

4th UNECE Workshop on Water and Adaptation to Climate Change in Transboundary Basins

24 - 25 June 2013, Geneva

icpdr **iksd**
International
Commission
for the Protection
of the Danube River
Internationale
Kommission
zum Schutz
der Donau

ICPDR Strategy on Adaptation to Climate Change for the Danube River Basin

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Vienna, December 2009

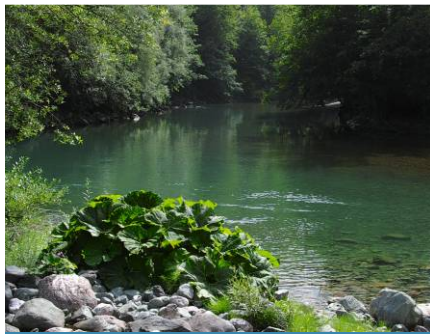
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Danube River Protection Convention

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signed 29 June 1994, Sofia (Bulgaria)



Protection of water &
ecological resources



Sustainable use
of water



Reduce nutrients &
hazardous substances



Manage floods
& ice hazards

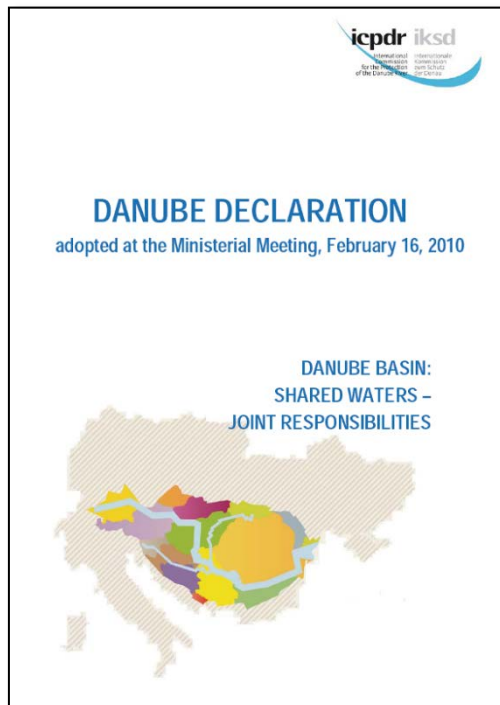
**ICPDR coordinates implementation of
EU Water Framework Directive & EU
Floods Directive on basin-wide level**



Climate change adaptation

Starting point

CLEAR POLITICAL MANDATE to get active on climate change adaptation !



- (...) impacts of **climate change** will increase and develop into a **significant threat** in the Danube River Basin
- ask the ICPDR to develop until 2012 a **Climate Adaptation Strategy** in the Danube River Basin (...) and ensure that climate adaptation issues are **fully integrated** in the second **Danube River Basin Management Plan** in 2015

Climate Change Adaptation

Main steps

Step 1 (during 2011)

Danube Climate Adaptation **STUDY**



Step 2 (March 2012)

Climate Adaptation **WORKSHOP**



Step 3 (December 2012)

