

Study Visit to the ICPDR Secretariat

06 October 2014, Vienna International Centre



# River Basin Management in the Danube Basin



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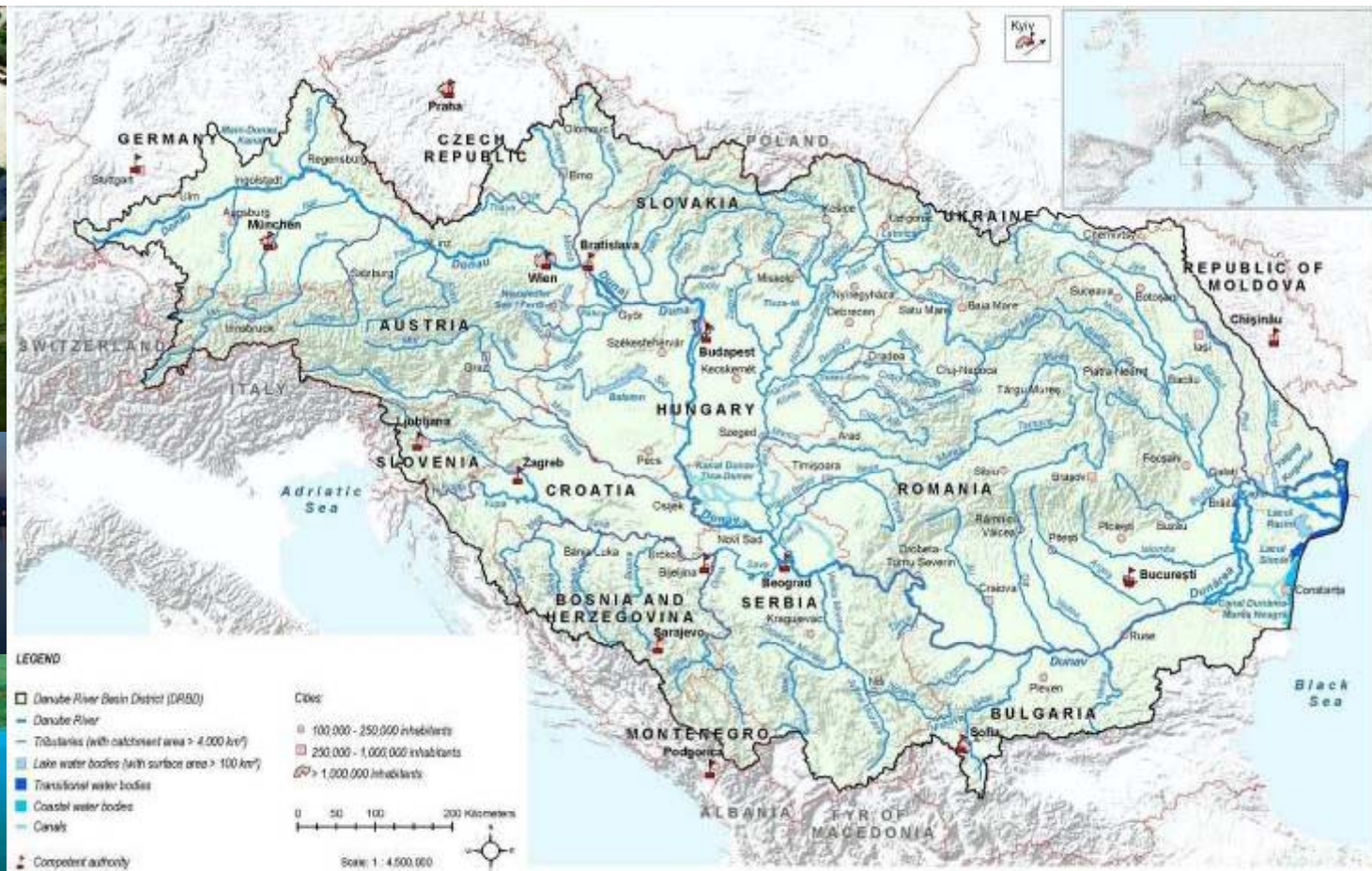
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# Danube River Basin From the Black Forest to the Black Sea

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International  
Commission  
for the Protection  
of the Danube River

Internationale  
Kommission  
zum Schutz  
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# ICPDR

## Contracting Parties



**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)**

# Danube River Protection Convention



**signed 29 June 1994, Sofia (Bulgaria)**



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





# EU Water Framework Directive (WFD)

Diversity of uses, aspirations and impacts



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# EU Water Framework Directive (WFD)

## Key Principles

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- **Integrated 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 the achieving WFD objectives
- **6 years** management cycles
- **Public participation** requirements

