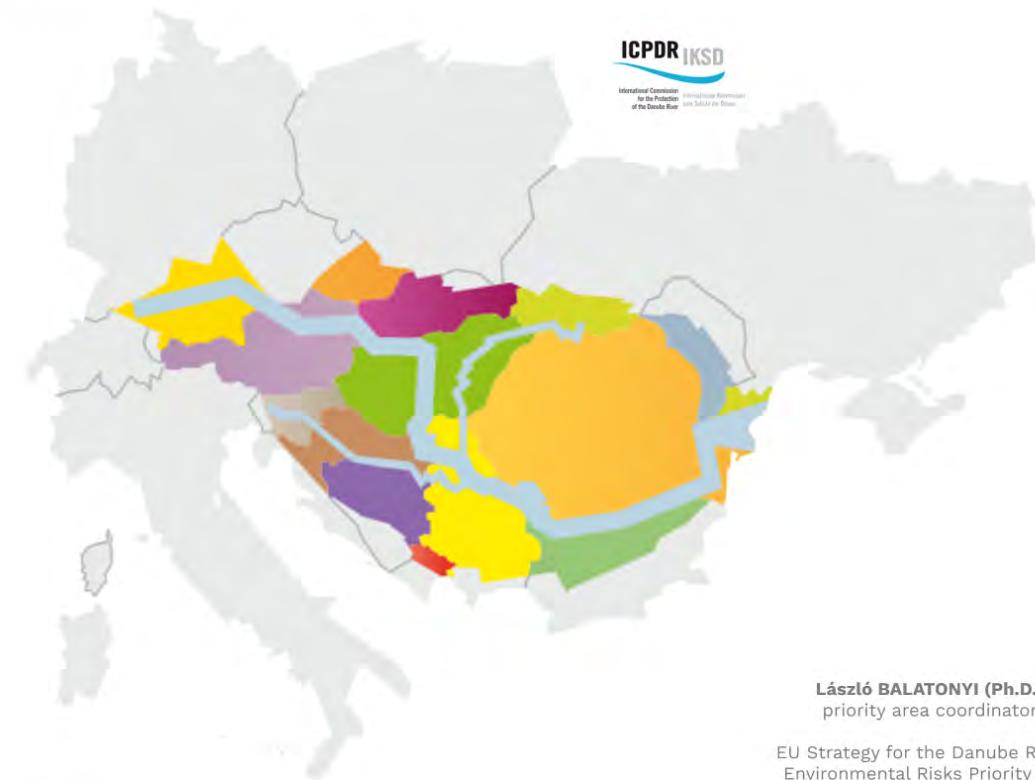


# Managing environmental risk in the Danube basin with a focus on water scarcity and drought



Project co-financed by European Union fund (ERDF) and Hungary



International Commission  
for the Protection  
of the Danube River

László BALATONYI (Ph.D.)  
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EU Strategy for the Danube Region  
Environmental Risks Priority Area  
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# Danube River Basin



## **Basic**

## Floods

## Drought

## **Basic characteristics of the Danube River basin district**

- second largest river basin
- world's most international river basin
- 19 countries
- ecosystem
- increasing pressures

# Danube River Basin

Danube River Basin District: Overview



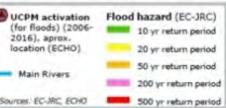
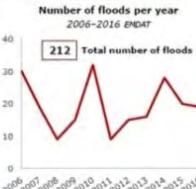
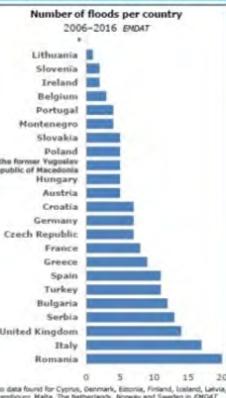
Basic

Floods

Drought

# Floods

Emergency Response Coordination Centre (ERCC) – ECHO Daily Map | 23/02/2017  
**Floods Events in Europe: UCPM activations from 2006 to 2016**



In recent years, most notably in 2002, 2006, 2013 and in the summer of 2014, parts of the Danube River Basin District were being affected by very strong or extreme flooding events. These events, with return periods of up to 100 years and above, caused significant human and economic damages in the affected countries and communities.

In 2006, 4 casualties were reported in the Czech Republic and Slovakia, and the costs and damages amounted to almost 600 million Euro in the whole basin. In 2010, there were 35 casualties, and damages of around 2 billion Euro occurred

# Danube River Basin

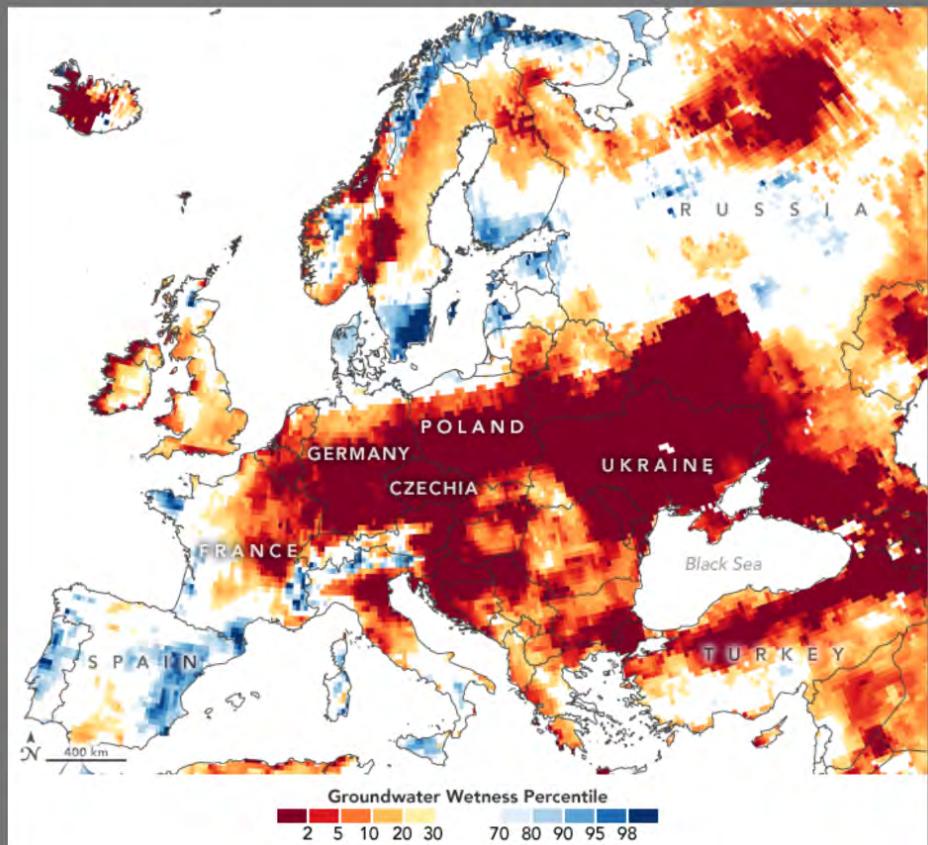


## Basic

## Floods

## Drought

## Water scarcity / Drought



Source:

NASA Earth Observatory images by Lauren Dauphin, using GRACE data from the National Drought Mitigation Center. Story by Michael Carlowicz, with assistance from Matt Rodell (NASA GSFC).