Danube Climate Adaptation **STRATEGY**



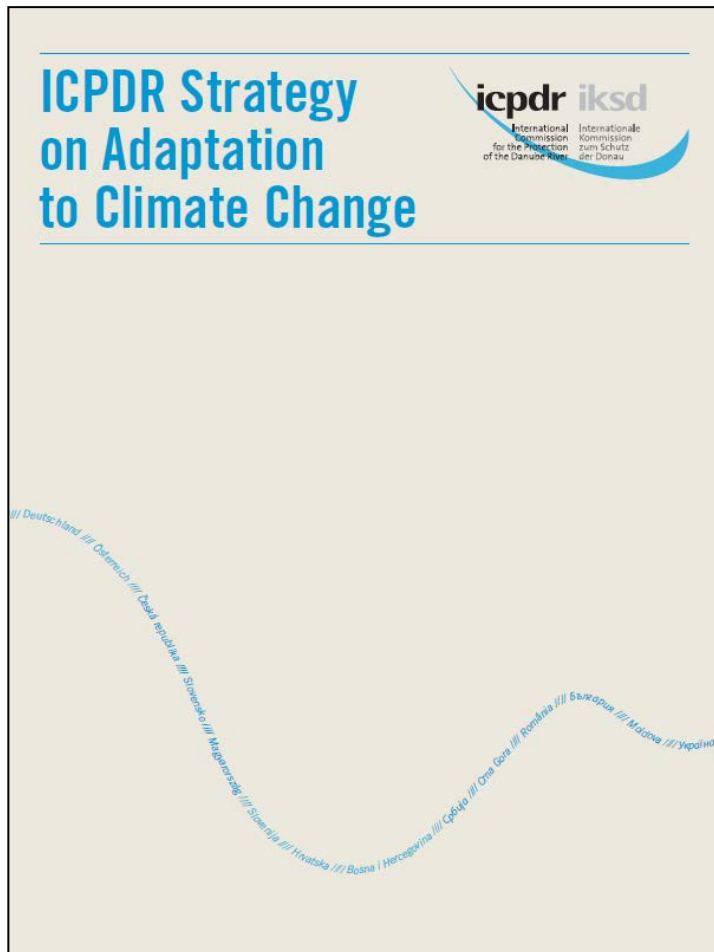
Step 4 (until 2015)

Implementation of Strategy

- Creation of common knowledge base
- Summary of existing information on expected impacts and possible adaptation measures
- Presentation and discussion of Study results
- What is relevant for basin-wide level?
- First discussions on contents of Strategy
- Elaboration of Strategy developed with input from different experts
- Adopted in December 2012
- Making Strategy operational
- Implementation in 2nd Danube River Basin Management Plan and 1st Danube Flood Risk Management Plan

Danube Climate Adaptation Strategy

Main elements



Chapters:

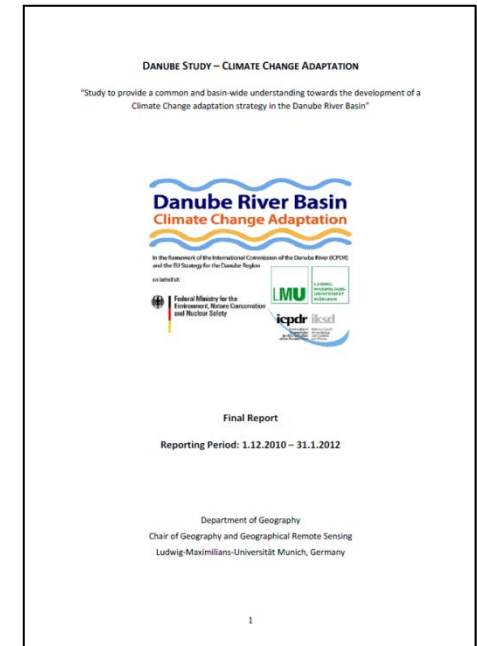
1. Introduction
2. Framework conditions
3. Climate change scenarios
4. Water-related impacts
5. Vulnerability
6. Overview of possible adaptation measures
7. Guiding principles on adaptation and integration into ICPDR activities
8. Next steps

Some key challenges and ICPDR approach (1/4)

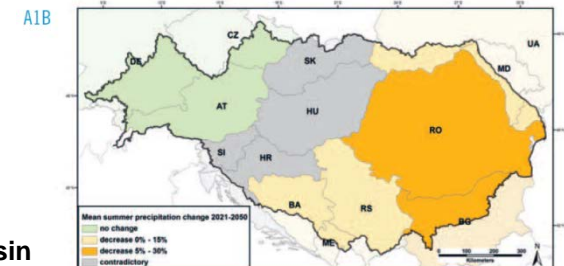
Challenge: Heterogenic knowledge base

Approach:

- STUDY, summarising and assessing all existing information on climate change and adaptation for the whole basin
- Discussion in international workshop with interdisciplinary team for creation of common understanding on basin-wide scale and acceptance of results
- Basis for elaboration of STRATEGY



2021 - 2050



Example: Scenario for precipitation for the Danube River Basin

Some key challenges and ICPDR approach (2/4)

Challenge: What is relevant to be coordinated on basin-wide level?