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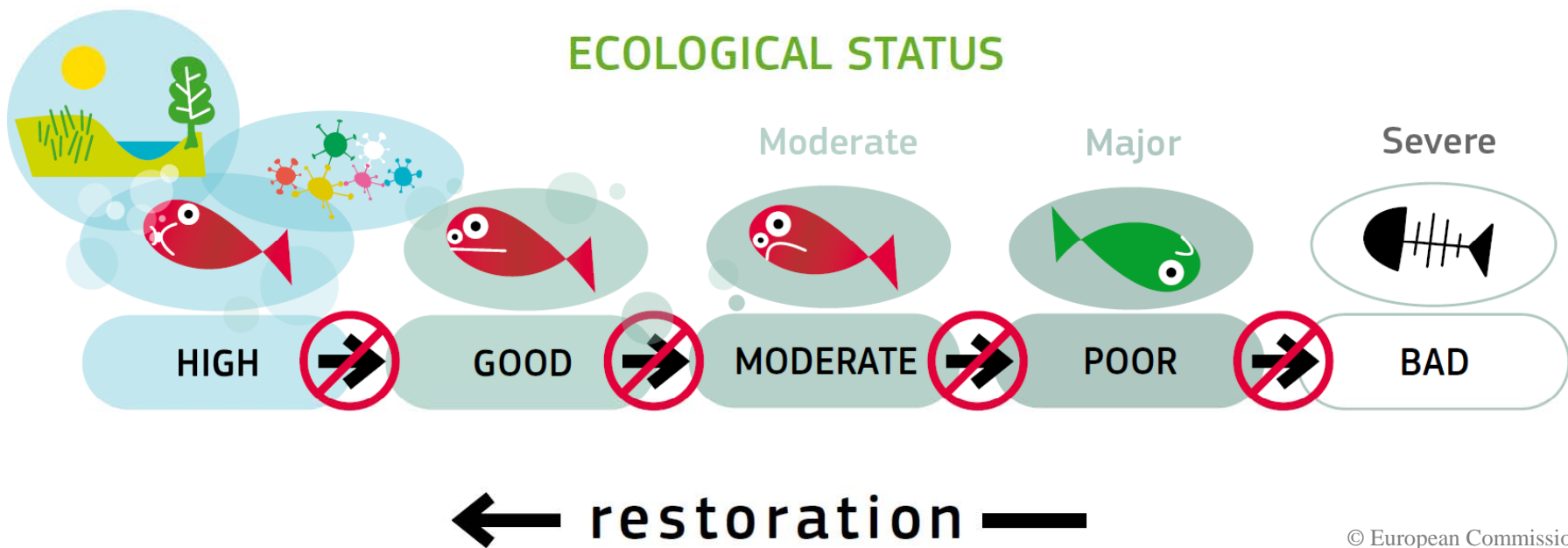
# ICPDR and EU WFD

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- **WFD** is an EU Directive and therefore **legally binding for (the 8) EU Member States**, however
- **Not all** Danube countries are **EU Member States** (6 are Non-EU Member States)
- **WFD Article 3(5)**: “appropriate **coordination with relevant non-EU Member States** shall be endeavoured for achieving WFD objectives”
- **Political commitment** from **non-EU Member States** to make all efforts to achieve coordinated River Basin Management Plan