# Danube River Basin

Danube River Basin District: Overview



Basic

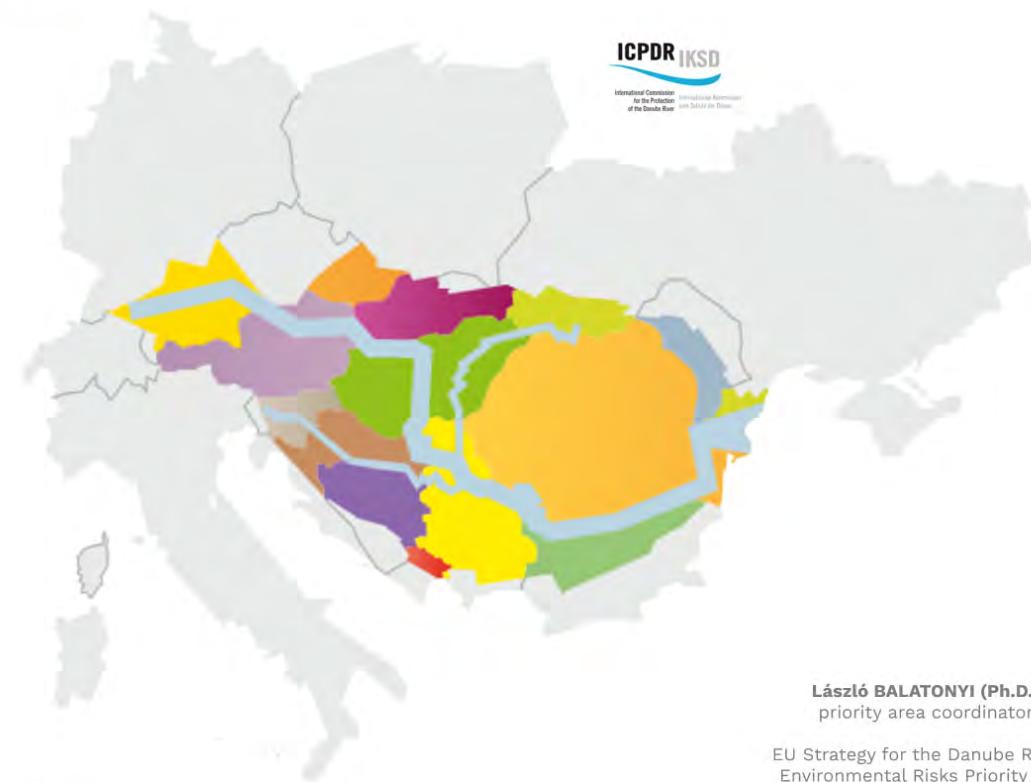
Floods

Drought

## Managing environmental risk in the Danube basin with a focus on water scarcity and drought



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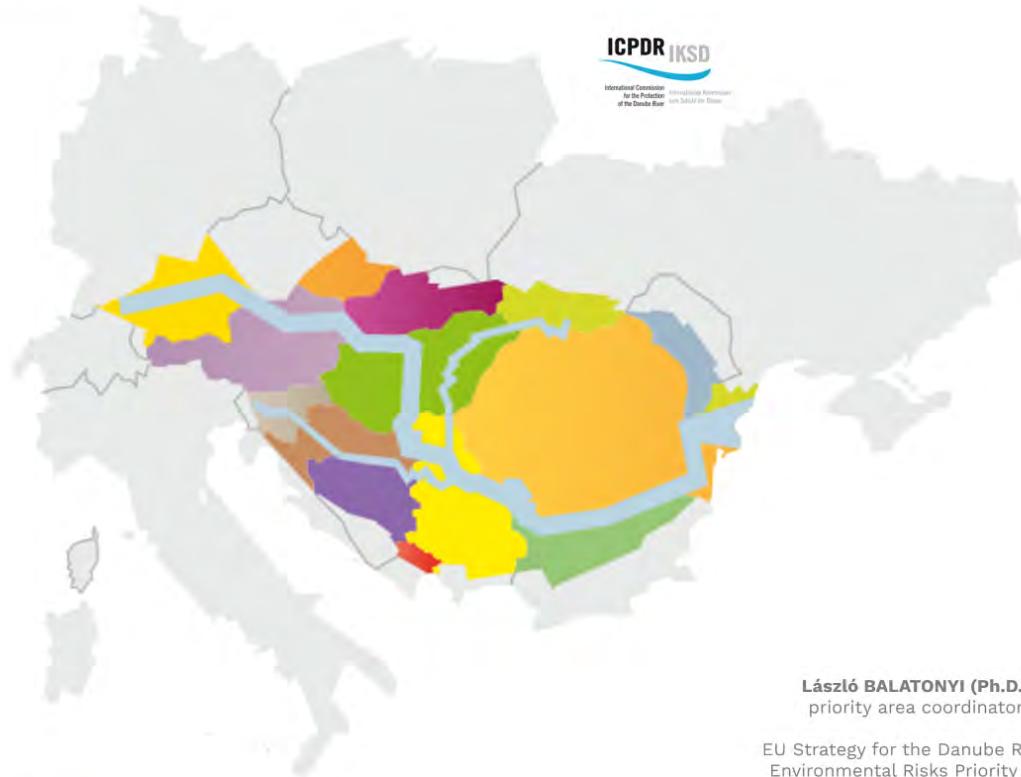


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## Managing environmental risk in the Danube basin with a focus on water scarcity and drought



