



# **The Sava Commission: Development and Challenges**

**Course "Transboundary water cooperation and international water law"**

Athens, 14-15 June 2016

Dr. Dejan Komatina,  
Secretary, ISRBC

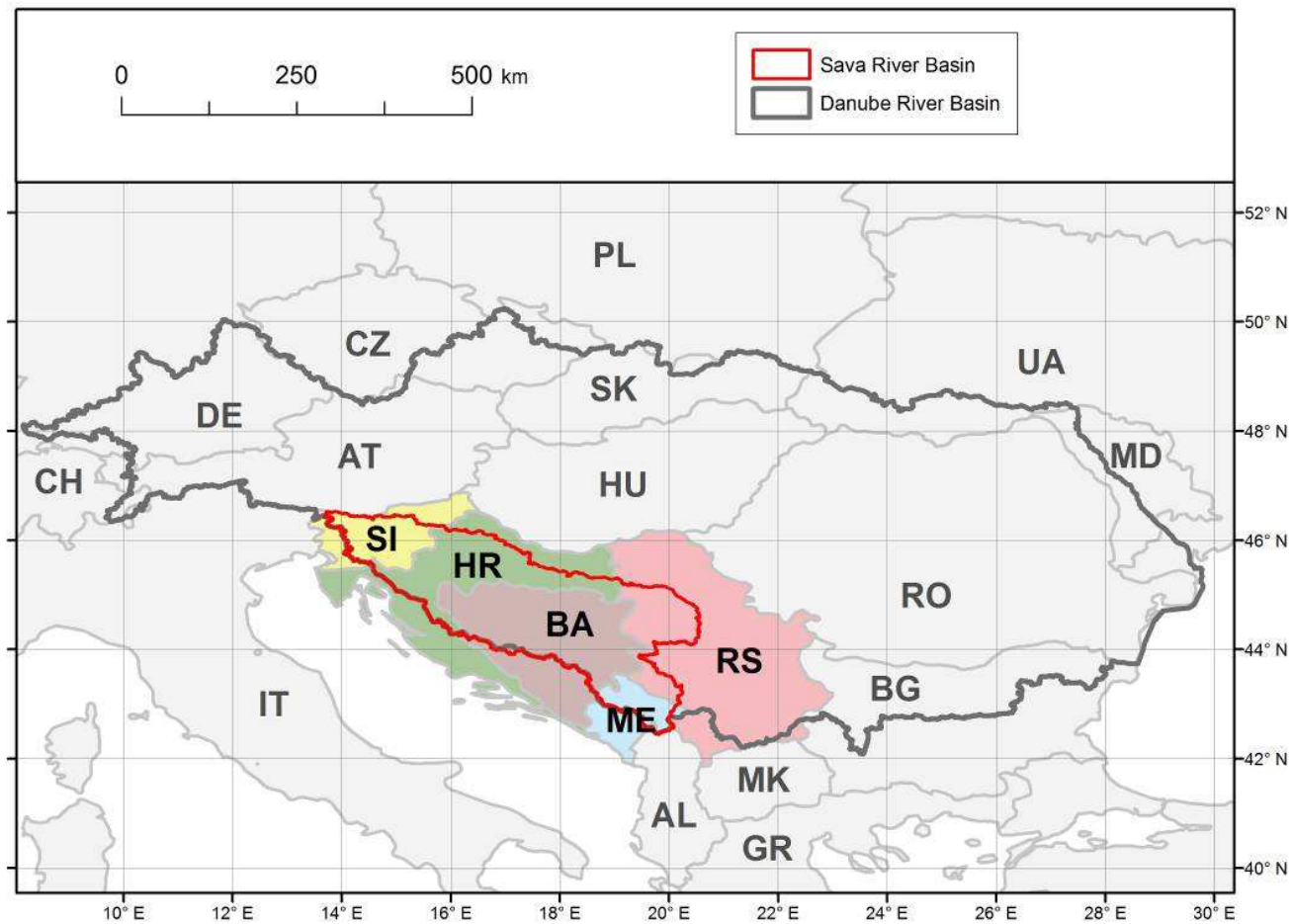
# Overview

- Introduction
- Background of cooperation
- Legal and institutional framework for cooperation
  - Framework Agreement on the Sava River Basin (FASRB)
  - International Sava River Basin Commission (ISRBC)
- Approach to cooperation
- Summary

# Sava river basin



# Sava river basin



# Sava river basin

- **Main geopolitical facts**

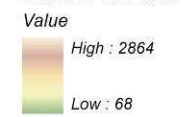
- **Area:** 97 713 km<sup>2</sup> (the second largest Danube sub-basin; share: 12%)
- **River length:** 990 km (~ 600 km of which is the waterway)
- **Population:** approx. 9 million

Country	Share of the basin (%)	Share of the territory (%)
Albania	0.2	0.6
Bosnia & Herzegovina	39.2	75.8
Croatia	26.0	45.2
Montenegro	7.1	49.6
Serbia	15.5	17.4
Slovenia	12.0	52.8

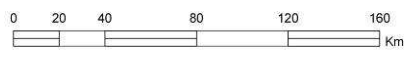
# Sava River Basin overview map



- Sava RB boundary**
  - State borders**
  - Urban areas**
    - Continuous urban areas
    - Discontinuous urban areas
    - Industrial or commercial units
    - Green urban areas
    - Sport and leisure facilities
    - Urban centers
  - Reservoirs** ( $V \geq 5$  mil m<sup>3</sup>)
  - Sava RB rivers**  
(*Catchments  $\geq 1000$  sq.km*)\*
    - Sava River
    - 1st order tributary
    - 2nd order tributary
    - 3rd order tributary
- \*except Sutla/Sotla, Lašva and Tinja



Data sources:  
 DEM data: The NASA Shuttle Radar Topographic Mission (SRTM) processed by the CIAT-CSI (<http://srtm.csi.cgiar.org>), USGS  
 CORINE land cover: EEA (<http://www.eea.europa.eu>)  
 Other data: ICPDR, ESRI, the Parties to the FASRB (SI,HR,BA,RS)



1:2,000,000

Coordinate system: ETRS 1989  
 Projection: Lambert Azimuthal Equal Area



Processed and compiled by the Secretariat of the ISRBC  
 November 2009

# Sava river basin

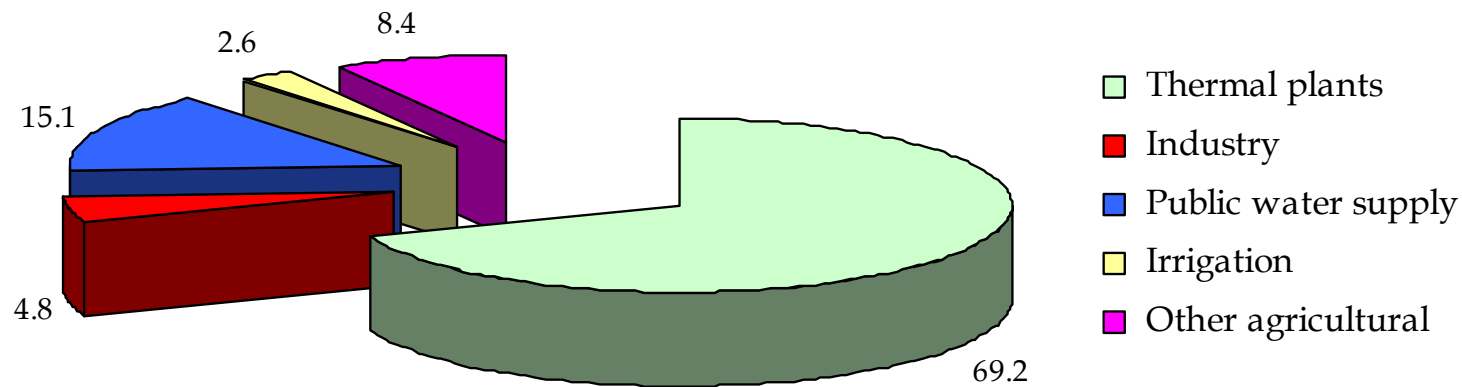
- **Main hydrological parameters**  
(average values)
  - **Precipitation:** 1100 mm/year
  - **Evapotranspiration:** 530 mm/year
  - **Effective rainfall:** 570 mm/year
  - **Unit-area-runoff:** 18 l/s/km<sup>2</sup>
  - **Discharge** (mouth): 1722 m<sup>3</sup>/s  
(the largest Danube tributary;  
contribution: 25%)



# Sava river basin

- **Water use**

- **Total annual water use: 4.8 billion m<sup>3</sup>**



- **Non-consumptive water uses**

- Transportation
    - Hydropower use
    - Recreation
    - Fishing



# Background of cooperation

- **High environmental and socio-economic value**
  - Natural beauty



# Background of cooperation

- **High environmental and socio-economic value**
  - High landscape diversity



# Background of cooperation

- **High environmental and socio-economic value**
  - High biological diversity (natural wetlands, parks, protected areas)



# Background of cooperation

- **High environmental and socio-economic value**
  - Large retention areas



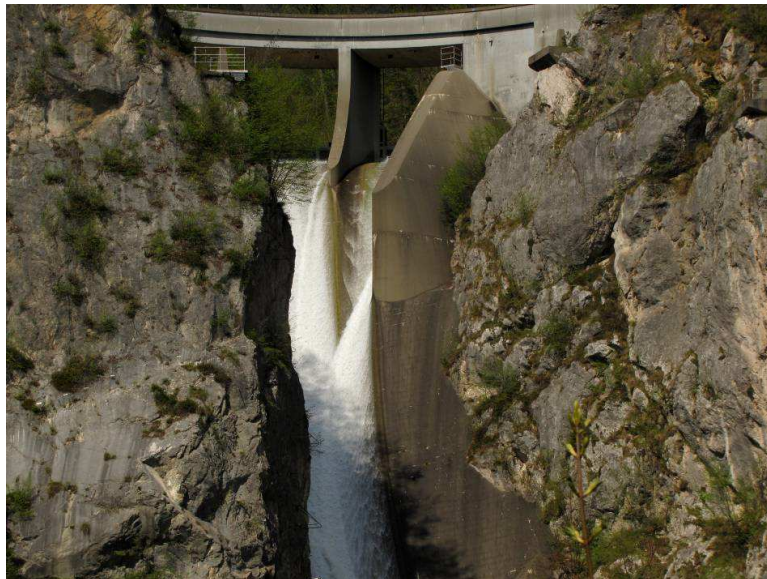
# Background of cooperation

- **High environmental and socio-economic value**
  - Potential for transport of cargo and passengers