# EU Water Framework Directive (WFD) Environmental objectives for surface waters

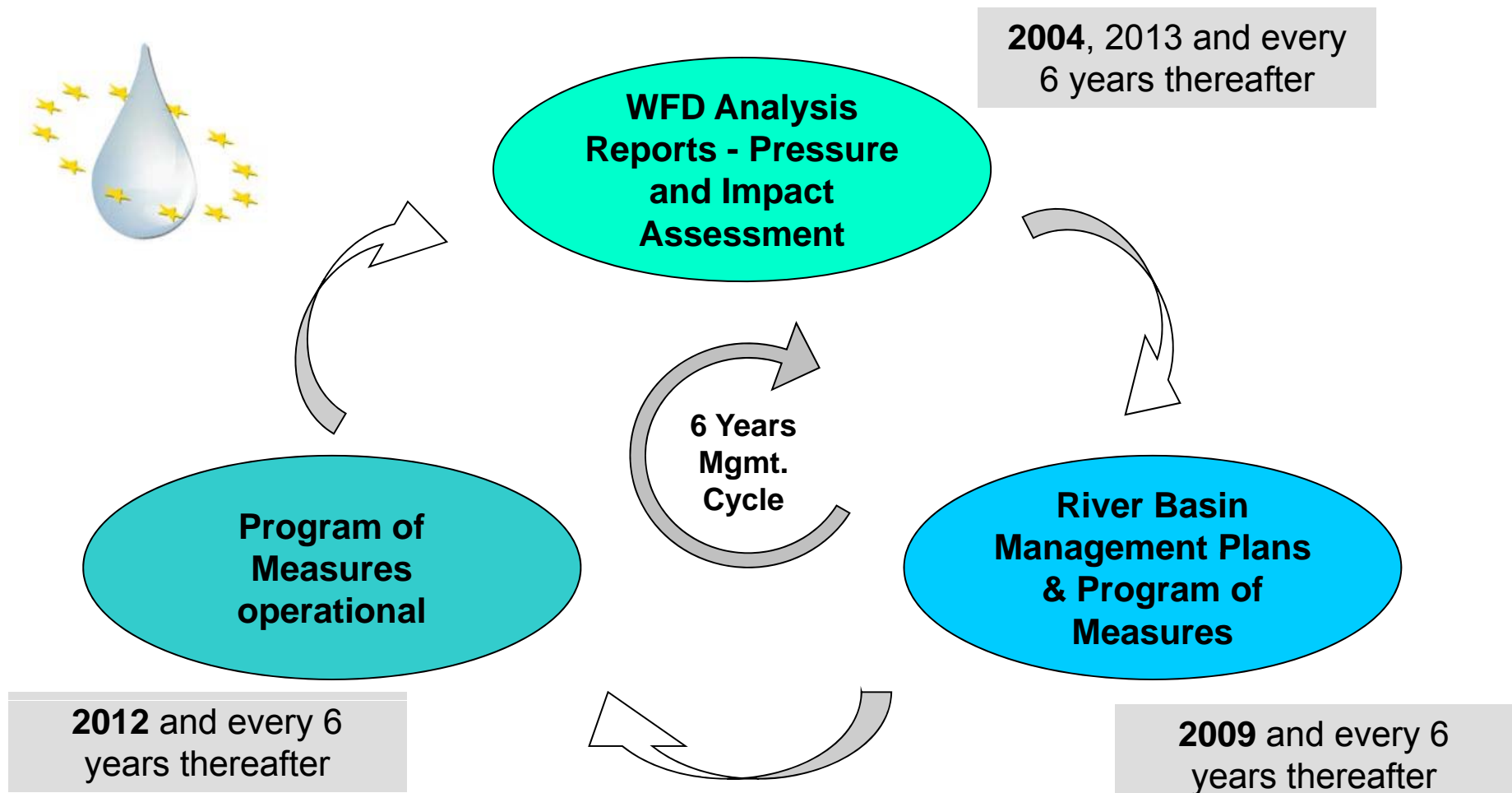


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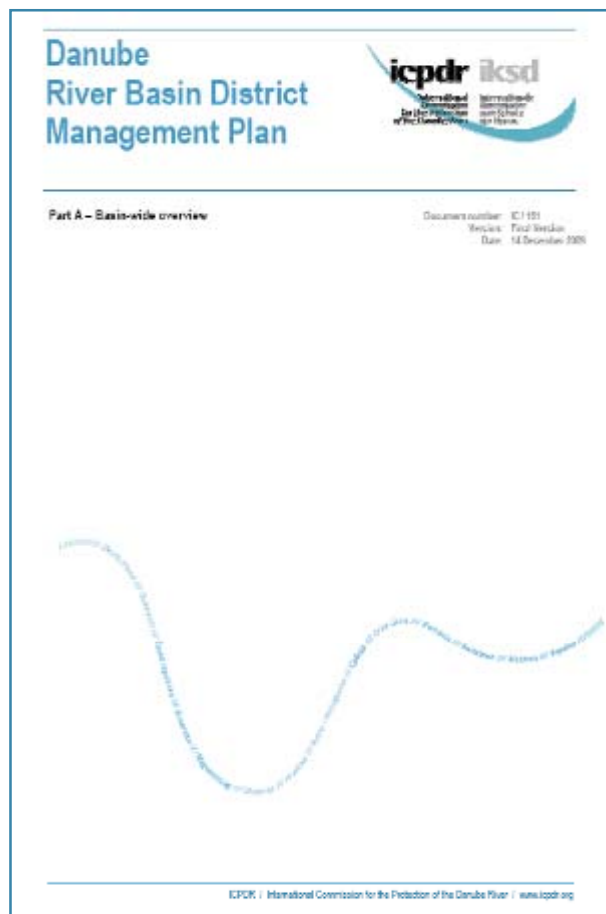
- ▶ With WFD focus on **functional ecosystem**
- ▶ Reaching „**Good status/potential**“ for all waters
- ▶ Principle of „**No deterioration**“ of water status



# WFD Implementation Cycle



# Danube River Basin Management Plan (adopted 2009)



## Reflects

- Water status in the basin
- Significant Water Management Issues

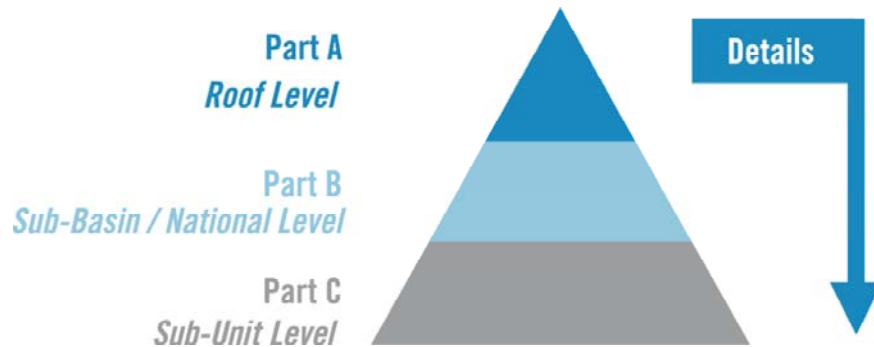
## Includes

- Joint Programme of Measures

## Enables

- Conclusions on investment & funding
- Evaluation on measure implementation

# WFD coordination mechanisms



**WFD River Basin  
Management Planning is  
based on three levels of  
coordination**

- Part A** International, basin-wide level - the roof level (Danube)
- Part B** National 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 in the national territory.

The information increases in detail from **Part A** to **Parts B** and **C**.

# Danube River Basin Significant Water Management Issues



Organic  
Pollution



Nutrient  
Pollution



Hazardous  
Substances Pollution



Hydromorphological  
Alterations

- **Priorities** for actions
- **Re-discussed** every 6 years (2 years before deadline for next management plan)
- **SWMIs to be maintained** also for updated 2<sup>nd</sup> DRBM Plan