DRB

EUSDR  
PA5



Project co-financed by European Union fund (ERDF) and Hungary



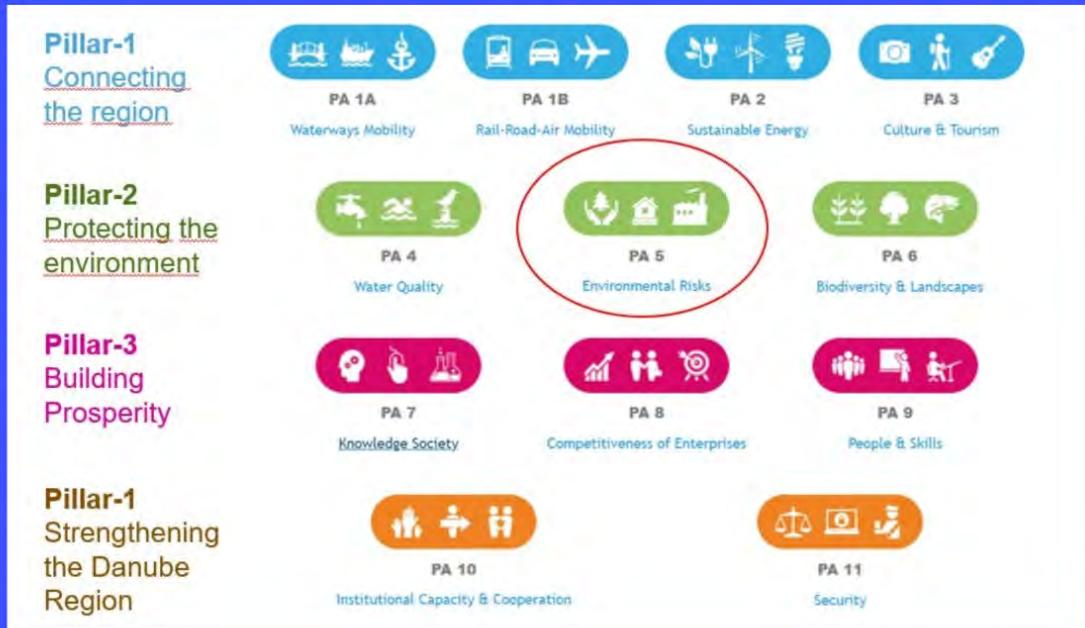
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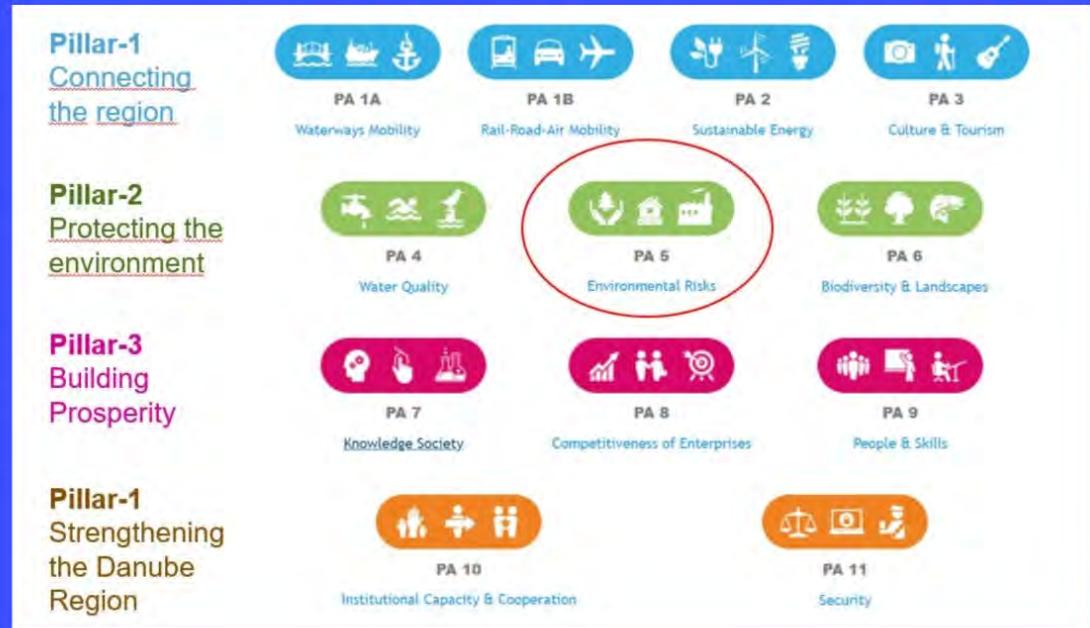


# EU Strategy for the Danube Region

EUSDR  
PA5



# EU Strategy for the Danube Region



EUSDR  
PA5

**HU Coordination**  
Ministry of Foreign Affairs and Trade  
Mr Laszlo BALATONYI, PhD  
Priority Area Coordinator

**RO Coordination**  
Ministry of Water and Forests  
Mr Gheorghe CONSTANTIN  
Priority Area Coordinator

# to manage environmental risks

Water Enhancement

Hydrologic Data

Flood Prevention

Disaster Management

Water Management

Floodplain

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# to manage environmental risks



# to manage environmental risks



# to manage environmental risks

Tasks

Waterscarcity

Water Enhancement

Hydrologic Data

**“To manage the environmental risks”**

**Drought Risk Management**

Flood Prevention

Disaster Management

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Applying for LoR/LoM based on the interest results in appearance on the website, action plan review will consider new findings and new fields of interest of the projects in scope

Dissemination of the results, communicating findings via SG meetings and organized events, plus by website and articles

Embed the results into e.g. education, like via InterFloodCourse project or e-learning materials

Difficulties of different level of involved organisations - stakeholder involvement via EUSDR network

PA 05 Environmental Risks (Acronym: DTP-PAC2-PA5 )PAC project

**You can read more:**

**<https://environmentalrisks.danube-region.eu/>**

# to manage environmental risks

Tasks

Waterscarcity

Water Enhancement

Hydrologic Data

**“To manage the environmental risks”**

**Drought Risk Management**

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# to manage environmental risks



# Strategical project

Letter of Recommendation  
Letter of Merit

<https://environmentalrisks.danube-region.eu/projects/pa5-letter-of-recommendation-lor/>



The main objective of DriDanube project is to increase the capacity of the Danube region to manage drought related risks.

<http://www.interreg-danube.eu/approved-projects/dridanube>

Give more  
chance  
for your  
project  
idea!

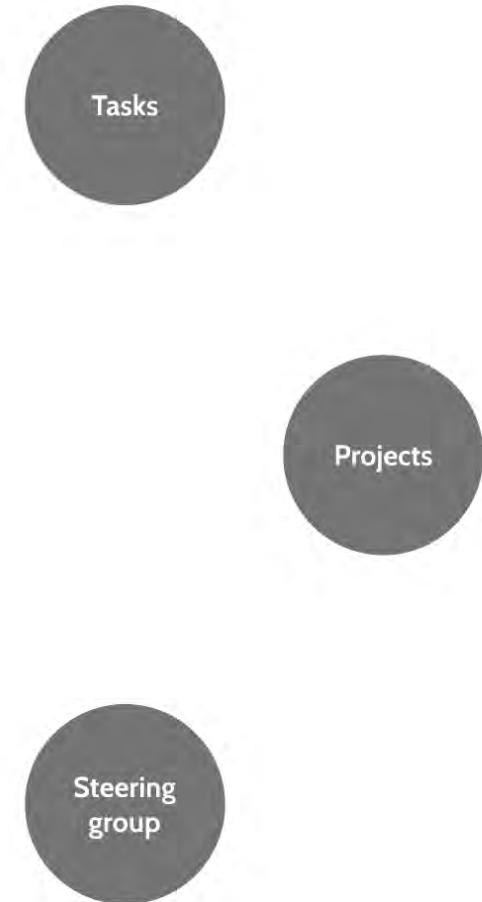


LETTER  
OF RECOMMENDATION  
FROM DANUBE  
REGION STRATEGY

# to manage environmental risks



# to manage environmental risks



# Strategical cooperation

# Strategical cooperation

Pilar-2

# Strategical cooperation

Pilar-2

European Commission  
(DG REGIO, ENVIRONMENT, CLIMA & ECHO)

