

---

# Dynamic integrated management **ICPDR** **IKSD** with regard to climate change

---

Experiences from the Danube River Basin



ICPDR  
Edith Hödl  
Bratislava, 3 November 2016

# Danube River Basin



---

# ICPDR priorities

---



## 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**

---

# Contracting Parties

---



Germany



Austria



Czech Republic



Slovakia



Hungary



Slovenia



Croatia



Bosnia & Herzegovina



Serbia



Montenegro



Romania



Bulgaria



Rep. of Moldova



Ukraine



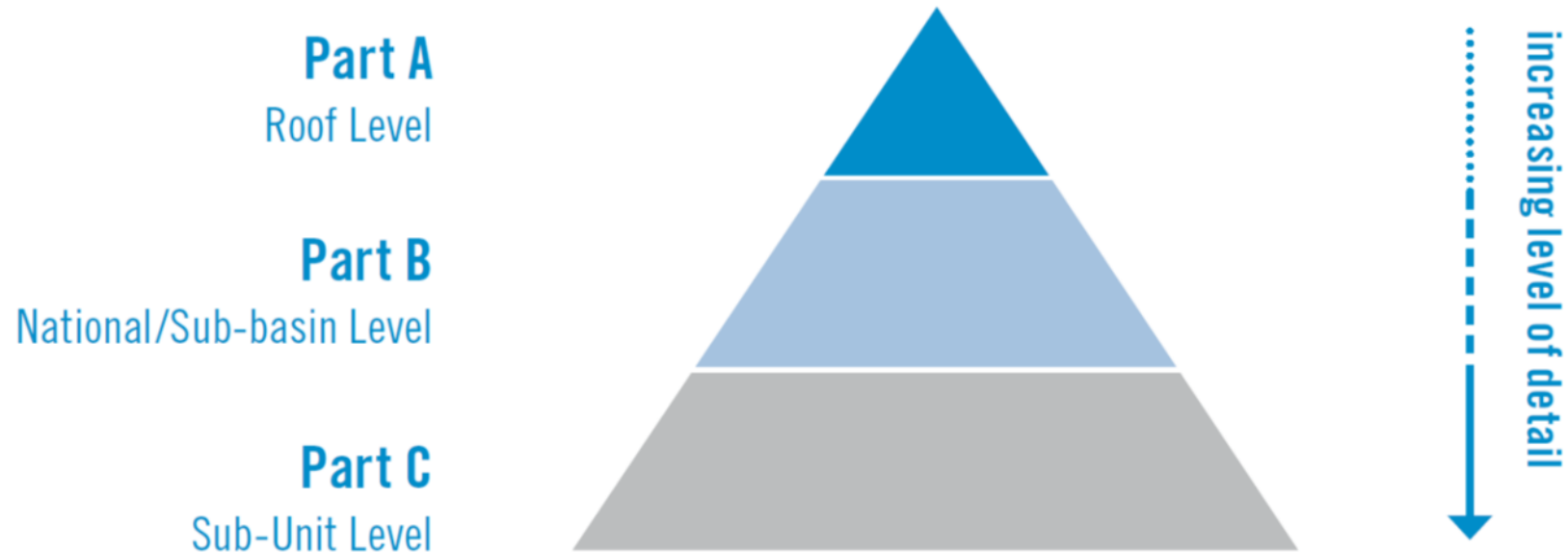
European Union



---

# Role of ICPDR regarding EU Directives (WFD & FD)

---



**Part A:** Danube River Basin = ICPDR

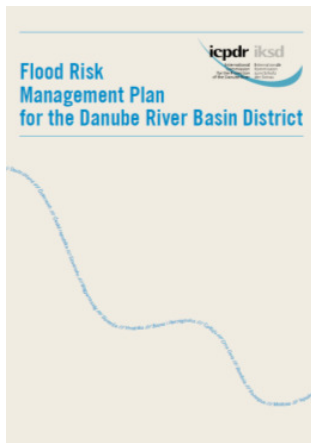
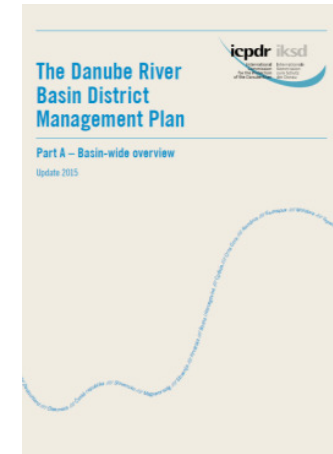
**Part B:** Countries, bi-lateral, sub-basin organisations

**Part C:** Management units within country

# Two Management Plans for the Danube River Basin



Danube River Basin Management Plan Update 2015

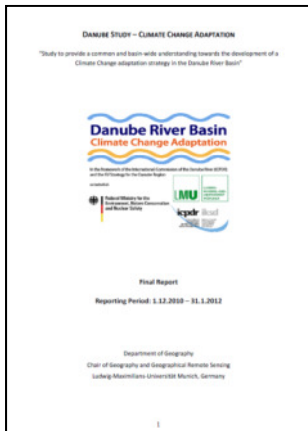


1st Danube Flood Risk Management Plan



Plans cover water scarcity, droughts & climate change

# Towards a basin-wide Climate Change Adaptation Strategy



## Danube Climate Change Adaptation Study

- Summarising all existing scientific and research studies
- Knowledge base on impacts & possible adaptation measures

1



## Workshop

- Broad discussion with countries and stakeholders
- Acceptance of results on basin-wide level

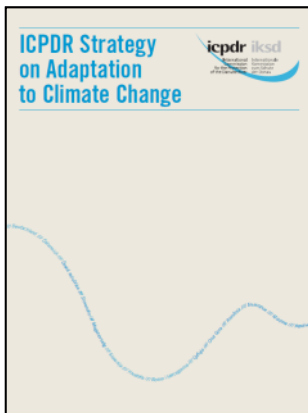
2



## Climate Change Adaptation Strategy

- Jointly elaborated with input from ICPDR Expert Groups
- Building on existing structures and water management planning instruments (fed into **DRBM Plan Update 2015**)

3



# National Adaptation Strategies & National Management Plans





---

# Next Steps

---

1



2



3

## ▪ **Update scientific knowledge base 2017**

- Latest research studies on CC for Danube River Basin
- Update climate change scenarios and water-related impacts, particular focus on drought, low water, irrigation and agriculture
- Update potential adaptation measures

## ▪ **Update ICPDR CC Adaptation Strategy 2018**

- Based on updated scientific knowledge base
- Refinement of strategic approach and potential adaptation measures including consideration of 2015 droughts

## ▪ **Integration of climate change in Plans 2021**

River Basin and Flood Risk Management Plans

---

# Drought in the Danube River Basin

---



## ▪ Droughts 2015 in the Danube Basin

- Impacts on economic sectors, vegetation and environment
- December 2015, Danube Ministerial Declaration 2016: HoDs asked to elaborate Report on the 2015 drought - impacts, measures, lessons learned

## ▪ Conclusions

- Drought management on national level, coordinated with WFD/FD
- Improved drought monitoring and data collection
- Drought impacts on agriculture including advanced technologies for irrigation and for improved nutrient management
- Greater application of conjunctive use of groundwater and surface water as a part of national drought management
- Exchange and cooperation

---

# Key messages

---



- Sound, institutionalised water management is a key to climate change adaptation
- ICPDR countries use their River Basin & Flood Risk Management Plans to address water scarcity, droughts and climate change pressures
- A cyclical, adaptive approach is needed to continuously address uncertainties and new scientific findings