# Transnational Monitoring Network (TNMN)

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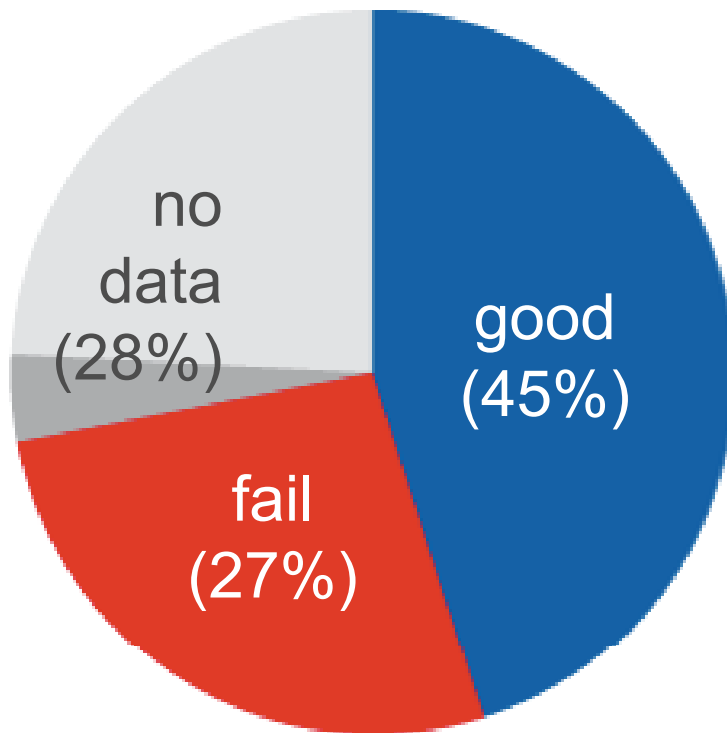
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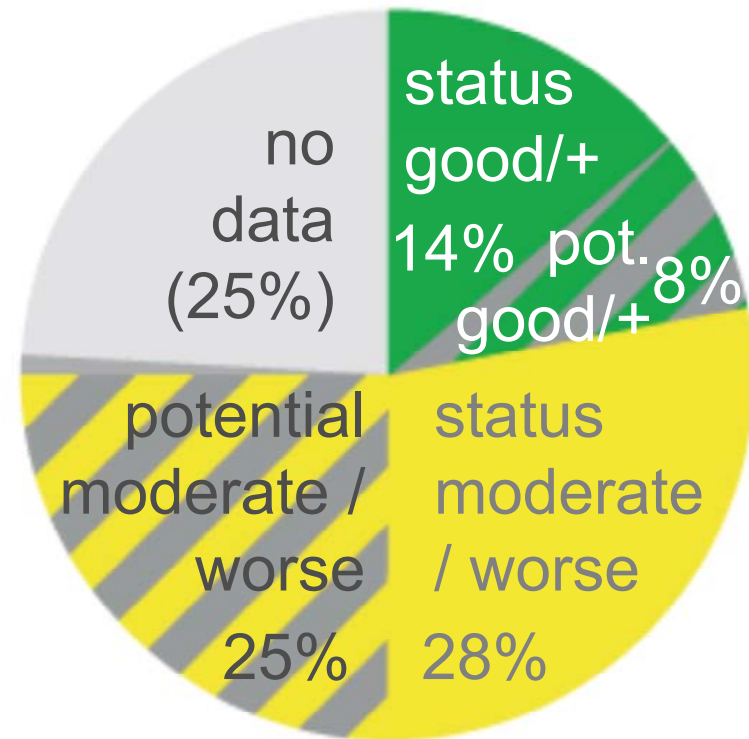




# Condition of Danube & its Tributaries



**Chemical Status**



**Ecological Status**

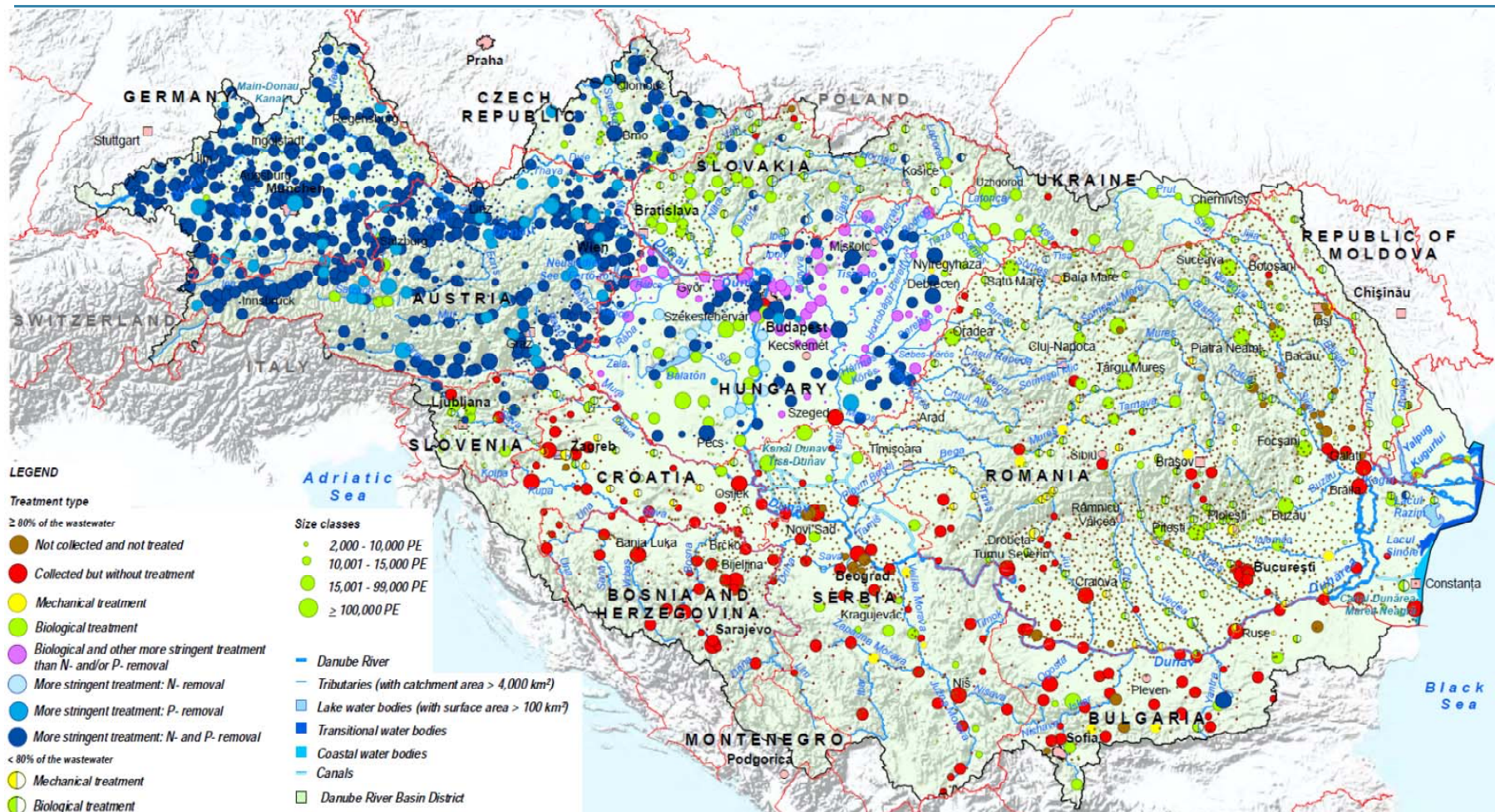
→ **Need for action and joint measures!**