# Strategical cooperation

Pilar-2

EU JRC

European Commission  
(DG REGIO, ENVIRONMENT, CLIMA & ECHO)

# Strategical cooperation

Pilar-2

Carpatian Convention

GWP (CEE)

ICPDR

EU JRC

European Commission  
(DG REGIO, ENVIRONMENT, CLIMA & ECHO)

# Strategical cooperation

Pilar-2

Carpatian Convention

GWP (CEE)

ICPDR

EU JRC

Western Balkan region

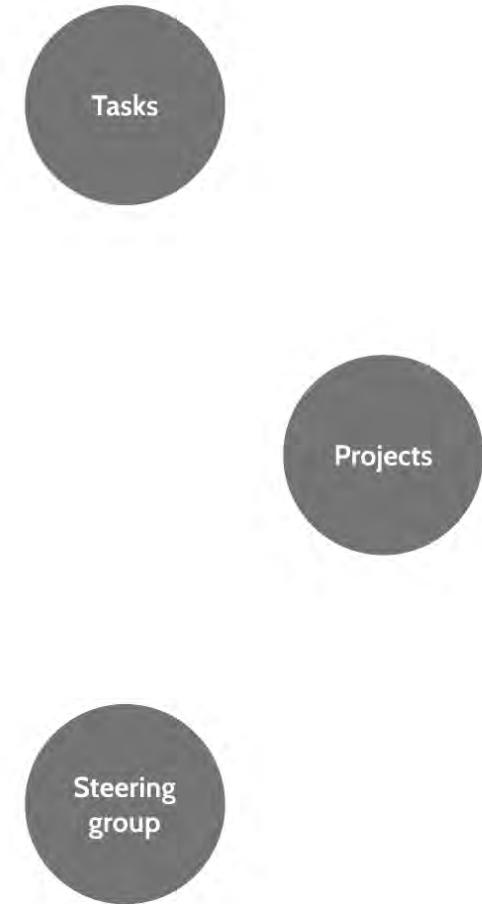
European Commission  
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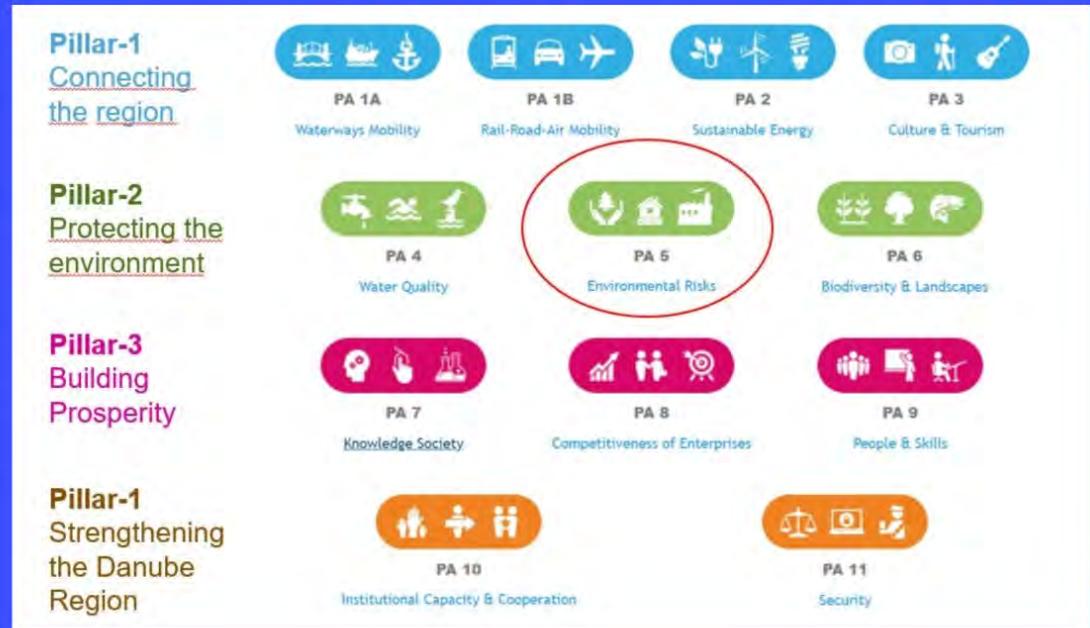


Pilar-2  
Carpatian Convention  
GWP (CEE)  
ICPDR  
EU JRC  
no EU countries  
Western Balkan region  
European Commission  
(DG REGIO, ENVIRONMENT, CLIMA & ECHO)

# to manage environmental risks



# EU Strategy for the Danube Region

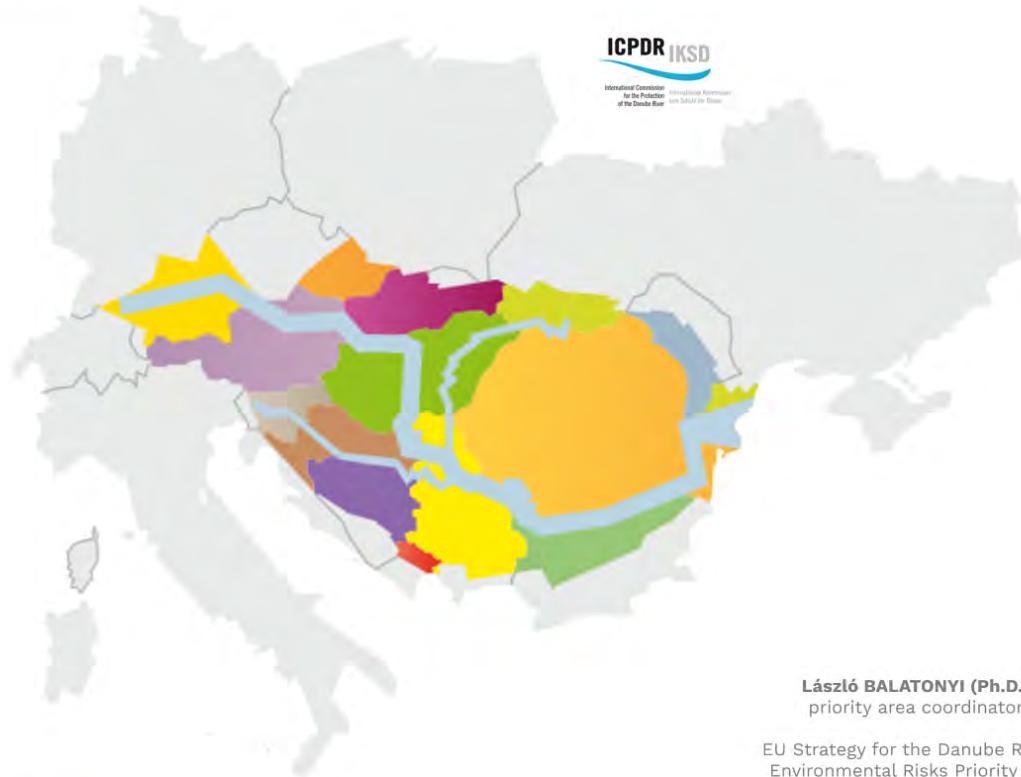


EUSDR  
PA5

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## Managing environmental risk in the Danube basin with a focus on water scarcity and drought



