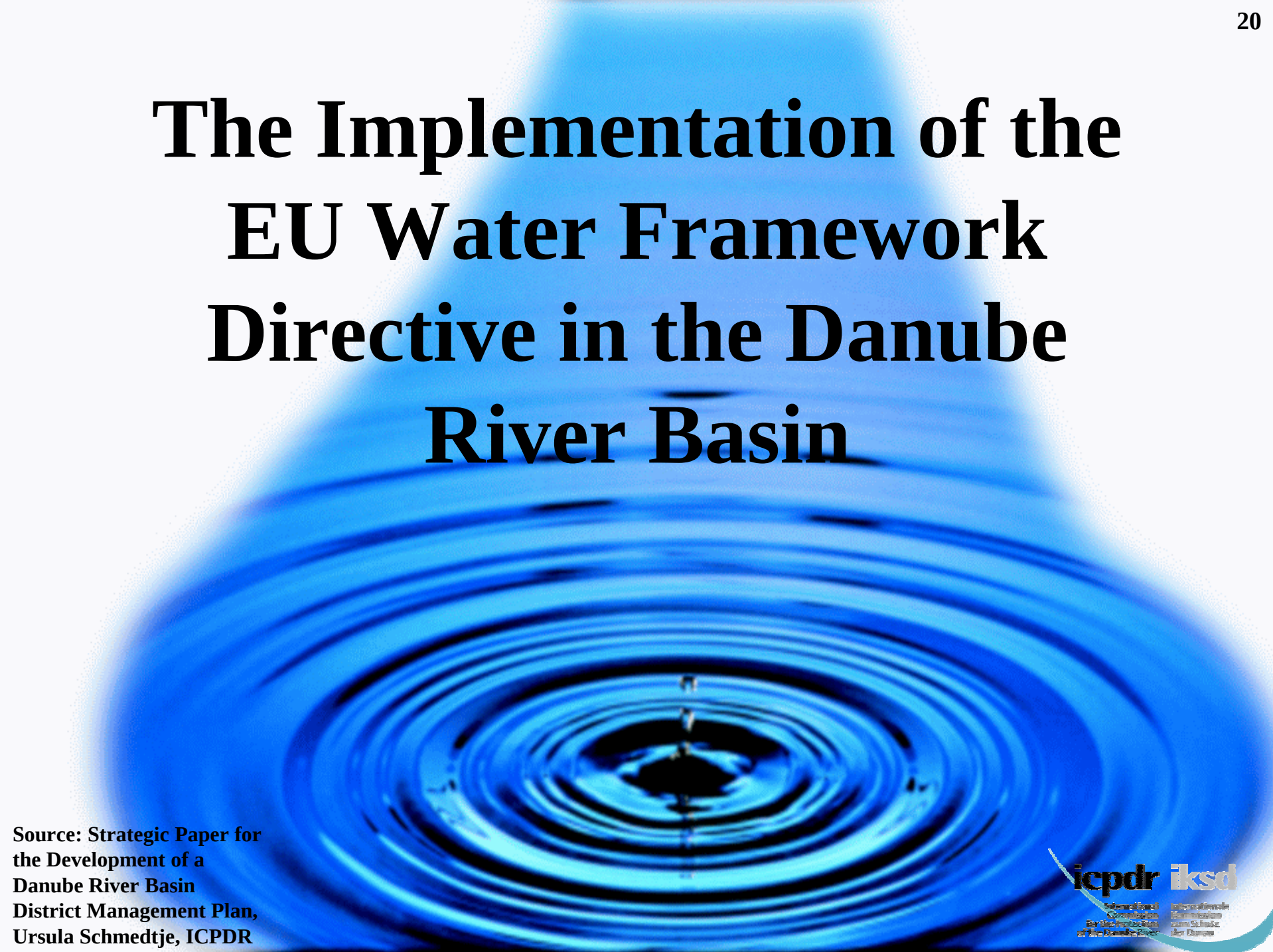
The Implementation of the EU Water Framework Directive in the Danube River Basin