Approach:

- Based on study results, discussion on issues relevant to be coordinated on basin-wide scale or national level

Result	Working Group 2		Working Group 1	
Field	Basin-wide level	National level	Basin-wide level	National level
Floods	6	9	10	6
Droughts/low flows/water scarcity	14	9	8	9
Biodiversity/ecosystems	7	4	5	1
Water quality	8	0	4	4
Water related energy production	0	3	4	2
Water use	-	-	4	1
Water availability	2	0	2	3
Navigation	5	3	2	3
Agriculture	2	7	2	2
Land use	5	4	2	1
Irrigation	0	4	1	3
Water regime	-	-	1	1
Air temperature	-	-	1	1
Limnology	0	0	1	1
Forestry	1	0	1	1
...



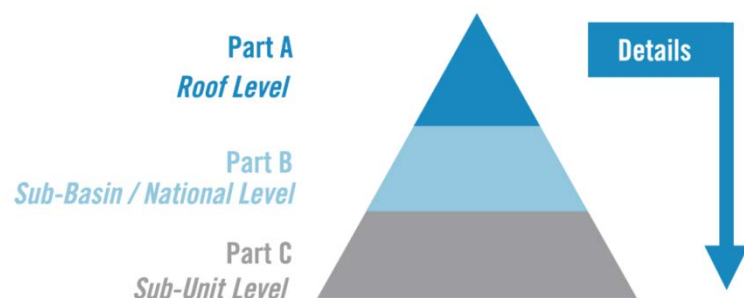
Discussion at workshop on issues relevant for basin-wide or national level

Some key challenges and ICPDR approach (3/4)

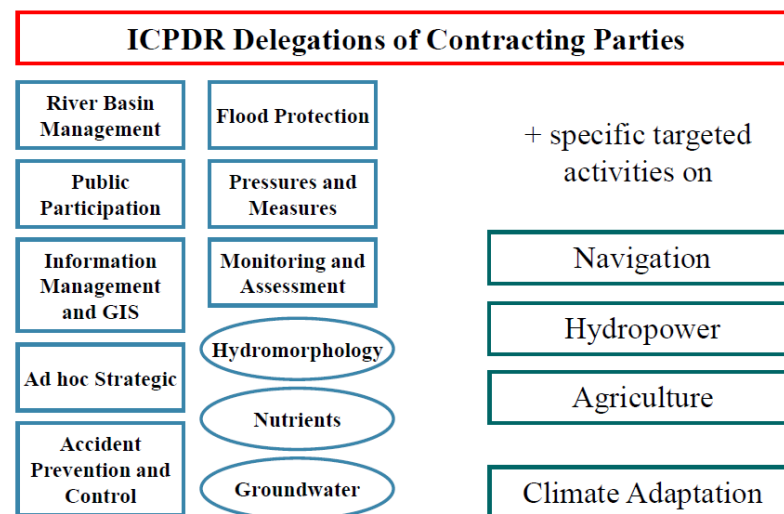
Challenge: Coordination between different sectors and different levels of management

Approach:

- Making use of existing structures and water management instruments for coordination already required by IWRM and incorporation of climate change