# Background of cooperation

- **High environmental and socio-economic value**
  - Potential for hydropower use



# Background of cooperation

- **High environmental and socio-economic value**
  - Potential for tourism and recreation



## Background of cooperation

- Relatively low **degree of human intervention**
- Need (and obligation) for **environmental protection**
- Need for **economic development**
- **A balanced approach needed** to use the potential and preserve the values simultaneously





## Background of cooperation

- **Geopolitical changes** in the region in the 1990-ies – the main challenge for WRM in the basin
  - Sava: the largest **national** river → **international** river
  - **Fragmentation of water management**  
(unlike the EU WFD approach)
  - **Fragmentation of systems**  
(data exchange, monitoring and early warning systems, ...)
  - Sharp **decrease of economic activities** (e.g. navigation)
  - **New, international framework** required to manage water resources on the basin level

# Background of cooperation

- **Establishment of framework**

- Consequences of the 1990's conflict – an **obstacle**
- Stability Pact for SEE – **facilitation** of the process
- **From different priorities to IWRM approach**
  - Navigation
  - Tourism development
  - Energy production
  - Flood protection
  - Water quality and quantity



# Background of cooperation

- **The Sava River Initiative**

- **Launch of Initiative:** June 2001
- **Signing Letter of Intent on Cooperation:** Nov. 29, 2001
- **Signing FASRB:** Kranjska Gora, Dec. 3, 2002
- **Est. of Interim Sava Commission:** Brussels, March 12, 2003
- **Entering of FASRB into force:** December 29, 2004
- **Est. of ISRBC:** Zagreb, June 27-29, 2005
- **Est. of ISRBC Secretariat:** Zagreb, January 9, 2006

# FASRB

- **First development-oriented multilateral agreement** in the region signed after Dayton Peace Agreement (1995)
- **Parties:**
  - **Bosnia & Herzegovina**
  - **Croatia**
  - **Serbia** (formerly FR Yugoslavia, Serbia & Montenegro)
  - **Slovenia**(**Montenegro** – cooperation on technical level until full membership)
- **Implementation** coordinated by **ISRBC**  
(Secretariat – executive and administrative body of ISRBC)

# FASRB

- **Key objective:**

**Transboundary water cooperation  
for sustainable development of the region**

- **Particular objectives – to establish:**

- International regime of **navigation**
- Sustainable **water management**
- Sustainable **management of hazards**  
(floods, droughts, accidents involving water pollution, etc.)

- Provides ISRBC with **the broadest scope of work** among European int'l basin organizations (river/lake commissions)

# FASRB

- **Principles of cooperation**

- Cooperation on the basis of **sovereign equality, territorial integrity, mutual benefit** and **good faith** in order to achieve FASRB goals
- Cooperation in accordance with **EU WFD**
- Regular **exchange of information** within the basin (on water regime, navigation regime, legislation, organizational structures, administrative & technical practices)
- Cooperation with **international organizations** (ICPDR, DC, UNECE, EU)

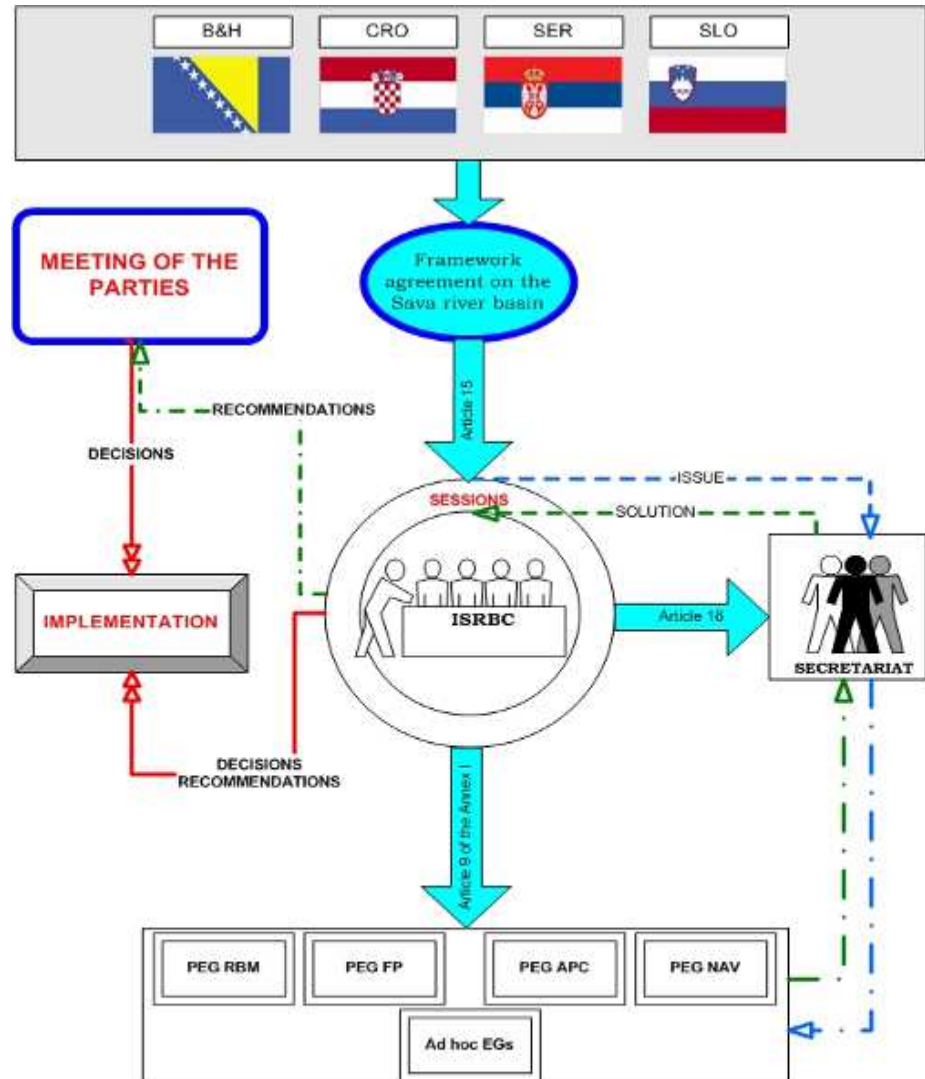
# FASRB

- **Principles of cooperation** (cont.)
  - **Reasonable and equitable use** of water
  - Securing **integrity** of the water regime in the basin
  - Reduction of **transboundary impacts** caused by economic and other activities of the Parties
  - **Prevention of causing significant harm** to other Party (Parties), when using water of the basin

# FASRB

- **Mechanism of cooperation**
  - **Governmental** sector
    - Officially nominated national institutions
    - Other national institutions
  - **Non-govern.** sector
  - **Academic** sector
  - **Business** sector

- **Monitoring of implementation**



**Acronyms and abbreviations:**  
 ISRBC - International Sava river basin commission  
 PEG RBM - Permanent expert group for river basin management  
 PEG FP - Permanent expert group for flood prevention  
 PEG APC - Permanent expert group for accident prevention and control  
 PEG NAV - Permanent expert group for navigation  
 Ad hoc EGs - Ad hoc expert groups



# FASRB

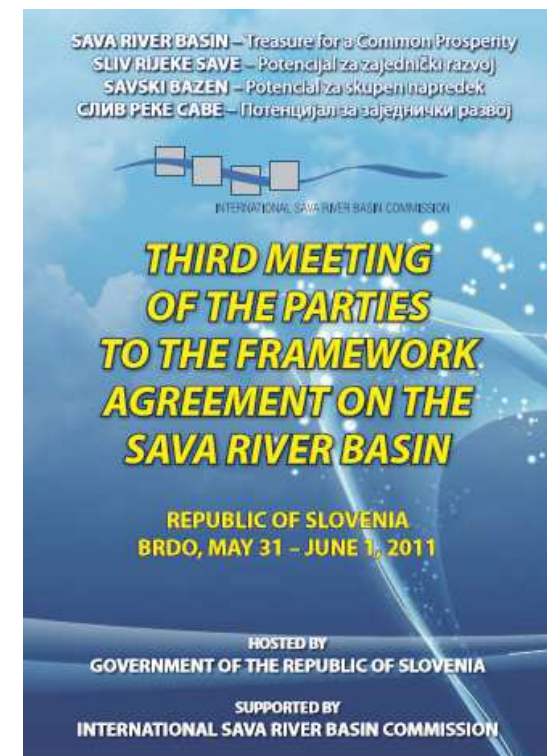
- **Monitoring of implementation**
  - Development of the Methodology **prescribed by FASRB**
  - Methodology **adopted at the 1<sup>st</sup> MoP** (Zagreb, 1 June 2007)
  - **Principal activities** according to the Methodology:
    - Preparation of a **Report on FASRB implementation**
    - **Presentation of the Report** to the MoP (at each MoP)
    - **Dissemination of information** to wide public

Brdo, 1 June 2011



# FASRB

- **Monitoring of implementation** (cont.)
  - **Report on FASRB implementation**
    - Preparation of **national reports** by the Parties (ISRBC Guidelines and Templates)
    - Preparation of a **joint report** by ISRBC (national reports + ISRBC's own findings)
  - **Dissemination of information**
    - **National reports**
    - **Joint Report** of ISRBC
    - **Information** on the next MoP (at which the Report will be presented)
    - **Complete documentation** for the MoP



# ISRBC

- **Basic facts**

- The **only subregional mechanism** of water cooperation in the Danube river basin
- Established **in June 2005**, seated in Zagreb (Croatia)
- The Secretariat established **in January 2006**
- **Seat Agreement** signed with the Croatian government