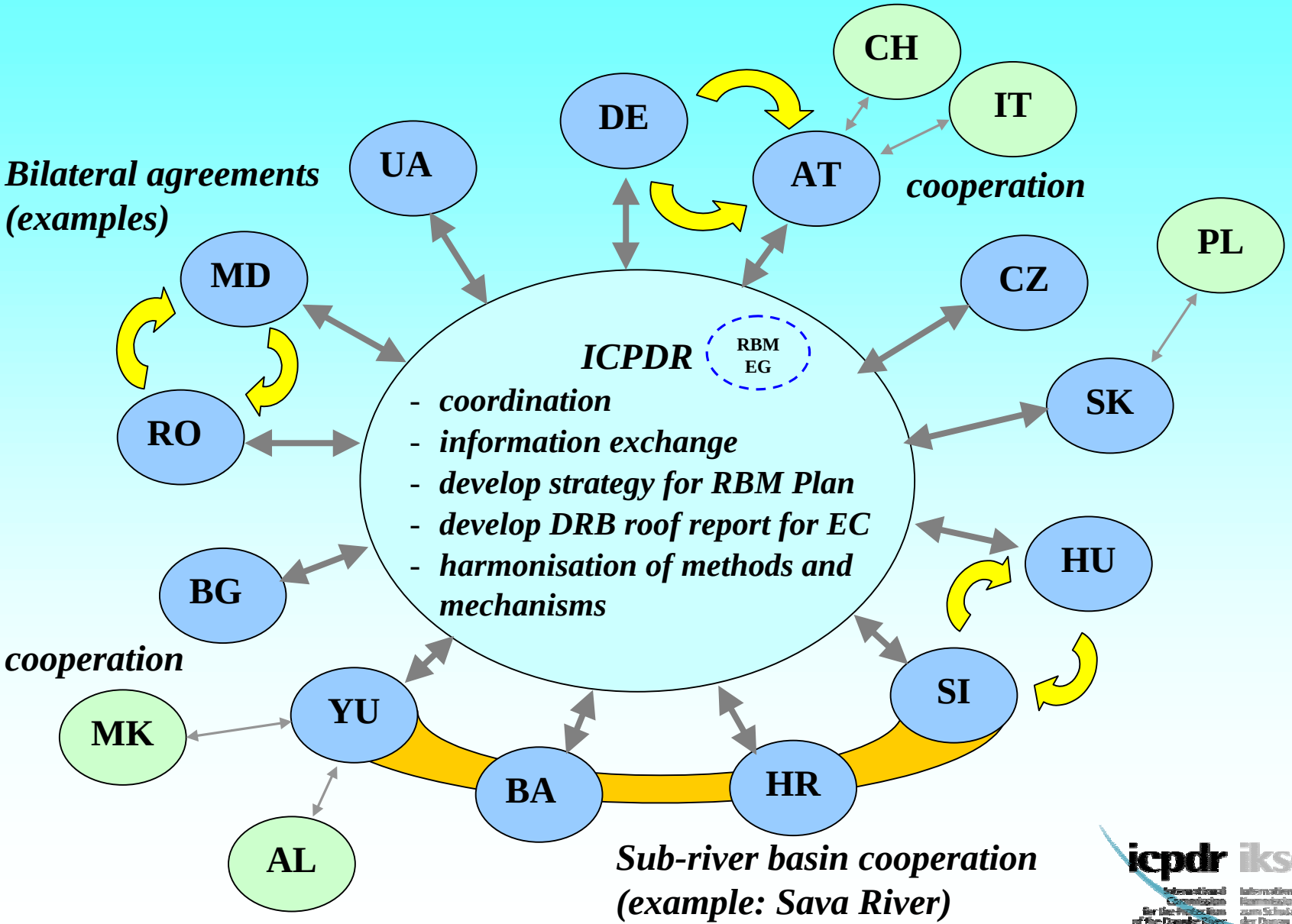


Source: Strategic Paper for the Development of a Danube River Basin District Management Plan, Ursula Schmedtje, ICPDR