# Urban Wastewater Treatment Facilities Situation 2005/2006

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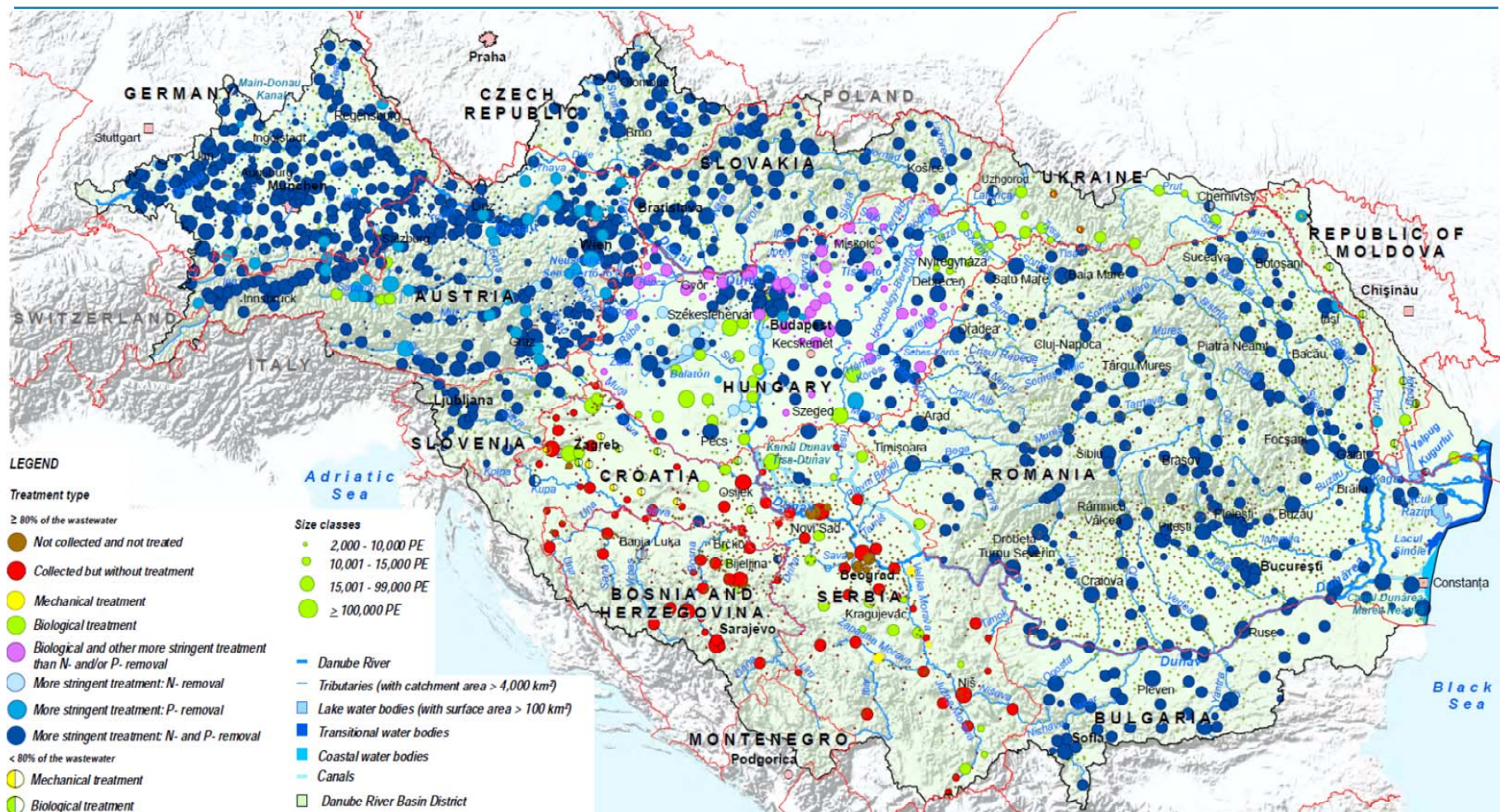


# Urban Wastewater Treatment Facilities Expected improvements 2015

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# Agriculture and Land Use affecting water quality

- Balancing fertilizer application and nutrient consumption by crops
- Ban of fertilizer application during periods where uptake is not guaranteed (winter months)
- Provisions on required storage facilities
- Regulations on application of plant protection products etc.