# ISRBC

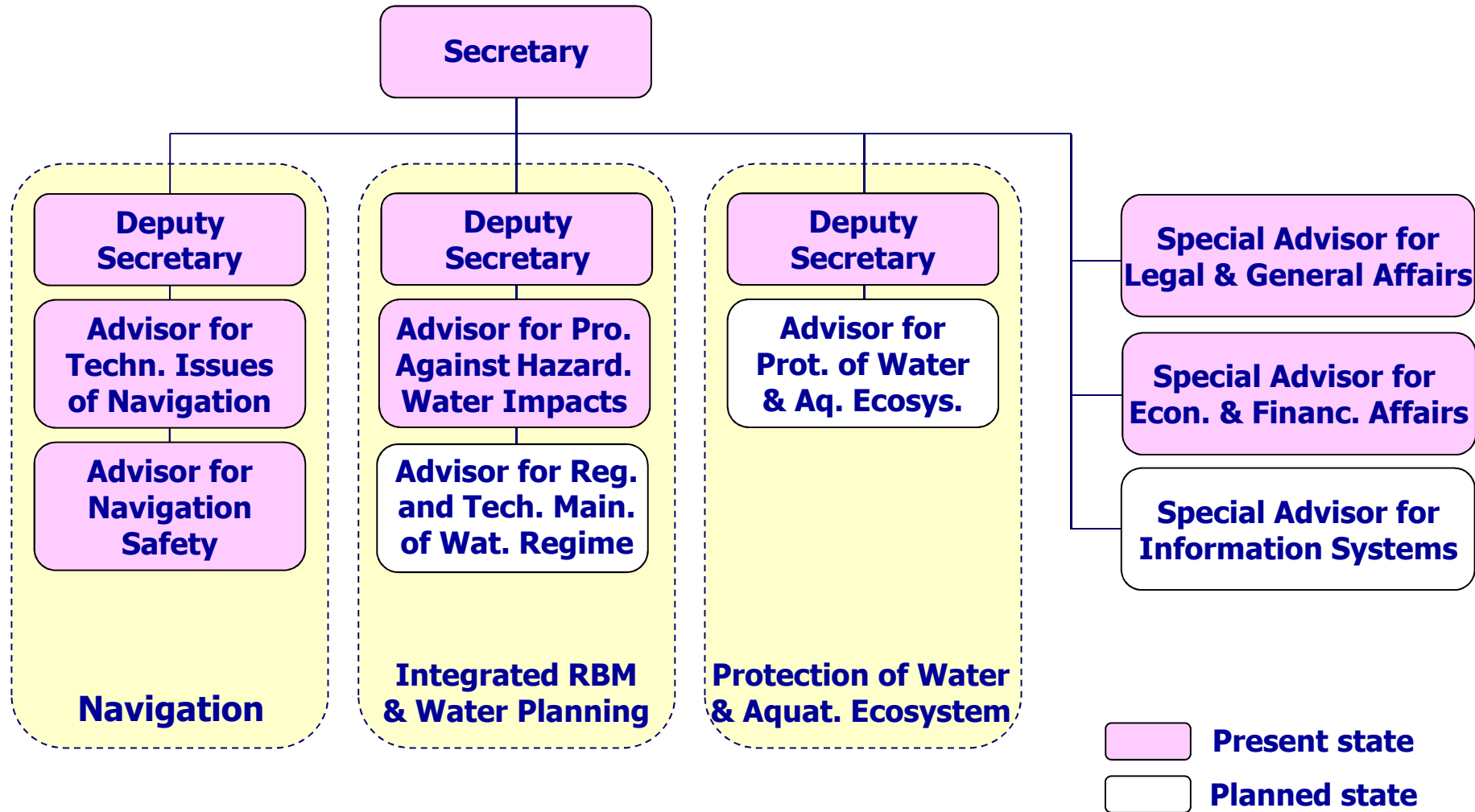
- **Basic facts** (cont.)
  - Composed of 8 **representatives** of the 4 countries (one vote per country)
  - Represented by the **Chairman**
  - Chairman is a **member of ISRBC** (from a Party – lot has been drawn for the first Chairman)
  - **Vice-Chairman** is a member from the next Party (following the English alphabetical order of the Parties)
  - **Chairmanship** is rotated every 3 years (following the English alphabetical order of the Parties)

# ISRBC

- **Basic facts** (cont.)
  - **Legal capacity**
    - **Decisions** (navigation)
    - **Recommendations** (all other fields)
  - **Decisions and recommendations** (adopted by unanimous vote)
    - On **sessions**
    - In **written procedure** (in urgent cases)
  - **Languages**
    - **Official** (3 official languages of B&H, Croatian, Serbian, Slovenian)
    - **Working** (English)



# ISRBC



# ISRBC

- **Expert groups**
  - **Permanent expert groups**
    - River Basin Management
    - Accident Prevention & Control
    - Flood Prevention
    - Navigation
    - Hydrological and Meteorological Issues
    - GIS
  - ***Ad hoc* expert groups**
    - Legal Issues
    - Financial Issues
    - RIS (River Information Services)

# ISRBC

- **Financing**

- **Annual contributions** of the Parties (Secretariat)
- **Projects**

- **Reporting**

- Report on the Secretariat's work **to ISRBC** (3 sessions per year)
- Annual report on ISRBC work **to the Parties**
- Country reports on implementation of FASRB **to ISRBC** (once in 2 years)
- Report on implementation of FASRB and ISRBC work **to the Meeting of the Parties** (once in 2 years)



# ISRBC

- **Budget**

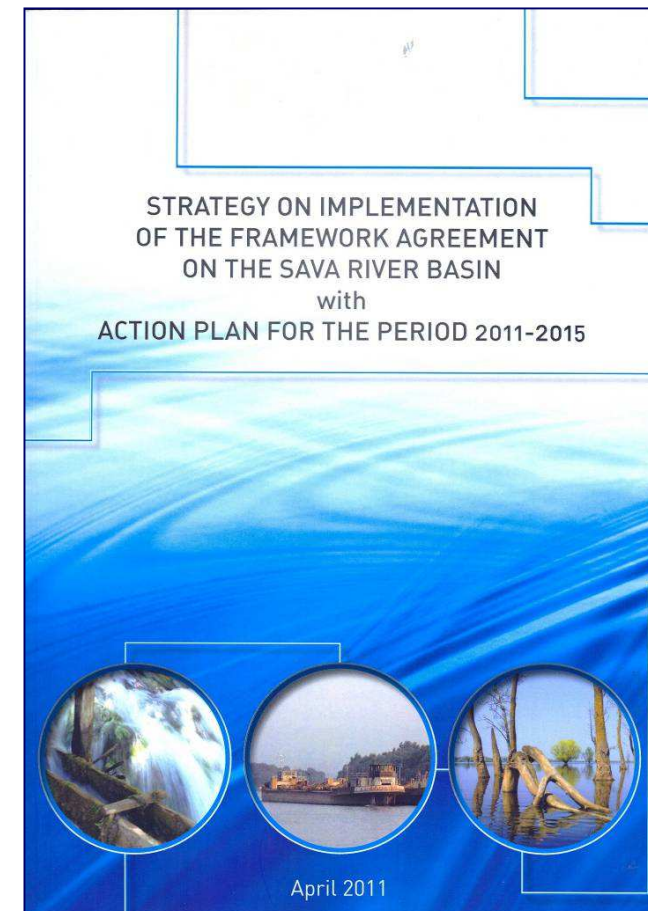
- **General fund:**

Type of costs	Share (%)
Staff salaries and allowances	78.5
Current costs	7.0
Travel costs	6.6
Operational costs	7.3
Long-term assets	0.6

- **Reserve fund:** 15% of the General fund
    - **Special and trust funds:** for realization of projects

# ISRBC

- **Basic documents**
  - **FASRB and protocols**
  - **Strategy on Implementation of FASRB**
  - **Annual Work Plan of ISRBC**
  - **Programmes of Work of ISRBC's expert groups**

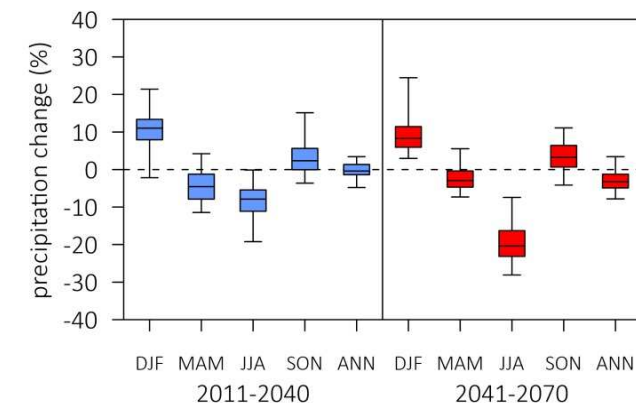


# ISRBC

- **Legal and financial documents**
  - **Rules of Procedure**
  - **Staff Regulations** of the Secretariat
  - **Financial Rules**
  - Subsidiary **financial regulations** and **procedures**
  - **Budget**

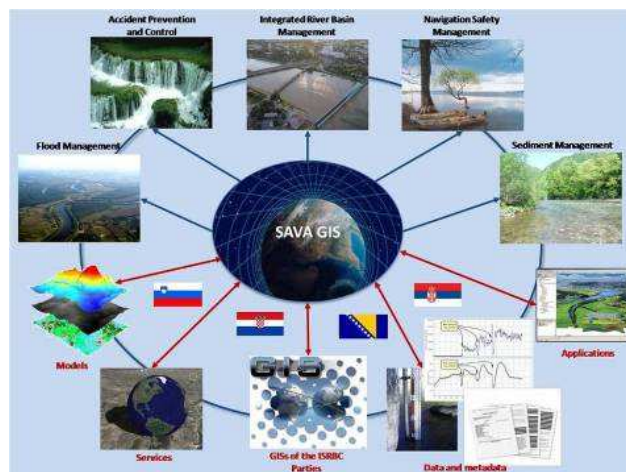
# Scope of cooperation

- Development of **joint / integrated plans** for the basin
  - **River Basin Management Plan** (according to EU WFD)
  - **Flood Risk Management Plan** (according to EU Flood Directive)
  - Other plans
    - **Water and Climate Adaptation Plan**
    - **Sediment Management Plan**
    - **Water Pollution Contingency Management Plan**



# Scope of cooperation

- Establishment of **integrated systems** for the basin
  - **Information** systems (GIS, RIS)
  - **Data exchange** system (hydrological and meteorological)
  - **Forecasting and early warning** systems (floods, accidents involving water pollution)




The screenshot displays the 'Hydrological stations with daily observation' page. It features a navigation menu on the left and a main content area with a table of data for various stations across different countries.