Coordination between international, national and sub-national level



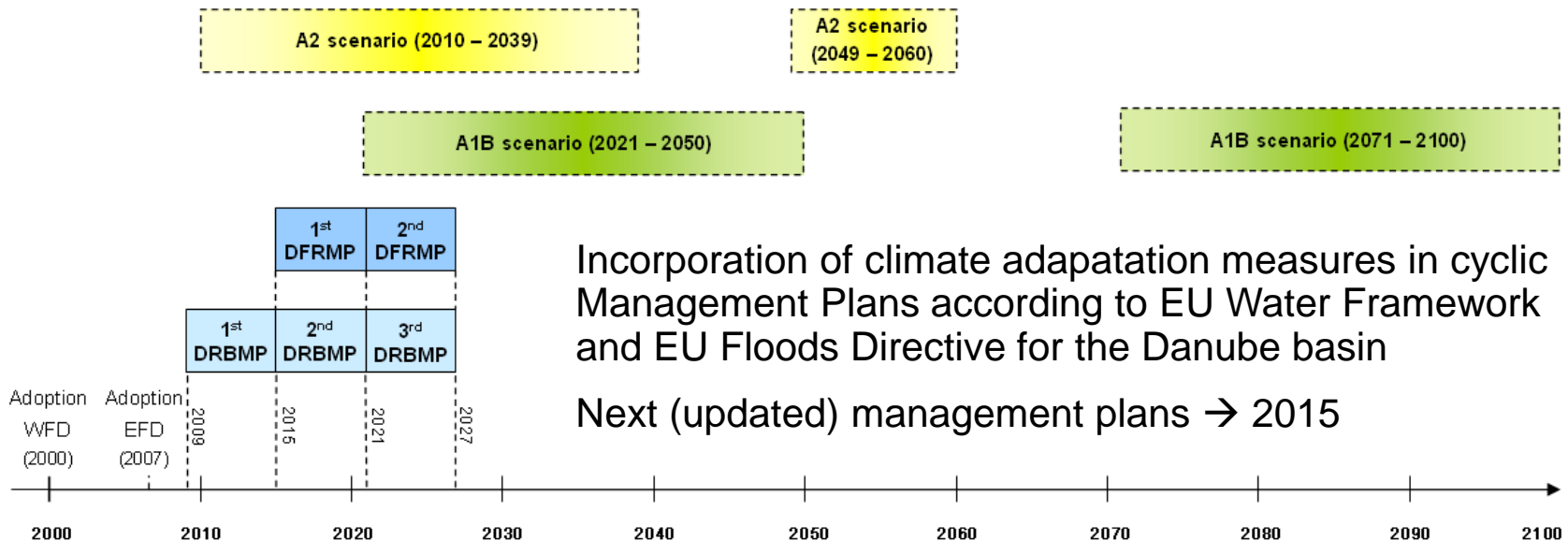
Mainstreaming of adaptation in different expert bodies and working groups

Some key challenges and ICPDR approach (4/4)

Challenge: What can be achieved in first step under existing uncertainty?

Approach:

- Step-wise and cyclic approach - 6-years planning cycle according to Management Plans of EU Water Framework and EU Floods Directive
- Update of Strategy in 2018 (2012 + 6 years)



Lessons learned

- Clear **political commitment crucial** for working on the issue
- **Joint understanding** (i.e. on scenarios and related impacts) and shared knowledge base is essential for **joint decision making** in a trans-boundary basin
- Making best use of **existing structures** and water management instruments
- Coordination requirements – climate change is cross-cutting issue (like IWRM), requiring **interdisciplinary approach**
- **Decision making process** on adaptation measures to be **embedded** in different (water management) disciplines but **exchange and coordination** has to be ensured
- Not all problems can be solved immediately (uncertainties, knowledge gaps, etc.), suggesting a **step-wise and adaptive approach**

Thank you for your kind attention!

ICPDR Climate Adaptation Strategy available at

<http://www.icpdr.org/main/activities-projects/climate-adaptation>

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**“Water and its availability and quality will be
the main pressures on, and issues for, societies
and the environment under climate change”**

(IPCC Technical paper “Climate Change and water”, June 2008)