**Storage  
facilities for  
manure**



**Proper  
application?**

Credit: BMLFUW



## Natural



## Driver/Pressure

### Hydropower



### Navigation



### Flood protection



## HYMO alteration





# Hydromorphological Alterations



Hydromorphological  
Alterations

River and Habitat Continuity Interruptions

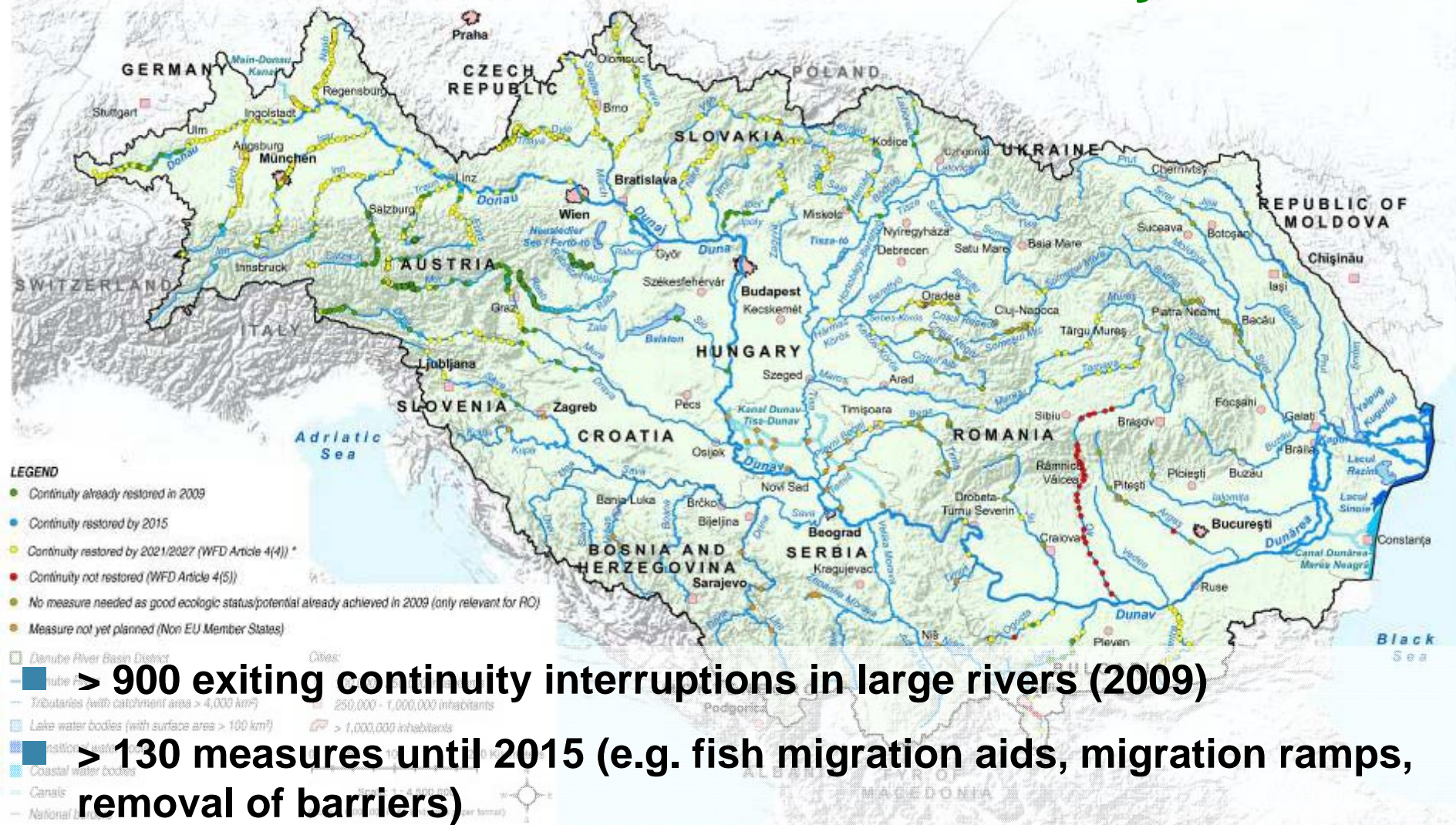
Disconnection of Adjacent Wetlands/Floodplains

Hydrological Alterations

Future Infrastructure Projects

- **Main drivers:** Flood protection, hydropower, navigation
- **Two-fold challenge:**
  - 1) Mitigation measures for already **existing pressures**
  - 2) Ensuring sustainability of possible **future infrastructure**