River	Hydrological Station	Water level (cm)	Water level change (cm)	Water level tendency (cm)	Discharge (m <sup>3</sup> /s)	Discharge of discharge (%)	Temp. (°C)
<b>Bosnia and Herzegovina</b>							
Sava	Čačak most	830	830	-6	480	10	3.2
Sava	Čačak	830	830	-5	2127	8	3.7
Sava	Šibenik	830	830	-1	24	-	2.8
Sava	Novi Grad nas.	830	830	-9	400	-	3.2
Sava	Novi Grad nas.	830	830	-9	2127	-	3.7
Sava	Prepelec	830	830	-1	26	10	2.8
Sava	Novi Grad	830	830	144	480	8	3.2
Sava	Novi Grad	830	830	50	2127	-	3.7
Sava	Dobrkovci Selo	830	830	-6	24	-	2.8
Sava	Šibenik	830	830	-6	480	-	3.2
Sava	Šibenik	830	830	-1	2127	10	3.7
Sava	Novi Grad	830	830	-6	24	8	2.8
<b>Croatia</b>							
Sava	Jasenovac 2	830	830	-6	480	10	3.2
Sava	Zagreb	830	830	-5	2127	8	3.7
Sava	Šibenik	830	830	-1	24	-	2.8
Sava	Jasenovac	830	830	-9	400	-	3.2
Sava	Novi Grad	830	830	-9	2127	-	3.7
Sava	Prepelec	830	830	-1	26	10	2.8
Sava	Novi Grad	830	830	144	480	8	3.2
Sava	Novi Grad	830	830	50	2127	-	3.7
Sava	Dobrkovci Selo	830	830	-6	24	-	2.8
Sava	Šibenik	830	830	-6	480	-	3.2
Sava	Šibenik	830	830	-1	2127	10	3.7
Sava	Karlovac	830	830	-6	24	8	2.8
Sava	Šibenik	830	830	-6	480	-	3.2
Sava	Novi Grad	830	830	-1	2127	-	3.7
<b>Serbia</b>							
Sava	Jasenovac	830	830	-6	480	10	3.2
Sava	Šibenik	830	830	-5	2127	8	3.7
Sava	Čačak	830	830	-1	24	-	2.8
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Sava	Novi Grad	830	830	50	2127	-	3.7
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Sava	Šibenik	830	830	-6	480	-	3.2
Sava	Novi Grad	830	830	-1	2127	-	3.7
<b>Slovenia</b>							
Sava	Novi Grad	830	830	-6	480	10	3.2
Sava	Novi Grad	830	830	-5	2127	8	3.7
Sava	Prepelec	830	830	-1	26	10	2.8
Sava	Novi Grad	830	830	-6	400	-	3.2

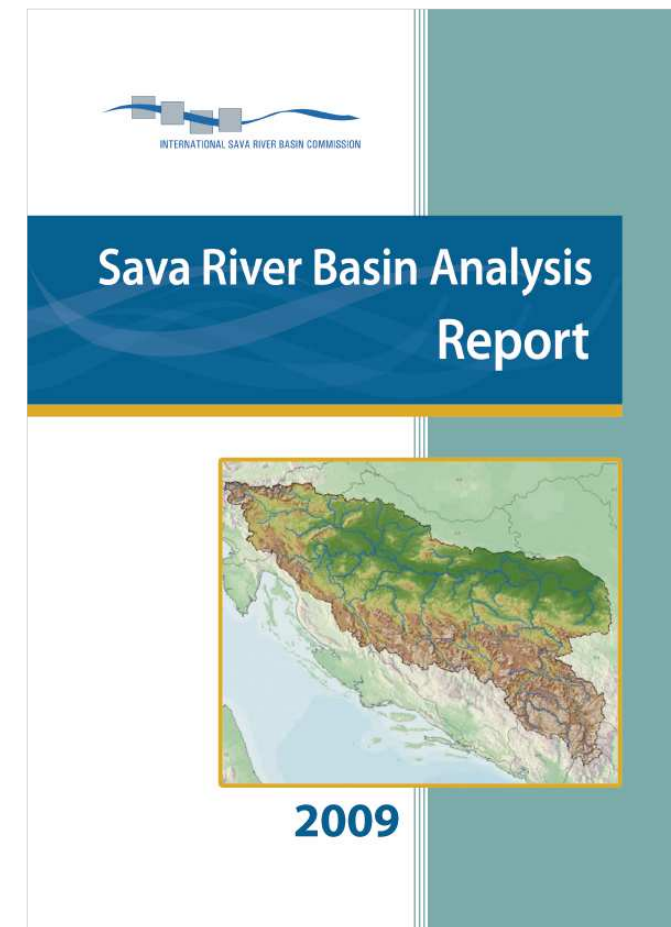
## Scope of cooperation

- Development of water-related **economic activities** in the basin  
(Navigation, River tourism, Hydropower use, Agriculture)
- Development and upgrade of **policy**  
(protocols to FASRB, policies / guidelines, harmonization)



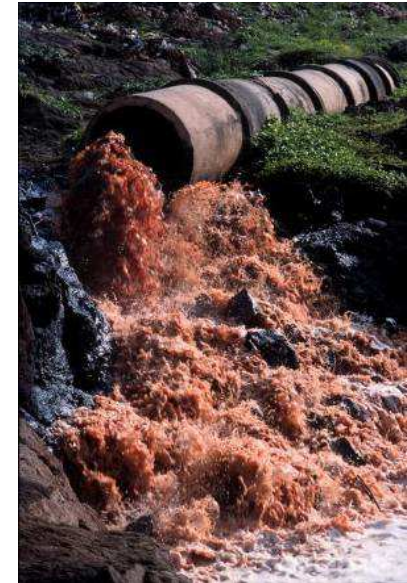
# Sava RBM Plan

- **Sava River Basin Analysis**
  - Requirements of **Art. 5 and Art. 6 of EU WFD** addressed
  - **Comprehensive nature**
    - Water **quality** and **quantity**
    - **Hydrology** and **hydromorphology** reports
    - **Integration** with other issues (flood management, navigation development)
  - **First (ever) GIS-based maps** of the basin



# Sava RBM Plan

- **Significant Water Management Issues**
  - **Pollution**  
(organic, nutrients, hazardous substances)
  - **Hydromorphological alterations**  
(hydropower use, water supply and flood protection facilities)
  - **Groundwater quality**





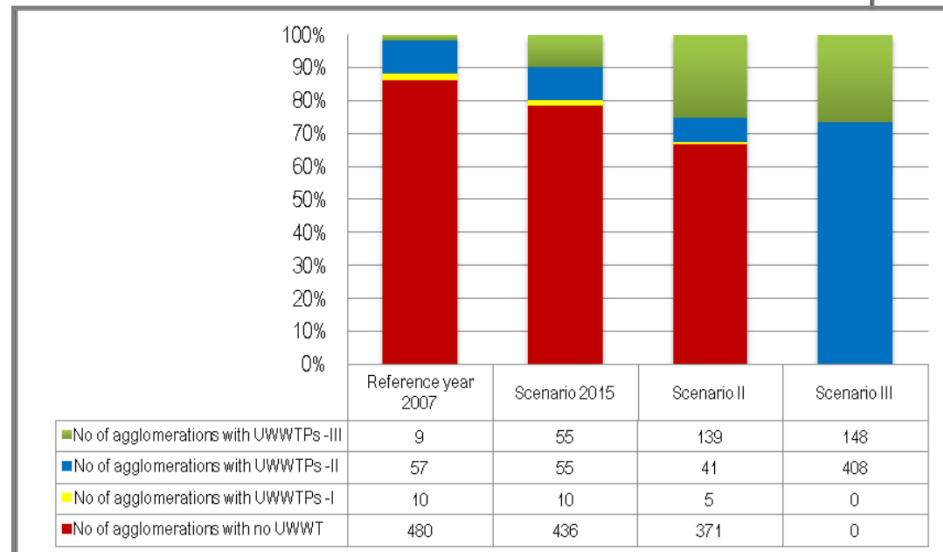
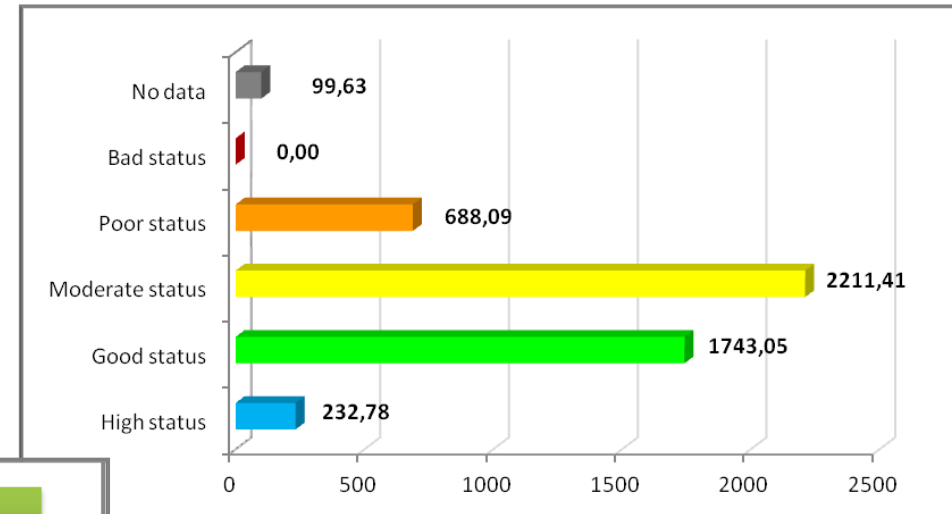
# Sava RBM Plan

- **Other issues addressed**
  - **Groundwater** quantity
  - **Sediment** quant. & qual.
  - **Invasive alien species**
  - **Protected areas**
  - **Integration** with other policies
    - Flood management
    - Navigation
    - Hydropower
    - Agriculture
    - Climate change