Key Elements of the EU Water Framework Directive

- Sets uniform standards in water policy throughout the European Union
- Requires cross border cooperation for the development of integrated and coordinated river basin management
- Stipulates a defined time-frame for the achievement of the good status of surface water and groundwater
- Introduces the economic analysis of water use in order to achieve the most cost-effective combination of measures in respect to water uses
- Includes public participation (stakeholders incl. NGOs) in the development of river basin management plans

Coordination Mechanisms in the DRB



RESULTS: The Danube River Basin Management Plan including a programme of measures and public participation

- **Part A: the “roof ” for the Danube River Basin Management Plan**
- **Part B: the Sub-basin plans**
- **Part C: the National sub-unit plans**

Investments and expected results

(Joint Action Programme / Five Years Nutrient Reduction Plan)

Investments:

- **Municipal waste water collection & treatment: 4.114 billion USD**
- **Industrial waste water treatment: 0.324 billion USD**
- **Agricultural projects and land use: 0.115 billion USD**
- **Rehabilitation of wetlands: 0.229billion USD**

Nitrogen reduction:

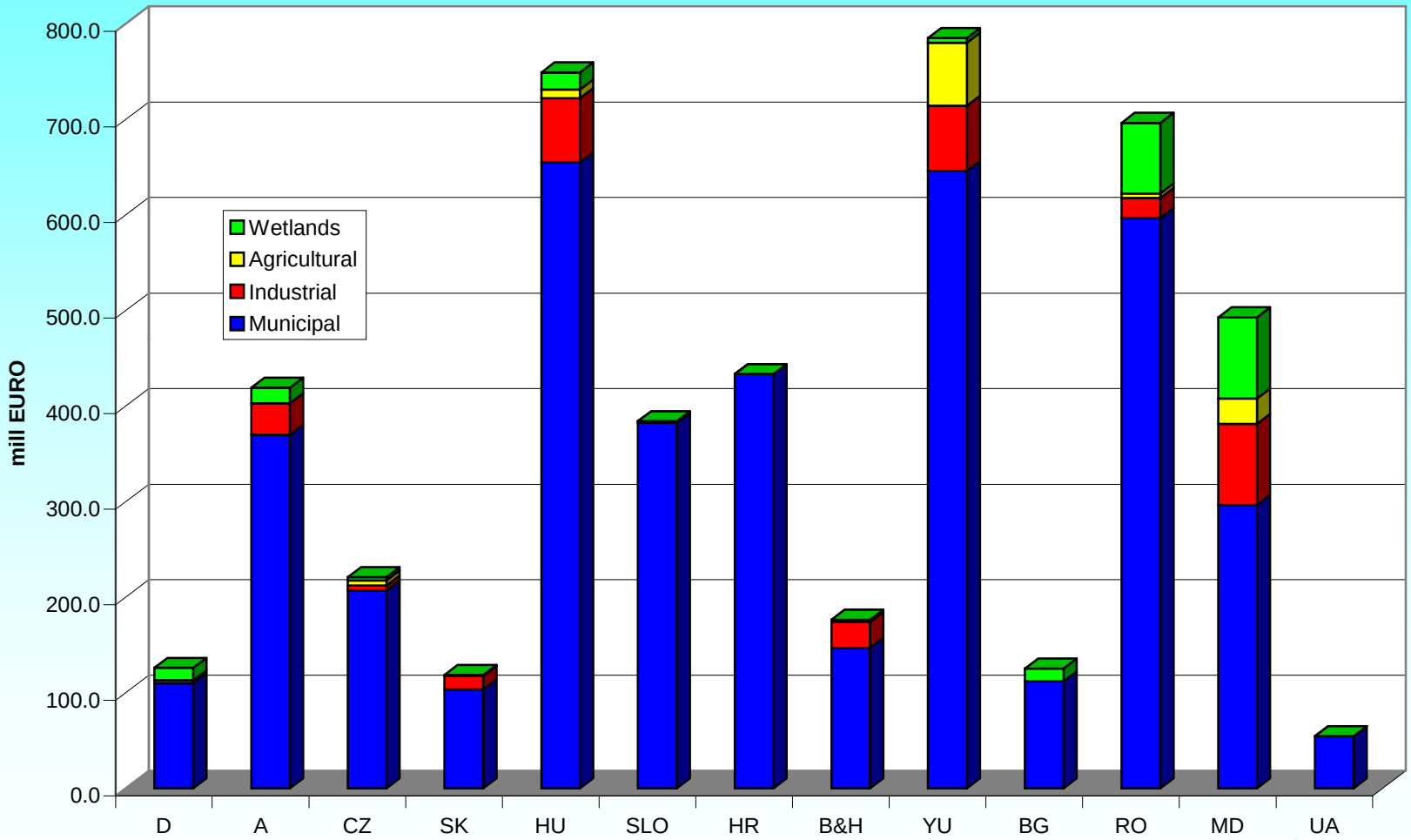
- **from point sources : 58,600 t/y**
- **from diffuse sources : 60,000 t/y**
- **total emission reduction : 22 %**