# Restoration of river and habitat continuity



**> 900 existing continuity interruptions in large rivers (2009)**

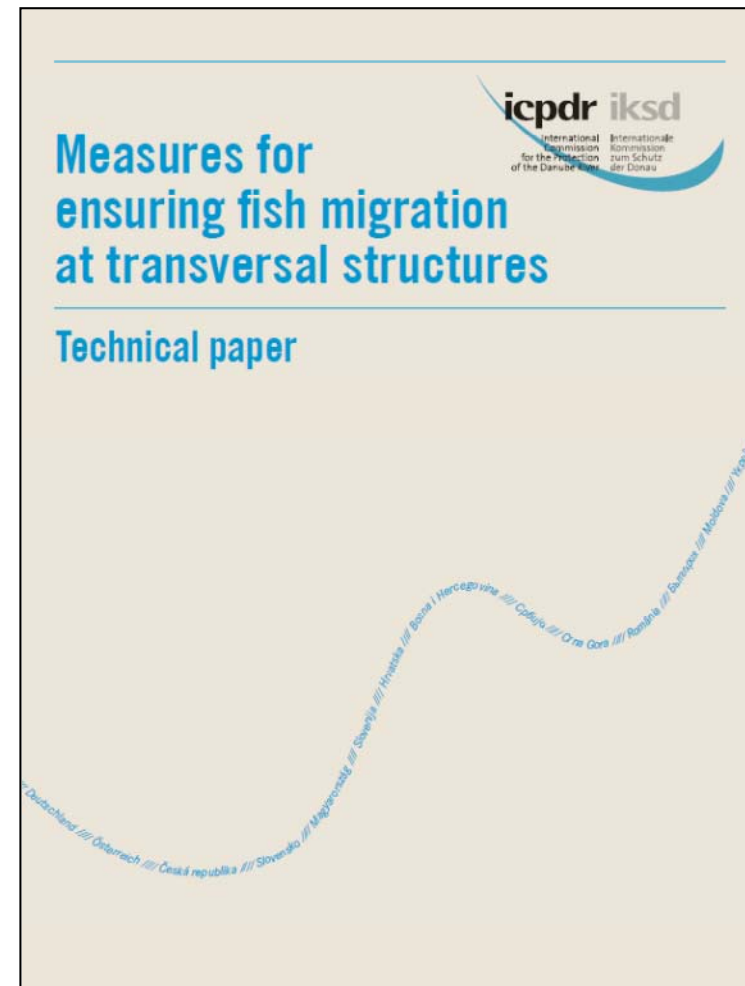
**> 130 measures until 2015 (e.g. fish migration aids, migration ramps, removal of barriers)**

**Implementation of measures currently ongoing and further efforts needed**



# Restoration of River and Habitat Continuity

## Examples for measures



# Examples for measures

## Re-connecting wetlands/floodplains



62,300 ha of wetlands/floodplains to be re-connected by 2015





# Examples for measures

## Hydrological alterations



**Impoundments  
Restructuring of banks**



**Ensuring ecological flow**



**Addressing hydropеaking**



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# In the focus: Intersectoral cooperation

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**Navigation:** Joint Statement process

Coordination with **Flood Risk Management**



Guiding Principles on Sustainable  
**Hydropower** Development



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## Example: Inland Navigation Growing concern and motivation

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### Major number of navigation infrastructure projects under preparation/implementation

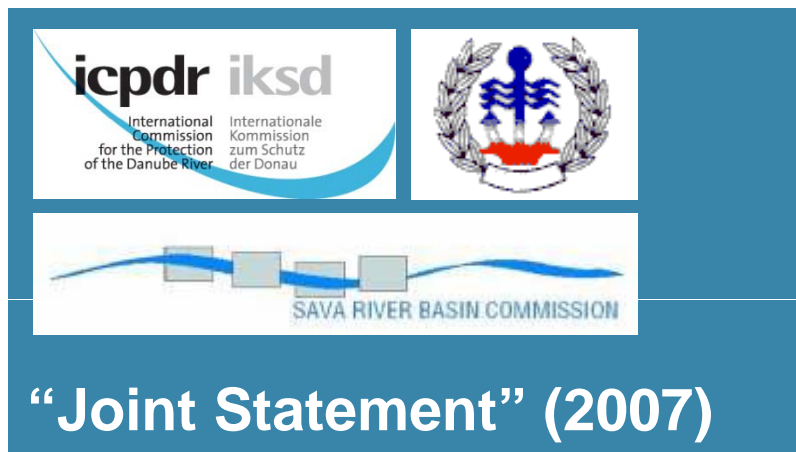
- How to ensure sustainable **water protection** and non-deterioration of Danube Basin water bodies & Nature Protection sites if **infrastructure projects** will be built?
- How to make a step from **confrontation** to reconciliation, **cooperation** or even win-win solutions?
- Can we **guide** infrastructure **development** that it won't conflict with legal requirements for environmental protection but ensure their achievement?

# First response 2007: Cross-sector dialogue inland navigation & environment

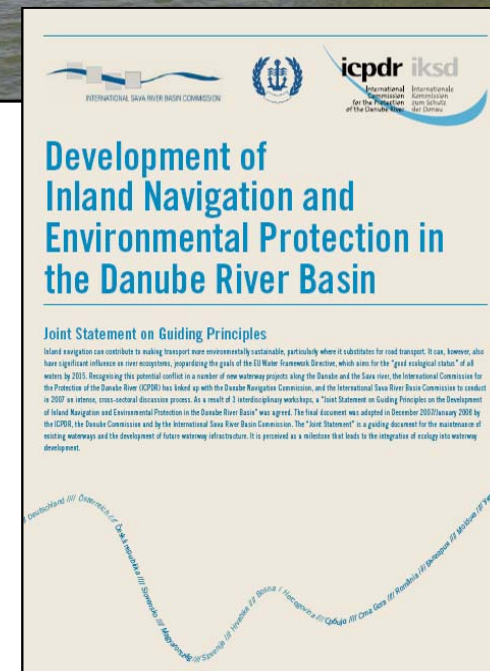


## Broad stakeholder process

- 12 Basin Governments
- 22 industry and environmental interest groups
- 3 River Commissions
- 3 Workshops