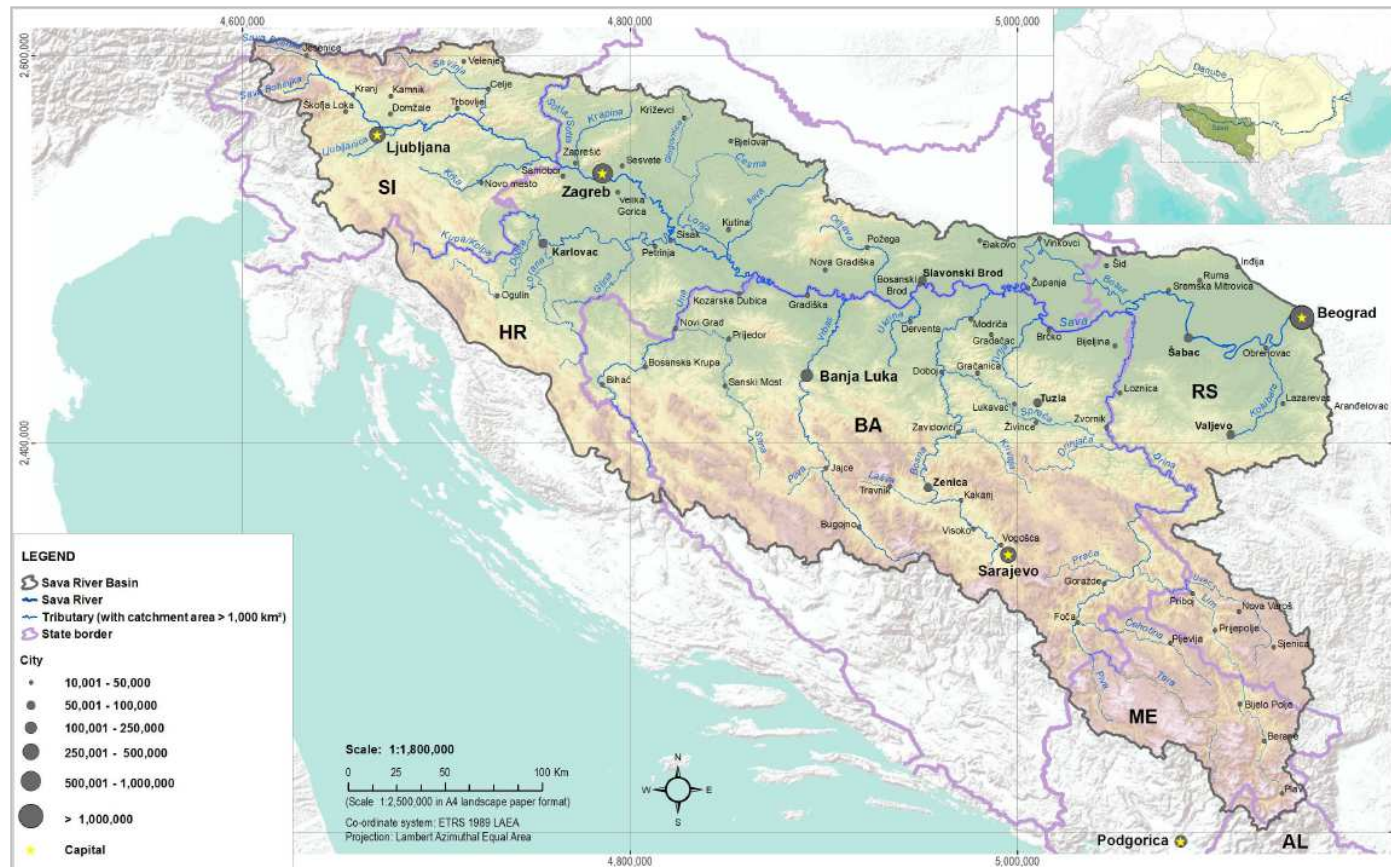
# Sava RBM Plan

- Water status assessment
- Vision and management objectives
- Programme of Measures



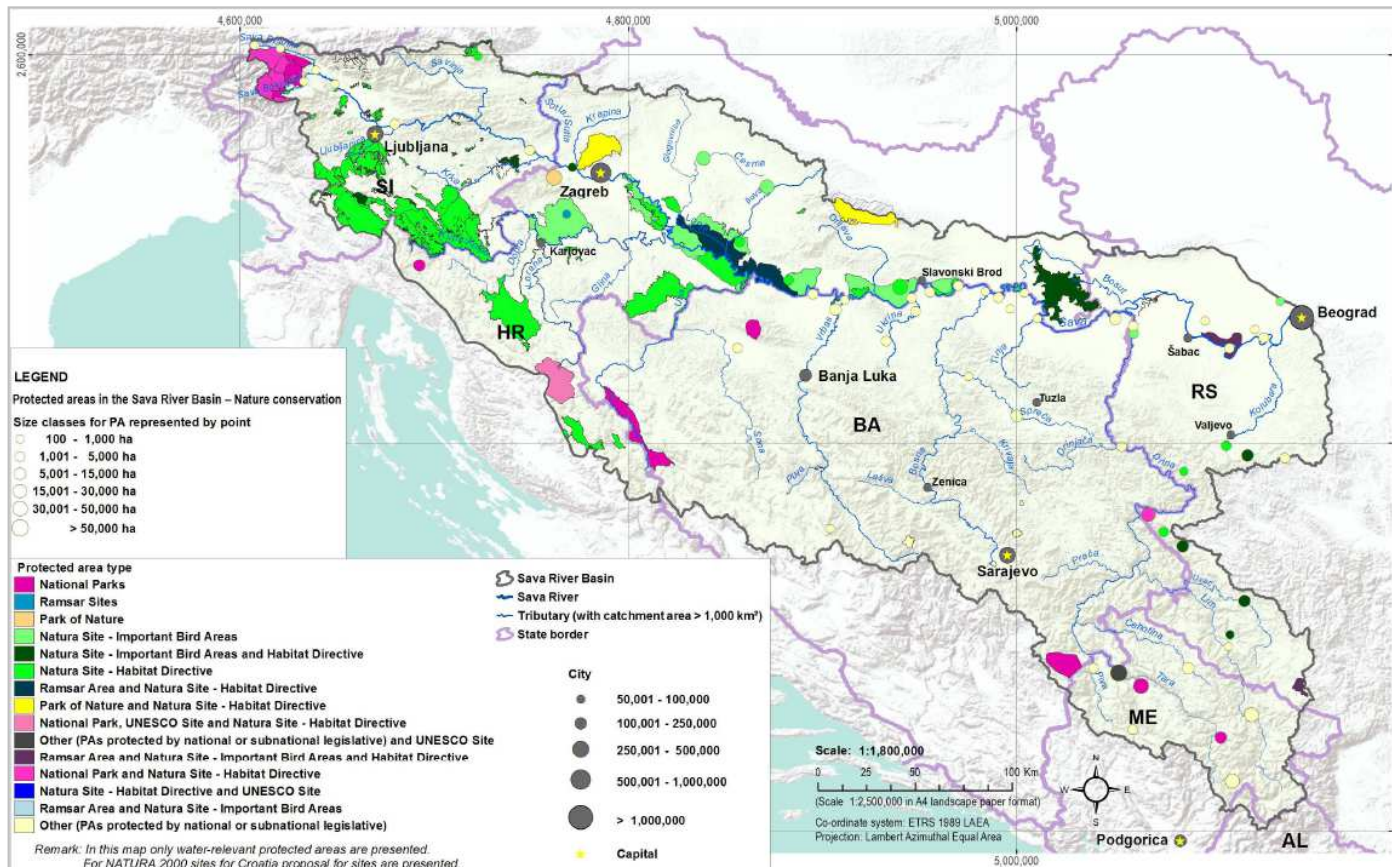
# Sava RBM Plan

- **Data on topography and hydrography**



# Sava RBM Plan

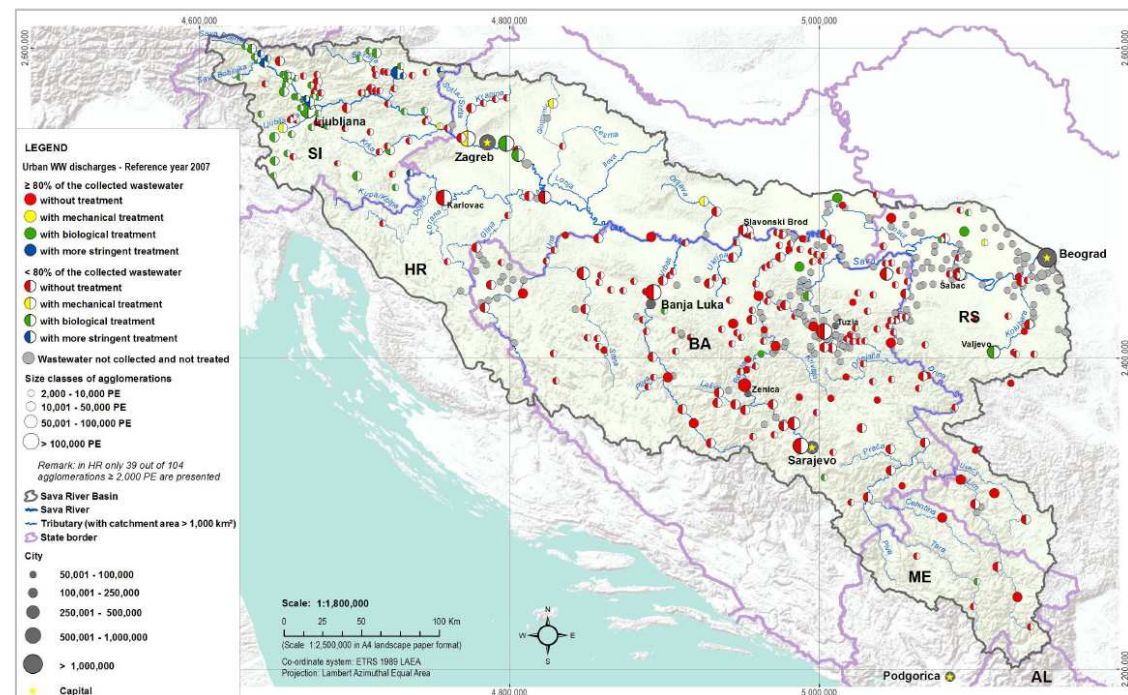
- **Data on land cover, eco-regions, WBs, protected areas**



# Sava RBM Plan

- **Data on 'pressures'**

- Pollution (organic, nutrients, hazardous substances)
- Hydropower, water supply and flood protection facilities
- Pressures on groundwater and sediment