Phosphorus reduction:

- **from point sources : 12,000 t/y**
- **from diffuse sources : 4,000 t/y**
- **total emission reduction : 33 %**

Total Investment Costs for Proposed Projects

(Joint Action Programme / Five Years Nutrient Reduction Plan)



International Cooperation

- Danube Regional Project (started in December 2001)
- Cooperation with the Black Sea Commission
- Danube - Black Sea Task Force (DABLAS)

Strengthening the Implementation Capacities for Nutrient Reduction and Transboundary Cooperation

UNDP/GEF Assistance to the ICPDR

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THE ACTIONS

- **Creation of sustainable ecological conditions for land use and water management**
- **Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the Danube Basin**
- **Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems**
- **Reinforcement of monitoring, evaluation and information systems for transboundary pollution control and nutrient reduction**

Cooperation with the Black Sea Commission

Memorandum of Understanding on Common Strategic Goals

- Long-term goal: to permit Black Sea ecosystems to recover to conditions observed in 1960s;
- Intermediate goal: to avoid nutrients load exceeding those in the mid of 1990s;
- Harmonization of standards to assure comparable assessment;
- Assessment and reporting on ecological status and input loads;
- Adoption of strategies for pollution reduction while assuring economic development in the region;
- Analysis of results achieved by 2007 and review of measures to achieve the long term goal.

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Danube - Black Sea Task Force for cooperation on water protection in the wider Black Sea Region

(DABLAS Task Force)

Purpose of the DABLAS Task Force

Platform for cooperation for the protection of water and water related ecosystems of the wider Black Sea Region through developing:

- ➔ **Project database and indicators for prioritisation of investment projects**
- ➔ **Financing mechanisms and facilitating cooperation between IFIs, bilateral donors and recipient countries**

Results

Country	Total PE of WWTP's	Projects Identified	Projects Submitted	Total Investment mil. EUR	Funds Not Secured mil. EUR
Germany	0	0	0	0.0	0.0
Austria	0	0	0	0.0	0.0
Czech Republic	1,430,980	18	18	178.9	22.8
Slovak Republic	1,422,855	15	8	98.2	18.4
Hungary	4,894,599	17	17	879.7	632.0
Slovenia	1,078,700	23	0	288.6	5.0
Croatia	4,525,200	36	35	381.1	262.9
Bosnia & Herzegovina	1,680,000	5	6	145.2	144.6
Yugoslavia	4,355,000	21	7	350.1	259.1
Bulgaria	2,061,569	26	23	169.3	169.3
Romania	5,708,000	18	18	675.2	505.8
Moldova	778,000	12	12	32.5	31.6
Ukraine	1,317,900	8	8	43.0	42.5
Totals:	**29,252,803**	**199**	**152**	**3,242**	**2,094**

International cooperation is essential to assure sustainable management of international waters.

....and only then you can catch the big fish.....

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for further information see www.icpdr.org