**“Joint Statement” (2007)**

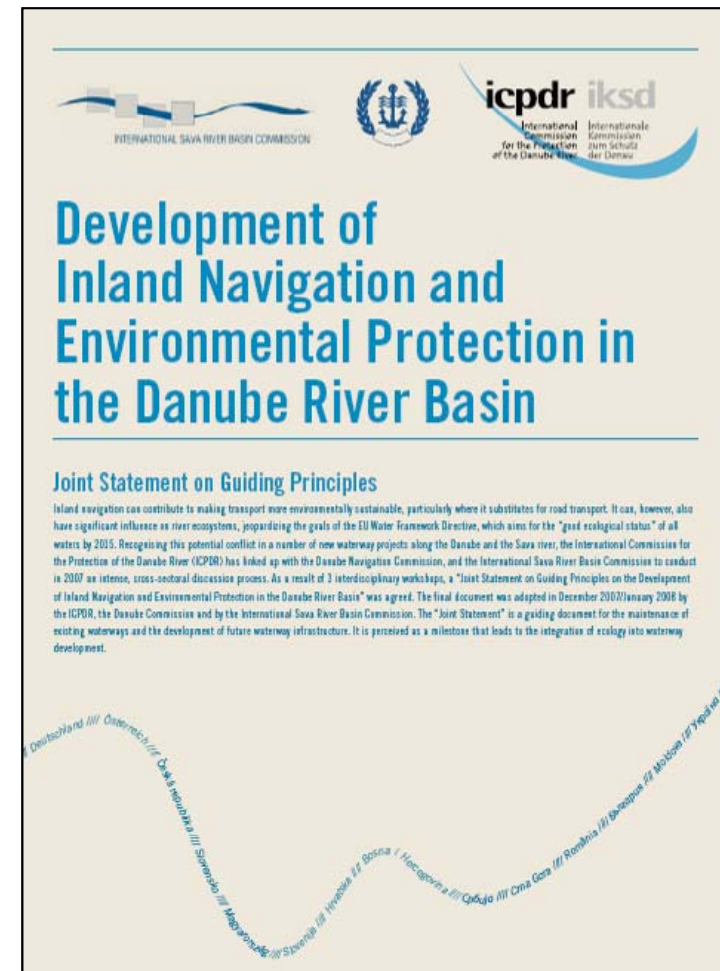


# Joint Statement Inland Navigation & Environment 2007

## Key principles



- **Integrated planning** process from the beginning
- **Minimize** the **impacts** of engineering interventions
- **Apply EIAs** with public input
- **Respect WFD's** River Basin Management Plans
- **Define goals** for Navigation and the river/floodplain ecological integrity
- Use **Best Practice** to achieve the required objective







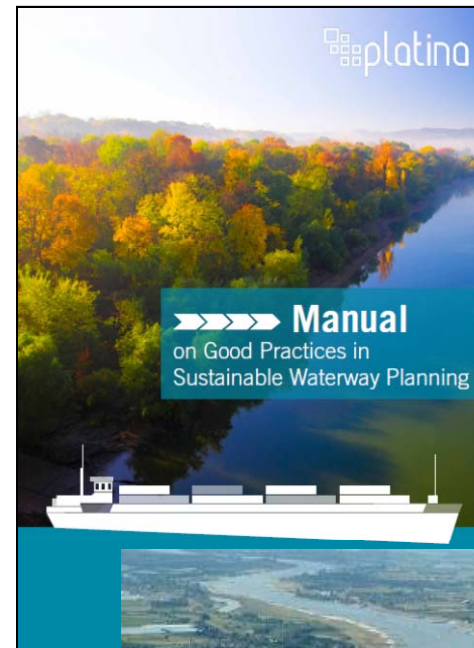


# Inland Navigation & Environment

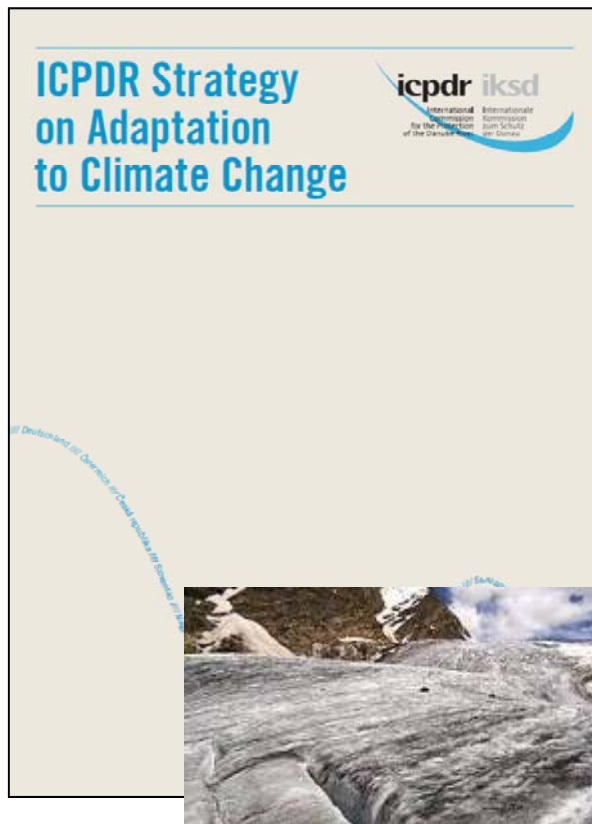
## Follow-up activities



- 2010 „**PLATINA Manual**“ further specifying integrated planning approach
- **Good practices** in sustainable waterway planning
- **Yearly joint follow-up meetings** between navigation and environmental sector
  - **Alternately organised** by 3 River Commissions
  - Exchange of **experiences** with practical application of principles
  - Facilitates **implementation process**
  - Keeping actors **involved and dedicated**



# Other issues



ICPDR Strategy on Adaptation to  
**Climate Change**



**Sediment** quality and quantity –  
efforts towards joint project for  
the DRB

**Invasive Alien Species**  
– comprehensive list  
currently under  
development



***Thank you very much!***

For more information please consult the ICPDR website

<http://www.icpdr.org>

... and the Danube River Basin Management Plan

[http://www.icpdr.org/icpdr-pages/river\\_basin\\_management.htm](http://www.icpdr.org/icpdr-pages/river_basin_management.htm)

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