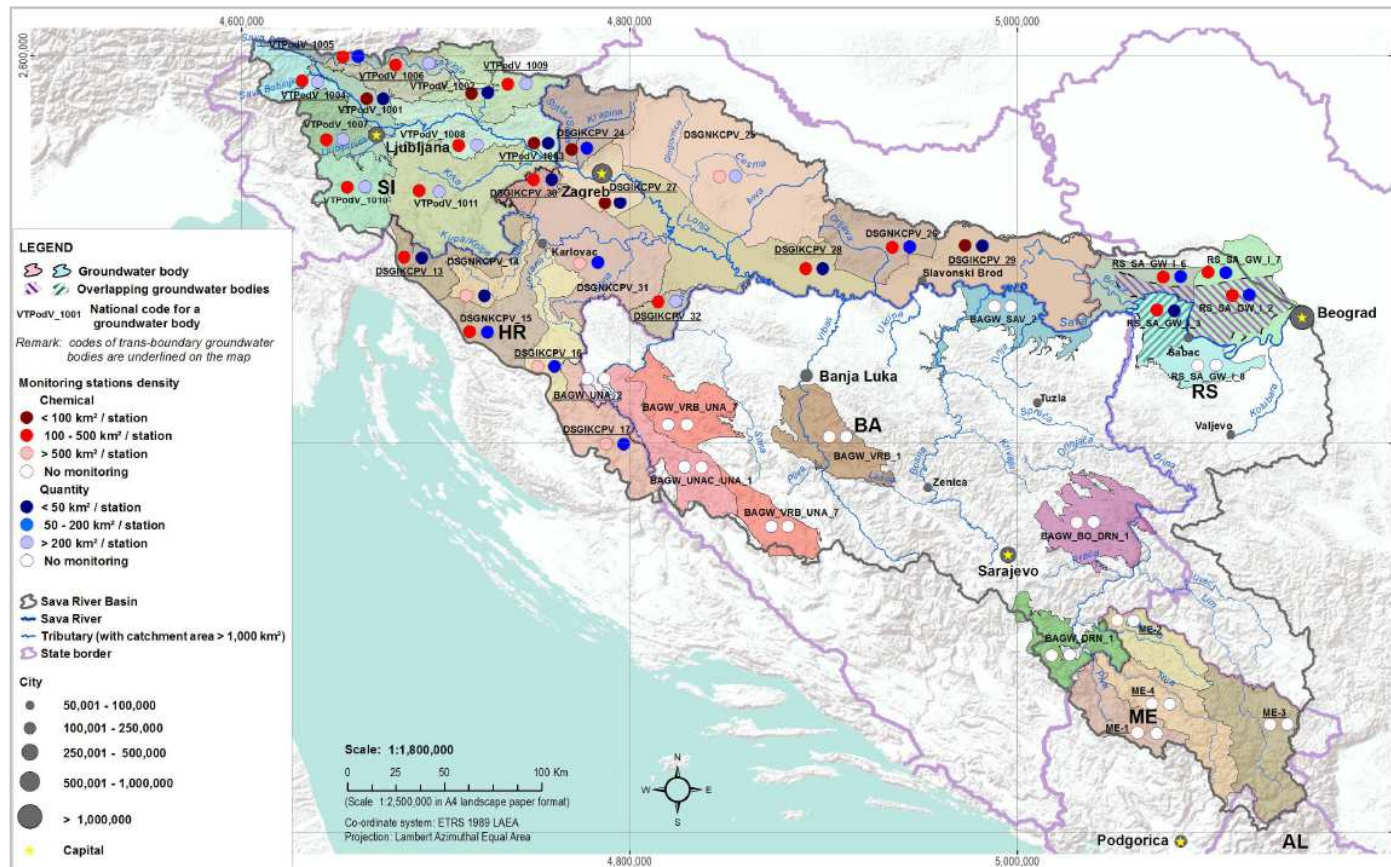
# Sava RBM Plan

- **Data on SW monitoring systems, programs and data**



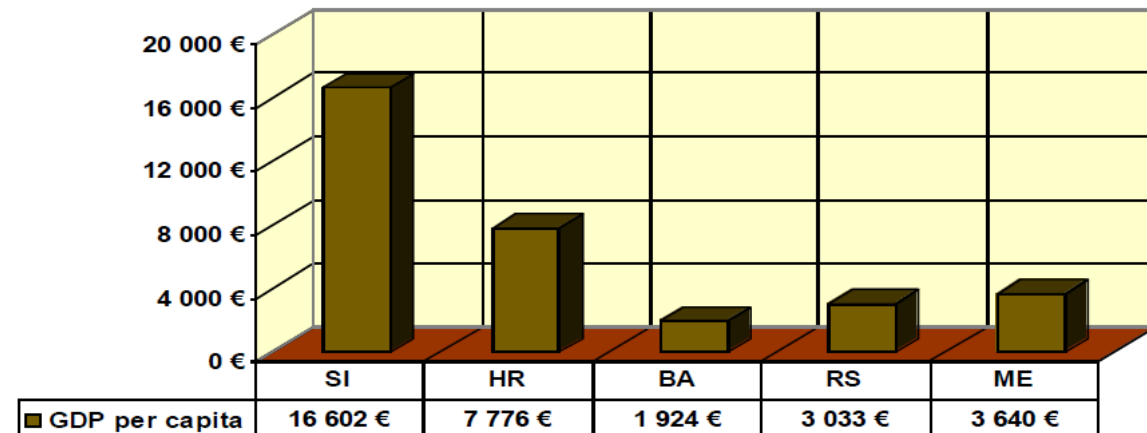
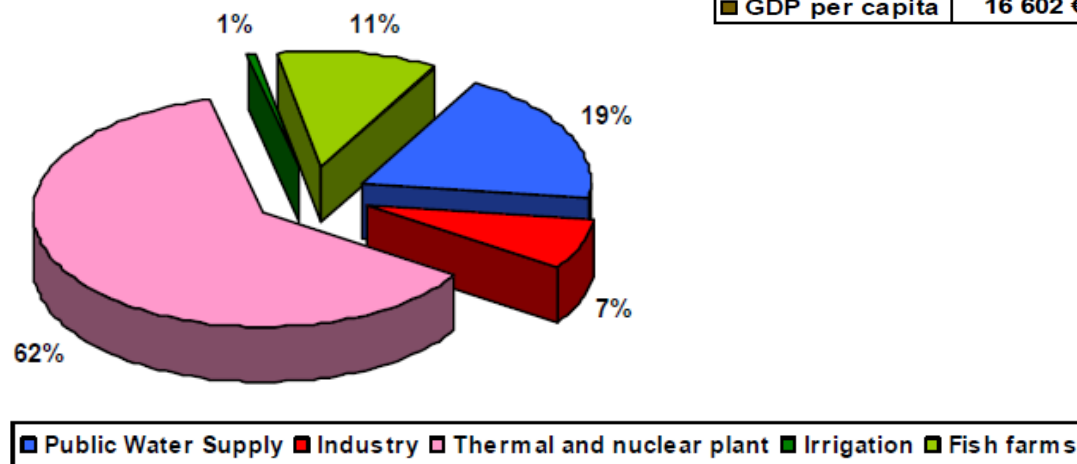
# Sava RBM Plan

- **Data on GW monitoring systems, programs and data**



# Sava RBM Plan

- **Data on water uses and economic data**





# Sava RBM Plan

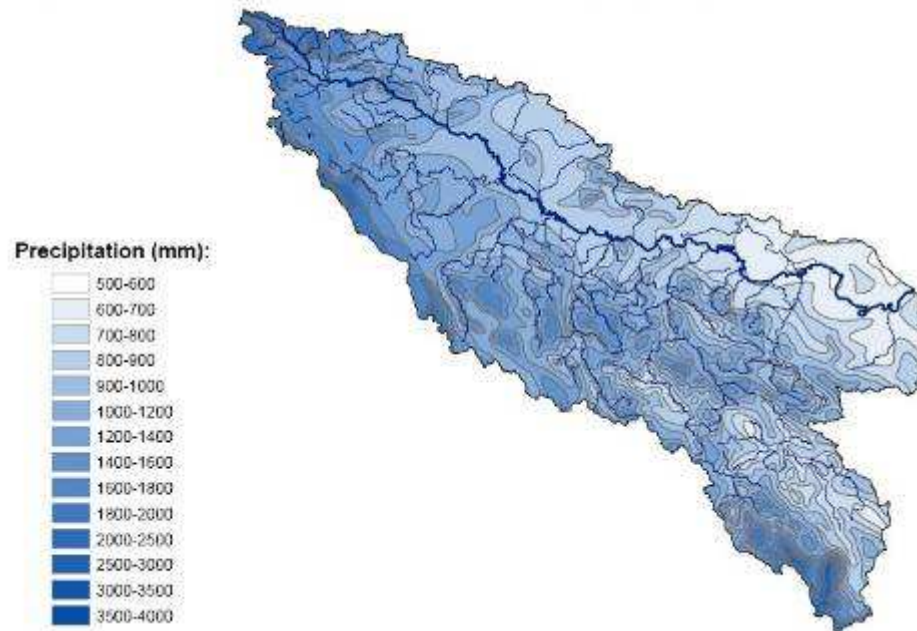
- **Stakeholder involvement**
  - Stakeholder analysis (2011)
  - Public participation plan (2012)
  - Consultation on the draft Plan (2013)
- **Approval at MoP 5** (2014)
- **2<sup>nd</sup> WFD cycle** (in progress)
  - Sava River Basin Analysis
  - Significant Water Management Issues



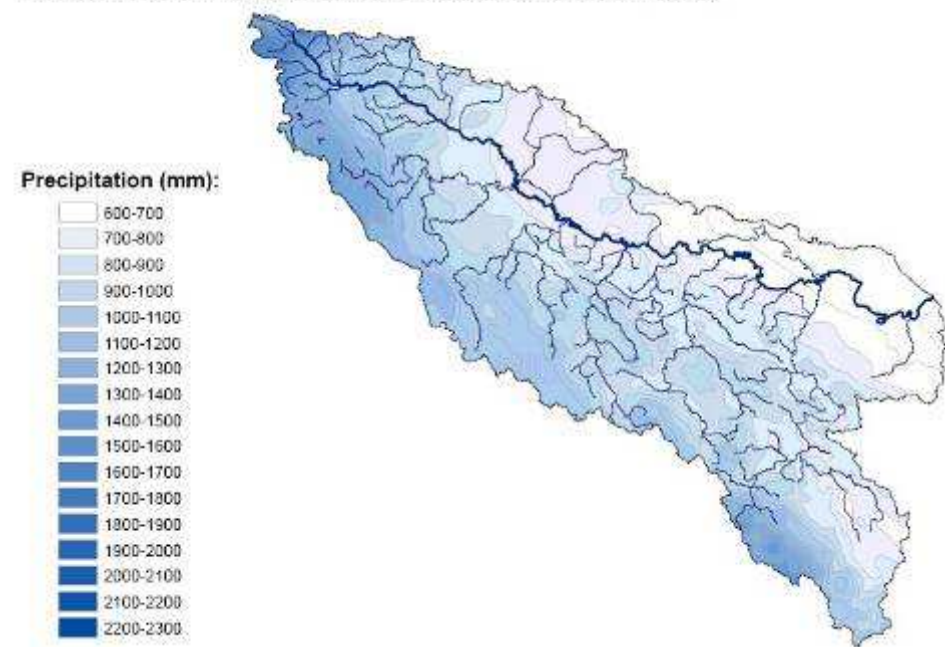
# Climate Adaptation Plan

- **Indicators of climate change in the basin**
  - Precipitation

Map 6: Mean annual precipitation in Sava River Basin (1969)