DRB

EUSDR  
PA5



Project co-financed by European Union fund (ERDF) and Hungary

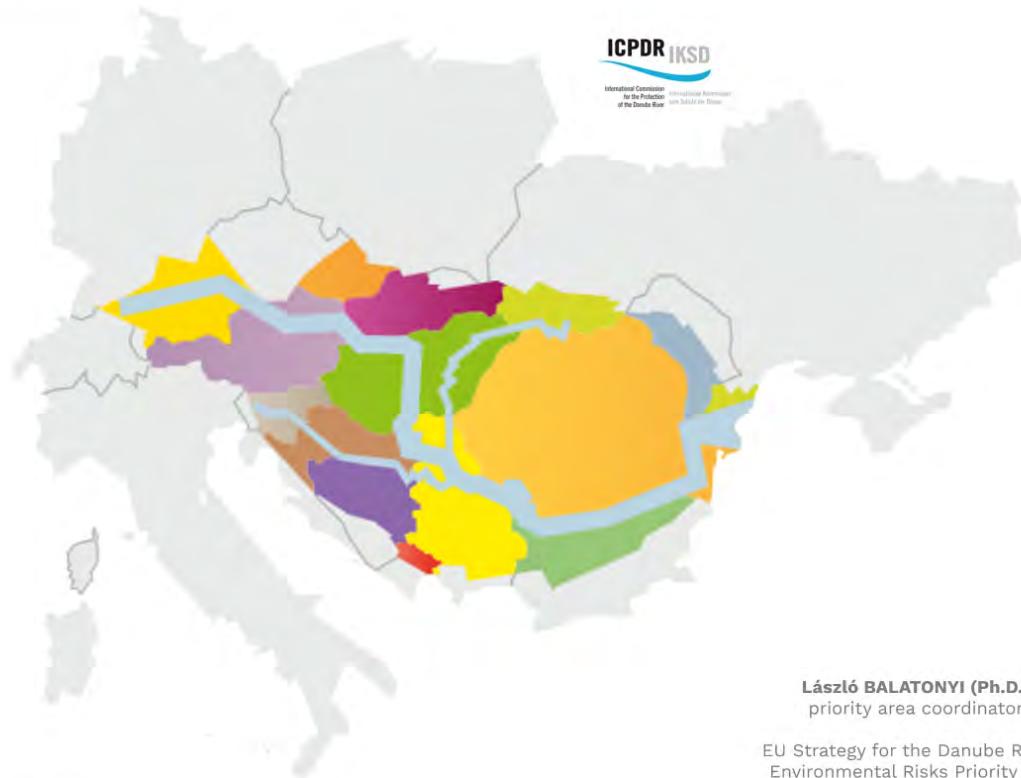


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## Managing environmental risk in the Danube basin with a focus on water scarcity and drought



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Project co-financed by European Union fund (ERDF) and Hungary



# Background

national drought policy processes

Policy  
Review

# Background

national drought policy processes

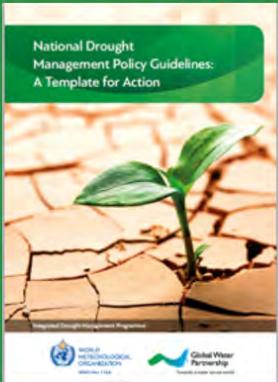


2015

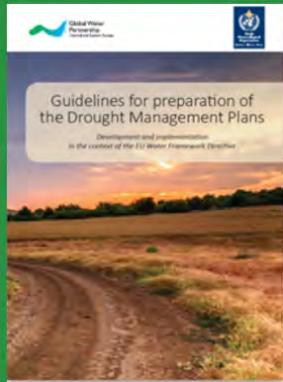
Policy  
Review

# Background

national drought policy processes



2015

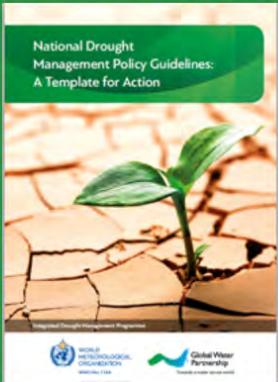


2018

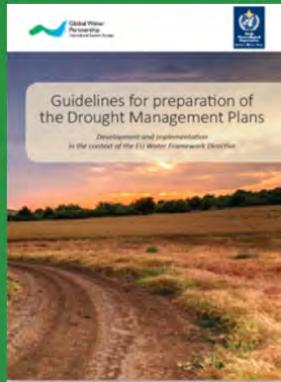
Policy  
Review

# Background

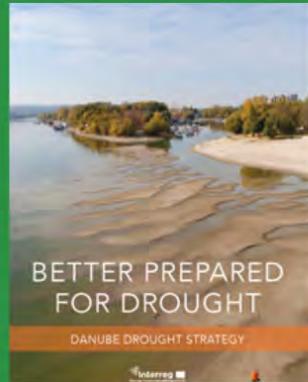
national drought policy processes



2015



2018



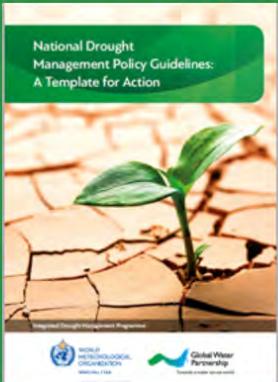
2019

Policy  
Review



# Background

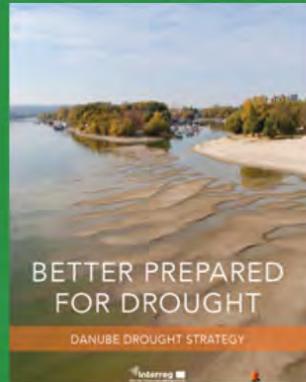
national drought policy processes



2015



2018



2019

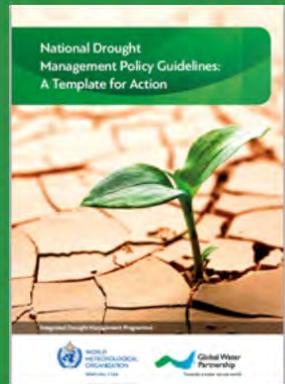
## Missing drought policies

Droughts addressed only partly in strategic documents, regulations, programs, etc.  
Lack of operational national drought management plans

