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# ICPDR Strategy on Adaptation to Climate Change

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## Short summary

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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). Around two third of the global landmass is located within transboundary river basins, requiring transboundary cooperation and coordinated adaptation actions towards the achievement of the Sustainable Development Goals. The Danube, which is the most international river basin in the world, recognised this need and took important and necessary adaptation steps.

The International Commission for the Protection of the Danube River (ICPDR) was asked by the Ministers of the Danube countries in 2010 to prepare the first transboundary Climate Change Adaptation Strategy for the whole basin. The Strategy was finalised and adopted in December 2012<sup>1</sup>, an is based on a scientific research study which summarises all relevant information on climate change and expected impacts on water for the Danube River Basin.

The Strategy is currently under implementation, whereas the most important tools for taking the required adaptation measures are the international Danube River Basin Management and Danube Flood Risk Management Plans. Drafts for both plans are currently in public consultation and will be finalised and adopted in December 2015.

## Key words:

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*Climate change adaptation; water; Danube; transboundary cooperation; river basin management; flood risk management; integrated water resources management.*

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<sup>1</sup> Available at <http://www.icpdr.org/main/activities-projects/climate-change-adaptation>

## Issues addressed:

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### **Water resources management (water-use efficiency, integrated water resources management, transboundary cooperation, sustainable extraction and supply of freshwater)**

Water is a key issue affected by climate change. Adaptation is required, posing a specific challenge for transboundary river basins. The ICPDR developed its first Climate Change Adaptation Strategy, taking climate change adaptation on board in integrated water resources management on the basin-wide level.

### **Water quality (pollution, dumping of toxic materials, wastewater management, recycling, reuse, restore ecosystems and aquifers)**

The main tool for taking the required climate change adaptation measures is the River Basin Management Plan, including a Joint Program of Measures agreed by the Danube countries. The Plan is updated every 6 years and includes measures for pollution reduction and improvement of ecosystem resilience.

### **Risks (mortality, economic losses caused by natural and human-induced disasters)**

A draft for the first Danube Flood Risk Management Plan for the whole Danube River Basin is currently in public consultation and will be finalised and adopted in December 2015. The draft Plan includes measures for the reduction of risks from floods, what is inter alia a key measure towards adapting to risks imposed from climate change.

## Tools for implementation:

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### **Governance: Institutions / legal framework**

Fourteen countries and the European Union are cooperating on the sustainable management and wise use of the Danube River Basin waters. The cooperation is based on the Danube River Protection Convention from 1994. Since the year 2000, the ICPDR is the coordination platform for the implementation of the EU Water Framework Directive and since 2007 for the EU Flood Risk Management Directive. The related management plans and existing water management instruments are the key tools for adapting the water sector to climate change. The plans are regularly updated every 6 years, allowing for an adaptive approach for adaptation based on the ICPDR Climate Change Adaptation Strategy.

### **Capacity development**

A joint understanding on the issue is key for joint actions on adaptation to climate change. For this reason the ICPDR elaborated a research study, summarising all relevant scientific information on climate change and expected impacts in the basin. The study was broadly discussed with stakeholders, researches and water managers of the Danube countries, providing a basis for the

elaboration of the ICPDR Climate Change Adaptation Strategy. The elaboration process was instrumental for capacity development on climate change adaptation in the basin.

#### **Who is involved?**

- Water management administrations
- Researchers
- Stakeholders
- NGOs

#### **What were the objectives of the intervention?**

- Reduction of risk imposed by climate change
- Securing access to sufficient water in good quality also under climate change
- Taking the first important and strategic steps towards adapting the Danube River Basin to climate change

#### **Implementation challenges**

- Different starting points and socio-economic backgrounds of countries within the basin
- Heterogeneity of available scientific information on climate change
- Pioneer work which was needed for the elaboration of the first climate change adaptation strategy of a transboundary river basin

#### **Main task/activities undertaken / Tools used**

- Research towards the elaboration of a joint scientific basis
- Meetings and workshops for stakeholder involvement and the generation of a shared understanding within an international river basin
- Making use of existing structures and water management instruments for climate change adaptation
- Transboundary and integrated river basin management and flood risk management plans
- Intersectoral cooperation

#### **Main outcomes / impacts (what has changed?)**

- Research study on climate change and adaptation for the Danube River Basin
- First Climate Change Adaptation Strategy for the Danube River Basin
- Improved understanding on climate change, expected impacts and possible adaptation measures
- Shift towards closer look at water quantity issues, i.e. water scarcity and drought
- Water management plans are currently updated and adapted, taking on board the issue of climate change and adaptation measures towards reducing risks imposed by climate change and improvement of ecosystem resilience

# Lessons Learned:

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## Triggers:

- Danube Ministerial Conference from 2010, where decision was taken to elaborate the first Climate Change Adaptation Strategy

## Drivers:

- Increased risk and significant threat imposed by climate change on the Danube River Basin
- Global discussion on climate change

## Barriers:

- Scientific uncertainties and knowledge gaps on climate change and expected impacts
- Lack of capacity and practical experience with regard to climate change and adaptation

## What has worked well?

- Political commitment from Danube countries
- Generation of joint understanding within the basin based on summarising research study
- Use of existing material and guidance documents on climate change and adaptation (e.g. from the EU and UNECE)
- Elaboration of Climate Change Adaptation Strategy and incorporating climate change adaptation in existing transboundary water management structures for the Danube River Basin

## What can be improved?

- Closing of knowledge gaps
- Further exchange and capacity building on climate change and adaptation is needed

## The way forward:

- Incorporating climate change in Danube River Basin Management and Danube Flood Risk Management Plans by December 2015
- Planned update of ICPDR Climate Change Adaptation Strategy in 2018

## Links:

The research study and ICPDR Climate Change Adaptation Strategy can be downloaded from the ICPDR website:

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