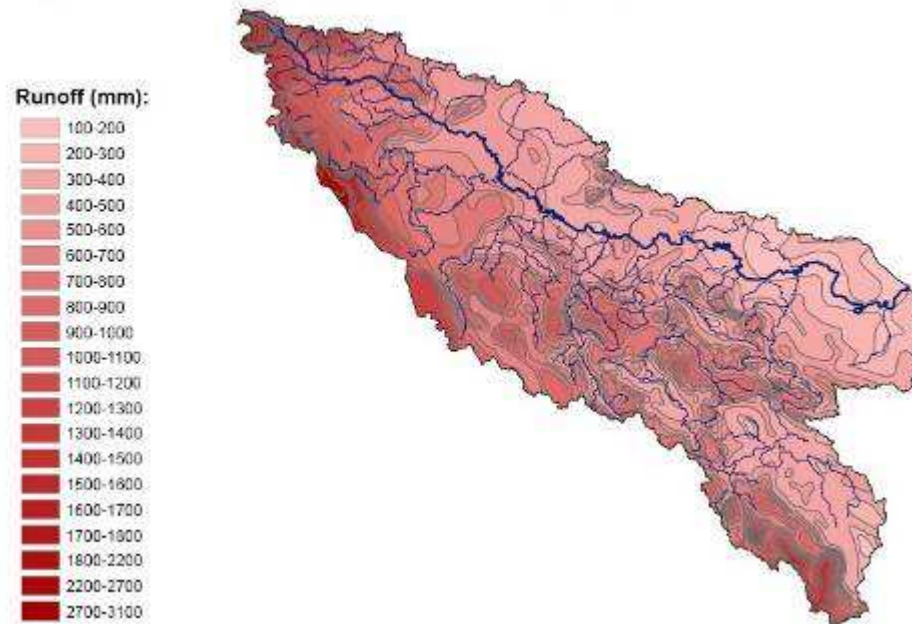
Map 3: Mean annual precipitation in Sava River Basin (2006)



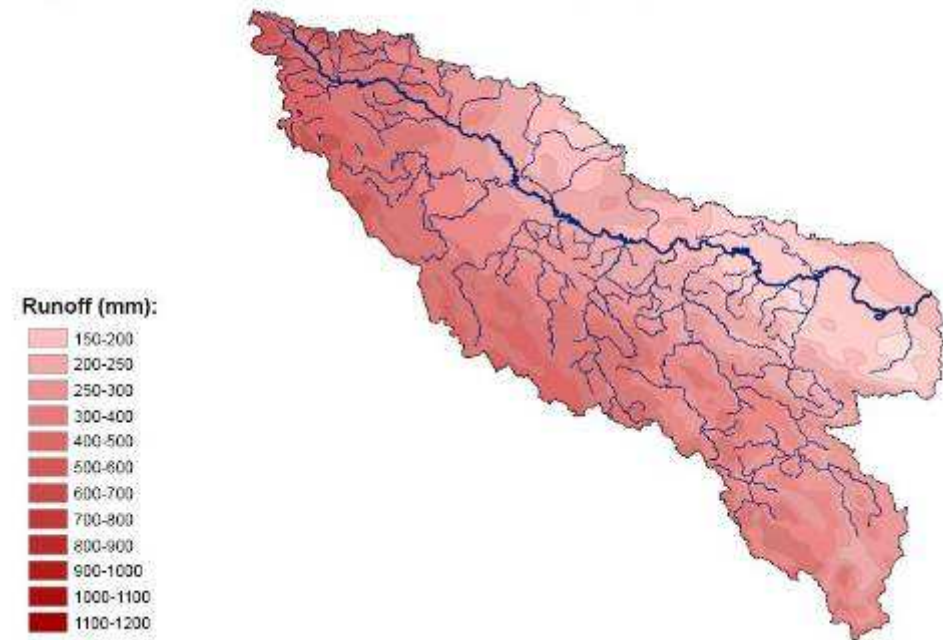
# Climate Adaptation Plan

- **Indicators of climate change in the basin**
  - Runoff

Map 5: Mean annual runoff in Sava River Basin (1969)

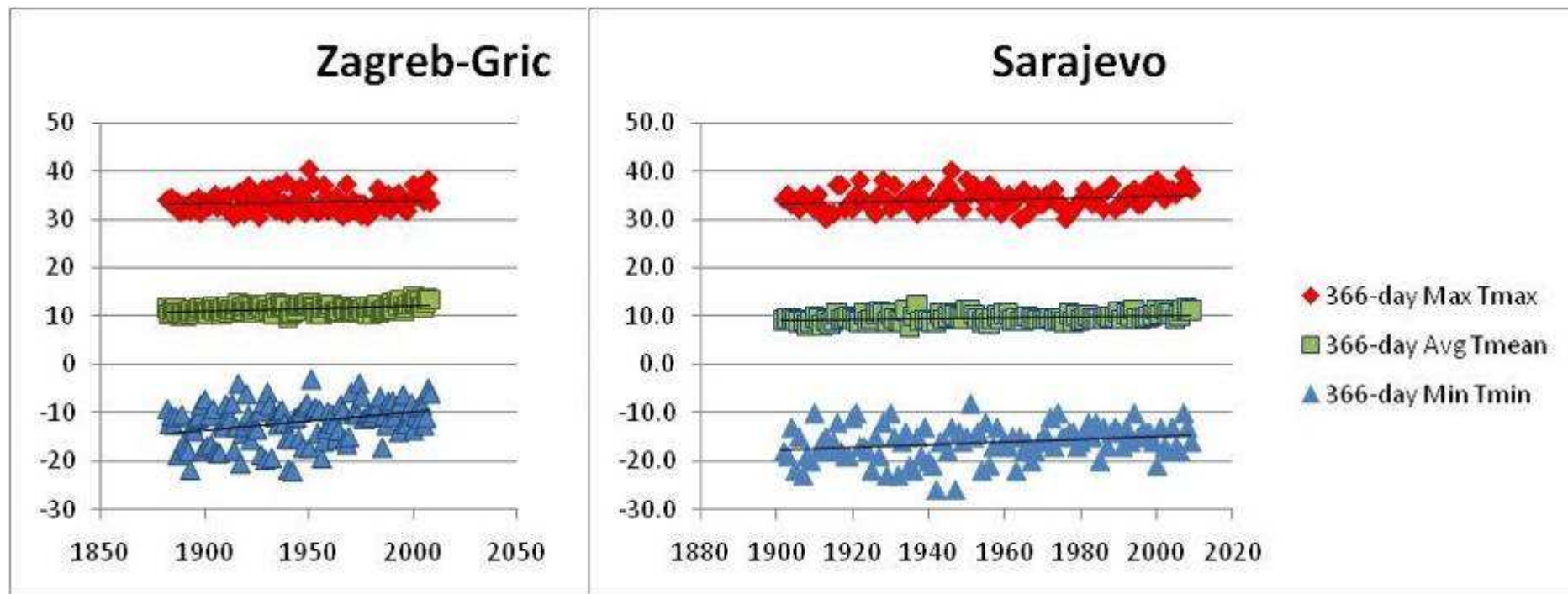


Map 2: Mean annual runoff in Sava River Basin (2006)



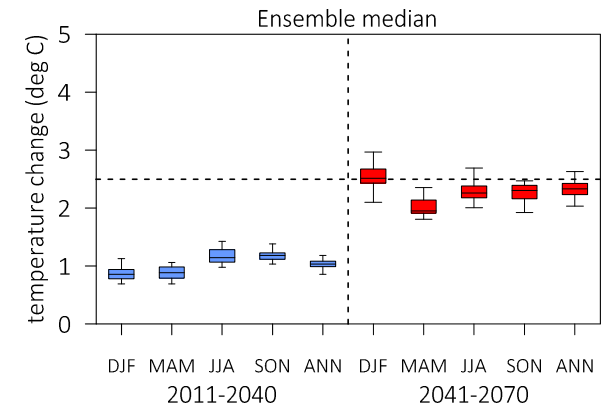
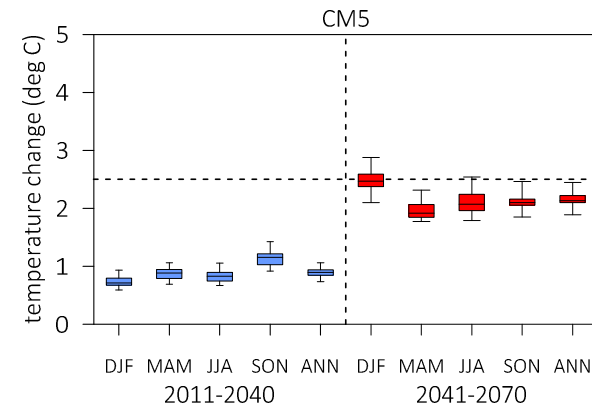
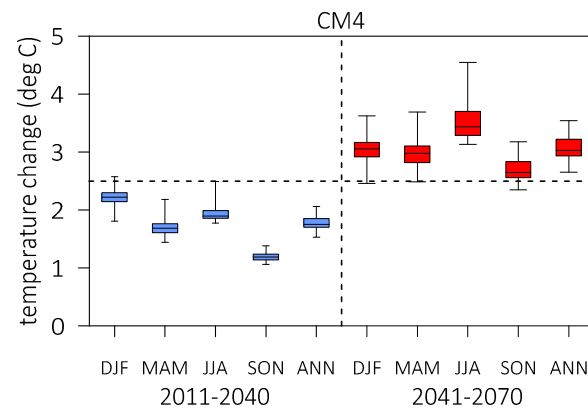
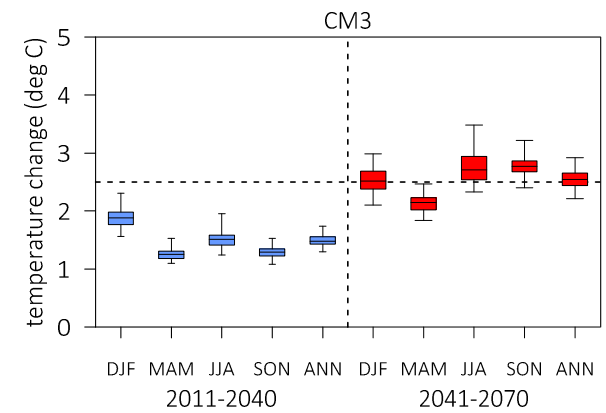
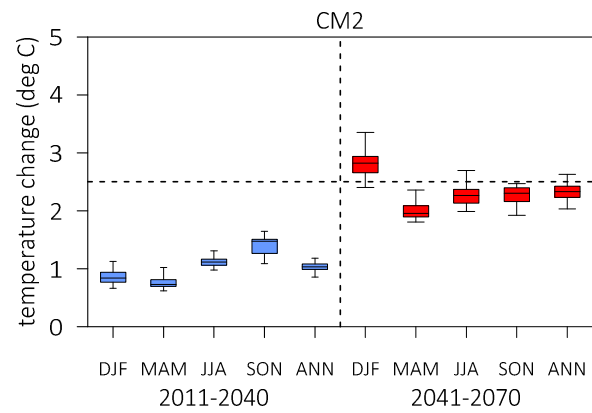
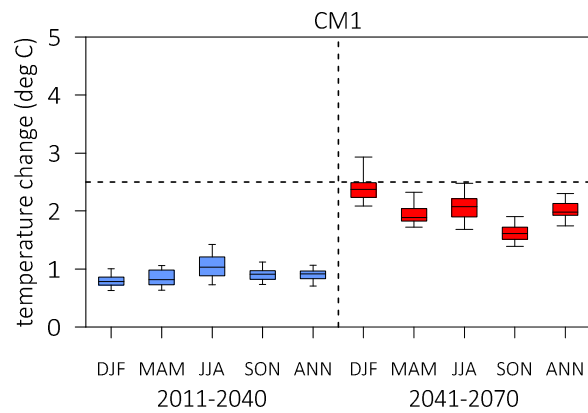
# Climate Adaptation Plan