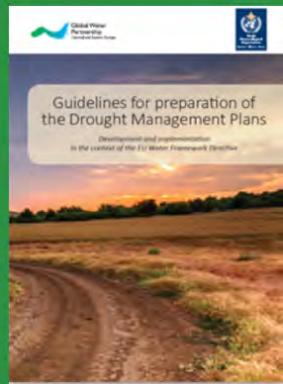
Policy  
Review

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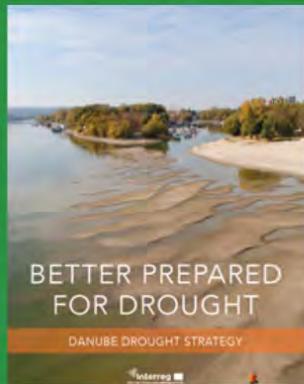
national drought policy processes



2015



2018



2019

## The need for action

- no EU directive or policy especially dedicated to drought
- current legislation, sectoral policies, and instruments (water, agriculture, climate change, energy, industry, transport, nature protection, and biodiversity) are partially related to drought management and can support drought management policies

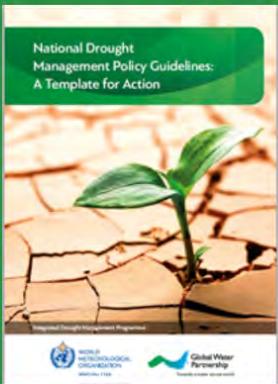
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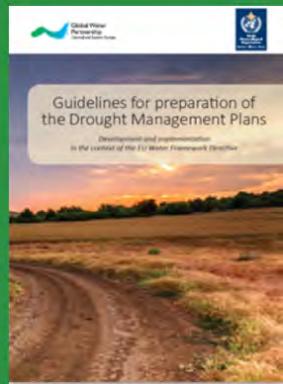
Policy  
Review

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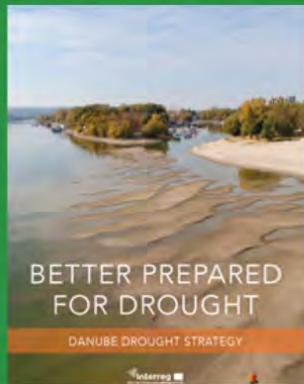
national drought policy processes



2015



2018



2019

Policy  
Review

2020

## The need for action

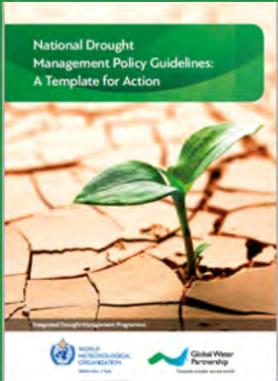
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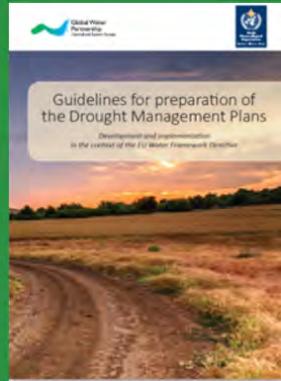
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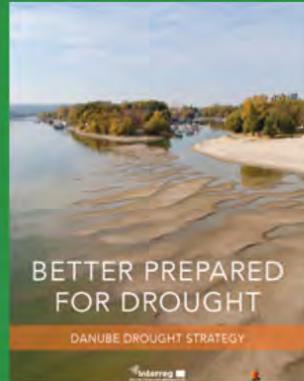
national drought policy processes



2015



2018



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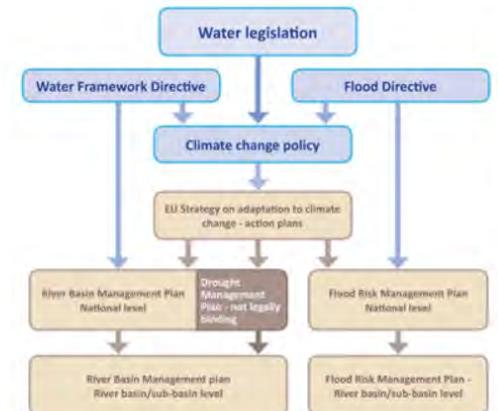
## Missing drought policies

Droughts addressed only partly in strategic documents, regulations, programs, etc.  
Lack of operational national drought management plans

# Main OBJECTIVE

to identify other EU policies

supporting to management of droughts



Methodology

# Methodology

EU policies, related to water, agriculture, climate change, energy, industry, transport, nature protection, and biodiversity

- monitoring
- incentives to water efficiency and circular economy
- knowledge and research
- measures to improve drought management and to develop drought management plans
- financial instruments

EU Policy/Regulation	Policy Instruments	EU Water Directive (2000/60/EC) and EU Environment and Climate Change Strategy (2011-2020)					
		Advising & Information	Setting Targets & Indicators	Setting Standards & Rules	Enforcement & Monitoring	Financial Instruments	Research & Innovation
<b>Water</b>							
Water Framework Directive (2000/60/EC)	Water Basin Management Plans	+	0	0	-	0	-
Flood Directive (2007/60/EC)	Water Risk Management Plans	0	-	0	0	-	-
Water Communications on water recycling and integrated water resources management (2010/31/EU) and the revision of the Water Policy (Circular 2010/75/EU)	Drought Risk Management Plans	+	+	+	+	0	-
Groundwater directive (2006/14/EC)	Water Basin Management Plans	0	0	0	0	-	-
<b>Climate Change</b>							
Regulation (EU) No 2015/1602 establishing the Circular Economy Programme	Circular Programme	+	-	-	-	-	-
General Union Environment Programme for 2010-2013, within the limits of our power	Water Framework Directive and the Environment and Climate Change Strategy	+	0	0	-	-	-
REGULATION (EU) NO 2015/1603 on a contribution of the Union to the financing of the Environment and Climate Change Strategy	Programme for the Environment and Climate Change Strategy (Circular 2014/2006)	-	-	0	0	-	-
Regulation (EU) No 2015/1604 on a mechanism for reporting information on greenhouse gas emissions and for reporting other information in individual and Union-level climate change	-	-	-	-	+	-	-
Regulation (EU) No 2015/1605 amending Regulation (EU) 2012/1250, on Union Emissions Trading System	-	-	0	-	-	-	-
COMMISSION REGULATION (EU) No 2015/1606 amending Regulation (EU) No 2012/1250 on the application of the rules for the calculation of the greenhouse-gas emissions from the energy sector	Directive 2009/29/EC	+	-	-	-	-	-
REGULATION (EU) No 2015/1608 establishing the Research Union Strategy	Competence Union Strategy Fund	-	-	-	-	-	+
DIRECTIVE (EU) 2015/1609 on a Union Emissions Trading System Mechanism	[Drought Risk Management Plans are not required for its operation if they are not considered as an incentive under the community rules]	+	-	0	+	0/+	-

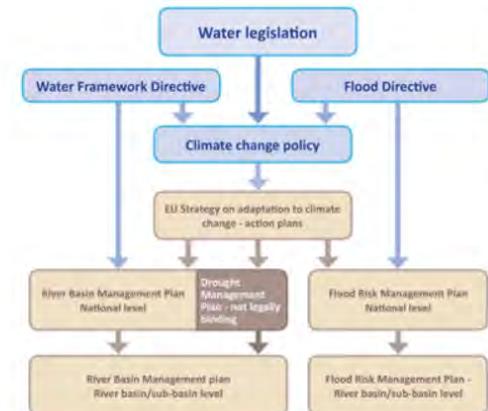
# Methodology

CIRCUIT COURT-100		EXISTING INFORMATION TECHNOLOGY ASSESSMENT	CIRCUIT COURT (CLUDING STATE AND LOCAL GOVERNMENT) INFORMATION TECHNOLOGY ASSESSMENT	CIRCUIT COURT (CLUDING STATE AND LOCAL GOVERNMENT) INFORMATION TECHNOLOGY ASSESSMENT				
		Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment
		Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment	Information & Assessment
<b>ASSESS</b>								
Miner Environment Division (MEND) (201)		Non-Basic Management Tools:	+	0	0	-	0	
		Basic Risk Management Tools:	-	-	-	-	-	
Flood Control (FC) (201)		Basic Risk Management Tools:	0	-	0	0	-	
		Advanced Risk Management Tools:	-	-	-	-	-	
West Environment, Safety and Health (WES) (201) (including a 201 review of the Governor's Workplace Injury Prevention Program (GWIP)) (201)		Permitting Risk Management Tools:	+	+	+	+	0	
		Basic Risk Management Tools:	-	-	-	-	-	
Emergency Services (EAS) (201)		Non-Basic Management Tools:	0	-	-	0	-	
		Basic Risk Management Tools:	-	-	-	-	-	
<b>Climate Change</b>								
Regulation (R) No. 17210046 establishing the Climate Programs		Operational Programs	+	-	-	-	-	
		Climate Initiatives	-	0	0	-	-	
General Risk Assessment, Action Planning, and Monitoring (GAP) (201) (including a 201 review of our plan for the protection of the public from the effects of climate change)		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	0	0	-	
		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	0	0	-	
Regulation (R) No. 17210047 on a mechanism for reporting information on greenhouse gas emissions and for reporting other information in relation to such emissions		-	-	-	-	4	-	
		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	0	0	-	
THE GOVERNOR'S CONCERN ON CLIMATE CHANGE (201) (including a 201 review of the Governor's Green Jobs Act (201), the Governor's Green Jobs Act (201), and the Governor's Green Jobs Act (201))		-	-	-	-	-	-	
		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	-	-	-	
REGULATION (R) No. 17210048 establishing the Governor's Green Jobs Act		-	-	-	-	-	-	
		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	-	-	-	
REGULATION (R) No. 17210049 establishing the Governor's Green Jobs Act		-	-	-	-	-	-	
		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	-	-	-	
REGULATION (R) No. 17210050 establishing the Governor's Green Jobs Act		-	-	-	-	-	-	
		Programmes for the Environment and Climate Action (ECA) - Climate Action Plan	-	-	-	-	-	
REGULATION (R) No. 17210051 on a basic risk management mechanism		Strategic Risk Management Plan	-	-	-	-	-	
		Draft Strategic Risk Management Plan	-	-	-	-	-	
REGULATION (R) No. 17210052 on a basic risk management mechanism		Strategic Risk Management Plan	-	-	-	-	-	
		Draft Strategic Risk Management Plan	-	-	-	-	-	

# Main OBJECTIVE

to identify other EU policies

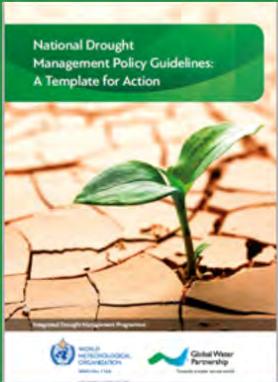
supporting to management of droughts



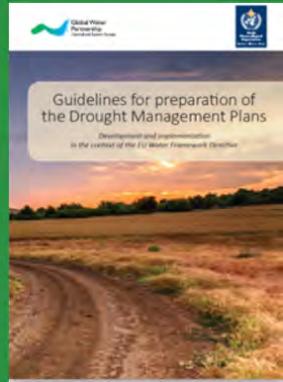
Methodology

# Background

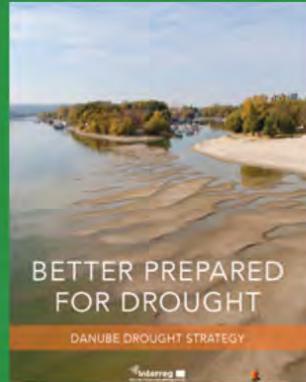
national drought policy processes



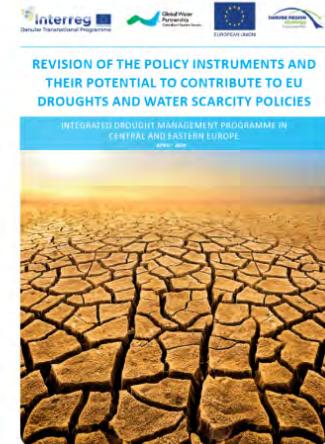
2015



2018



2019



2020

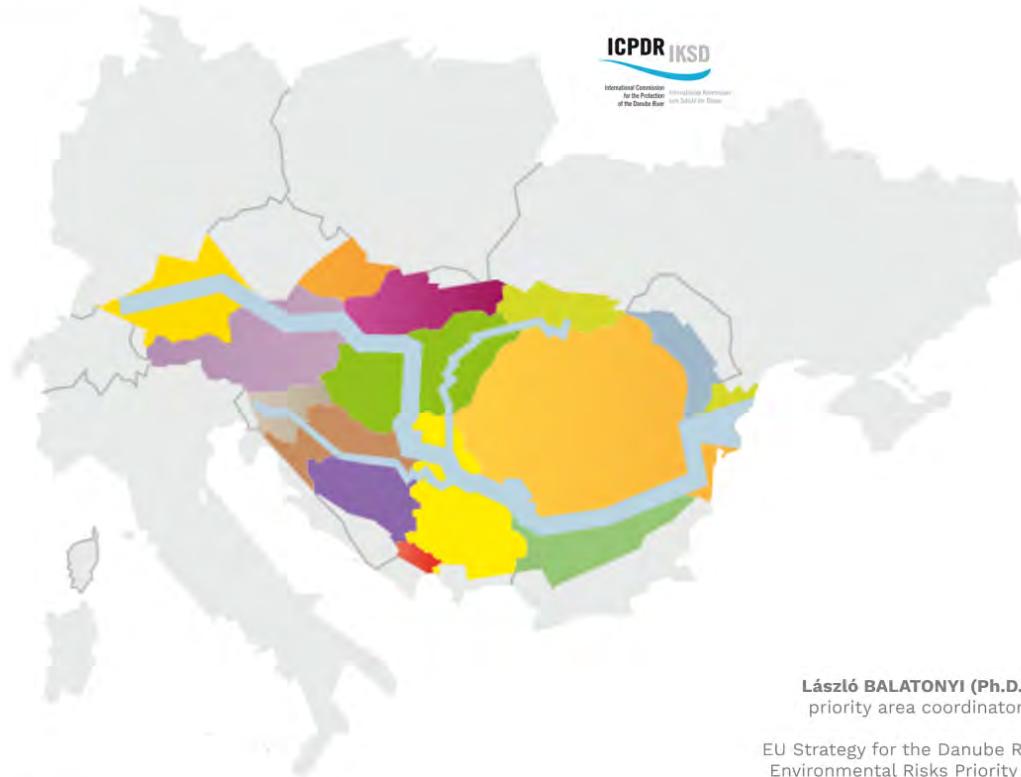
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Lack of operational national drought management plans

## Managing environmental risk in the Danube basin with a focus on water scarcity and drought



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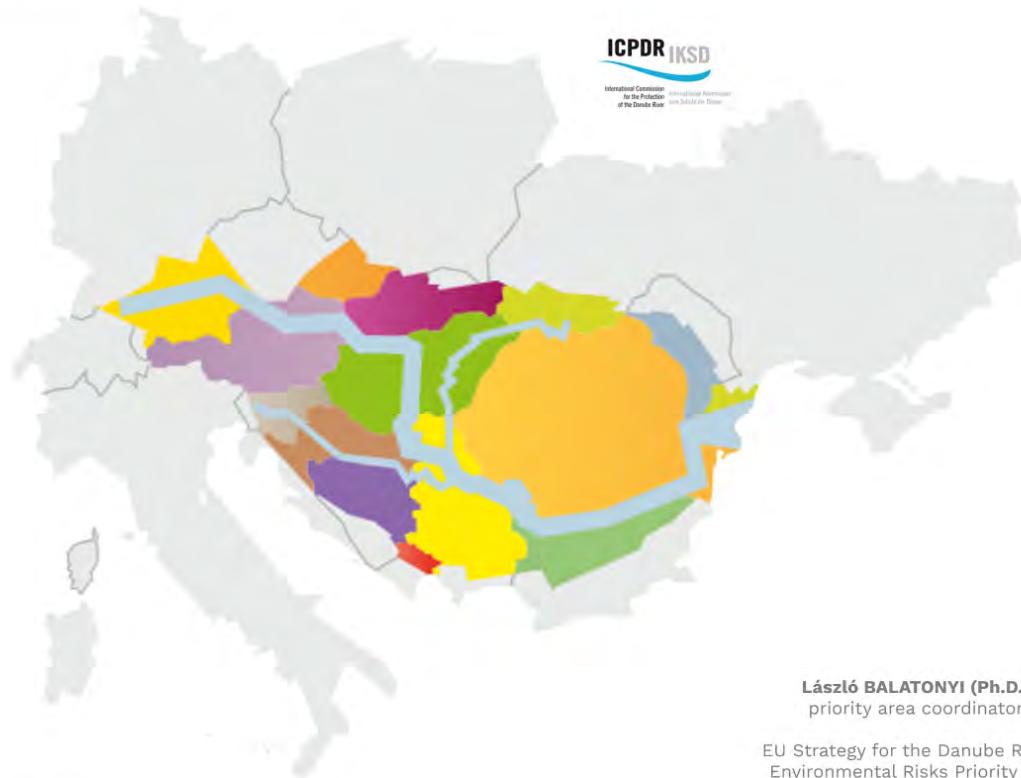
EU Strategy for the Danube Region  
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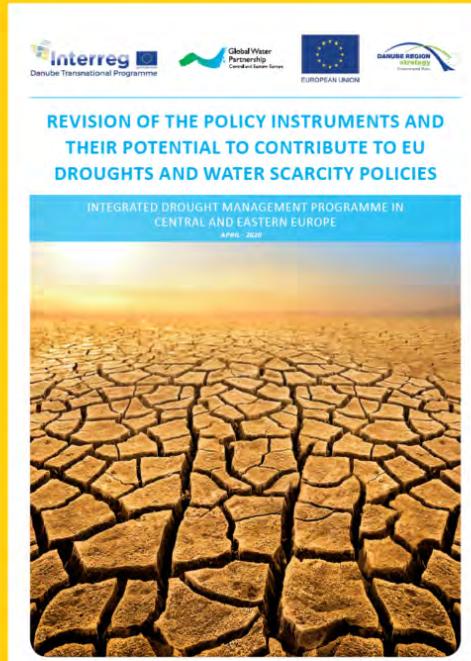
Project co-financed by European Union fund (ERDF) and Hungary



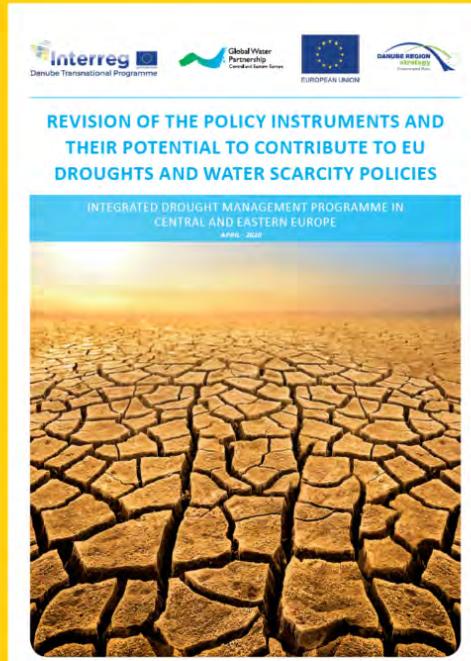
Thank you for your kind attention!



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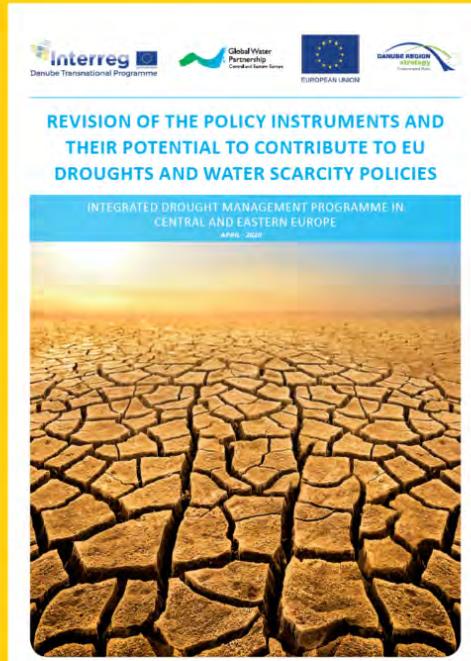
The policy review is available here:

<https://environmentalrisks.danube-region.eu/mdocs-posts/revision-of-the-policy-instruments-and-their-potential-to-contribute-to-eu-droughts-and-water-scarcity-policies/>

# Thank you for your kind attention!

## Developed by:

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