- **Analysis of climate and hydrologic trends**



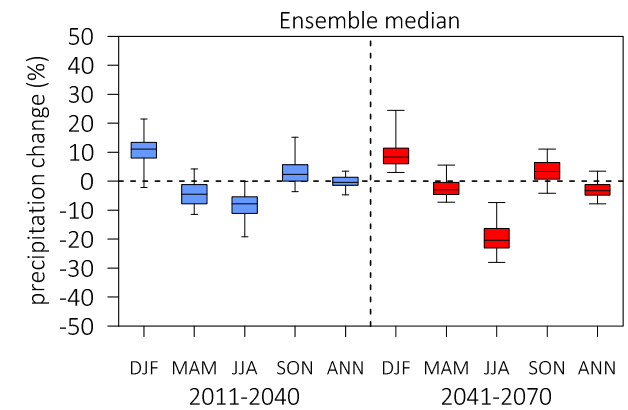
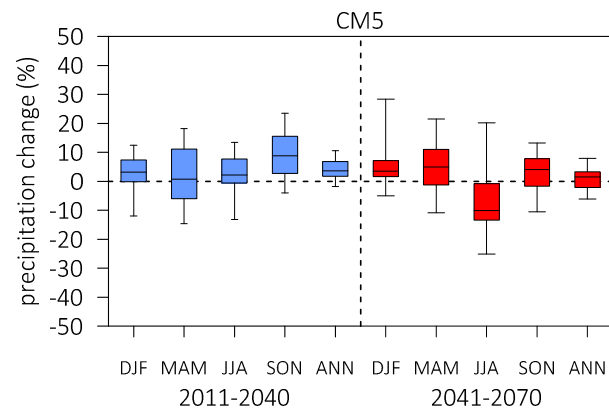
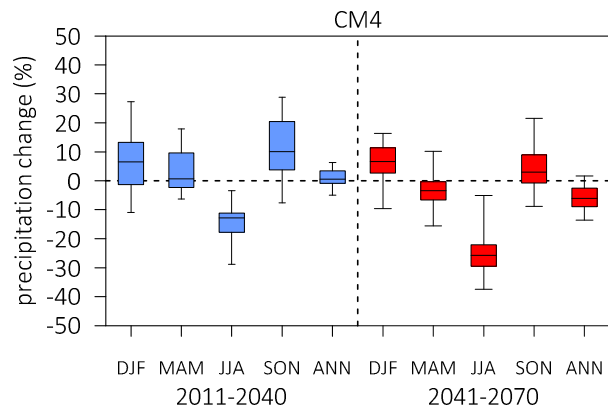
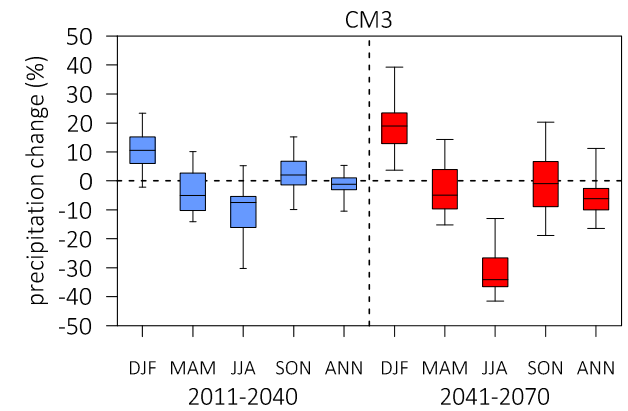
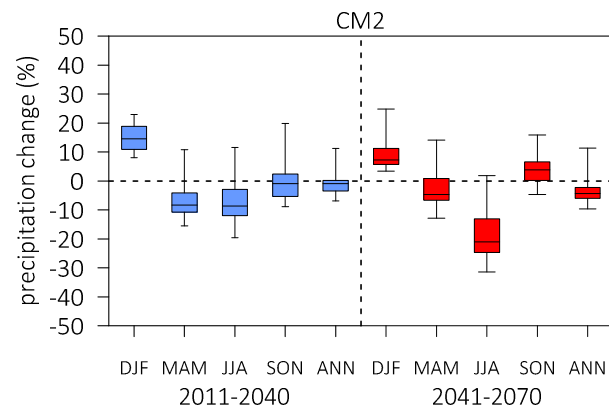
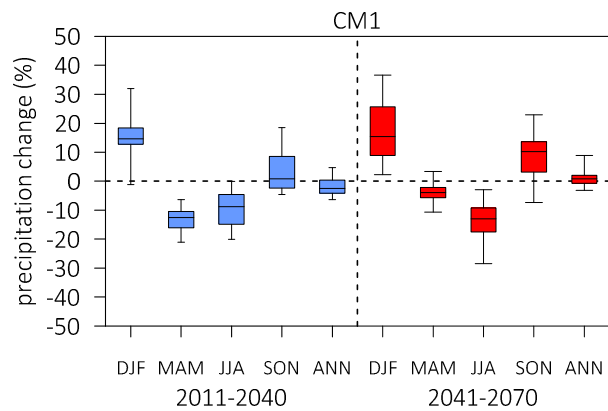
# Climate Adaptation Plan

- Temperature scenarios**



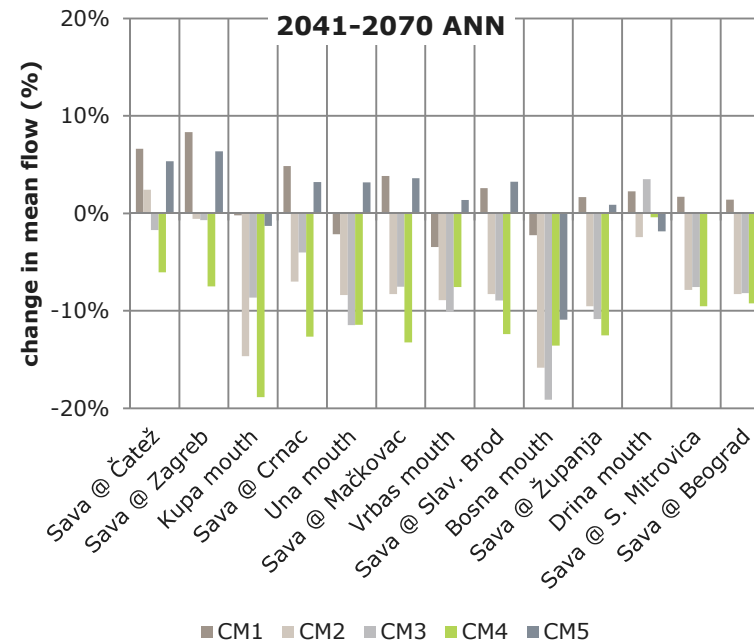
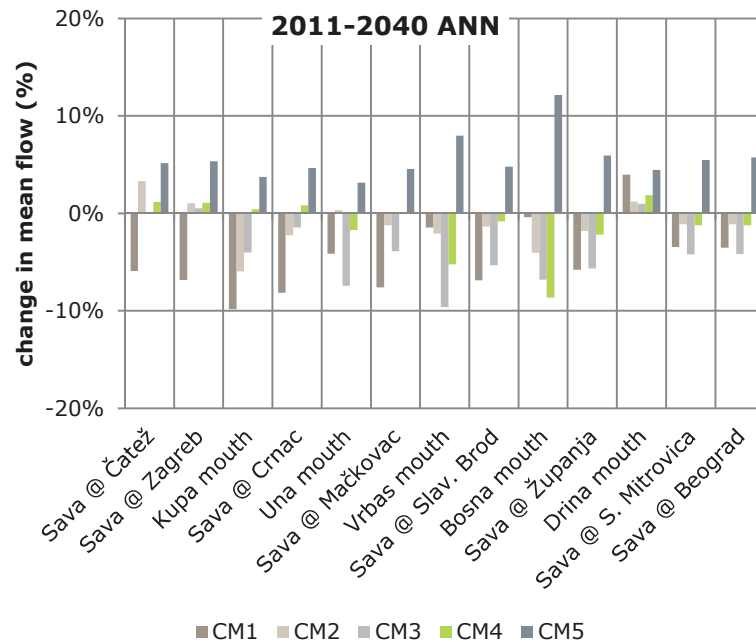
# Climate Adaptation Plan

- Precipitation scenarios**



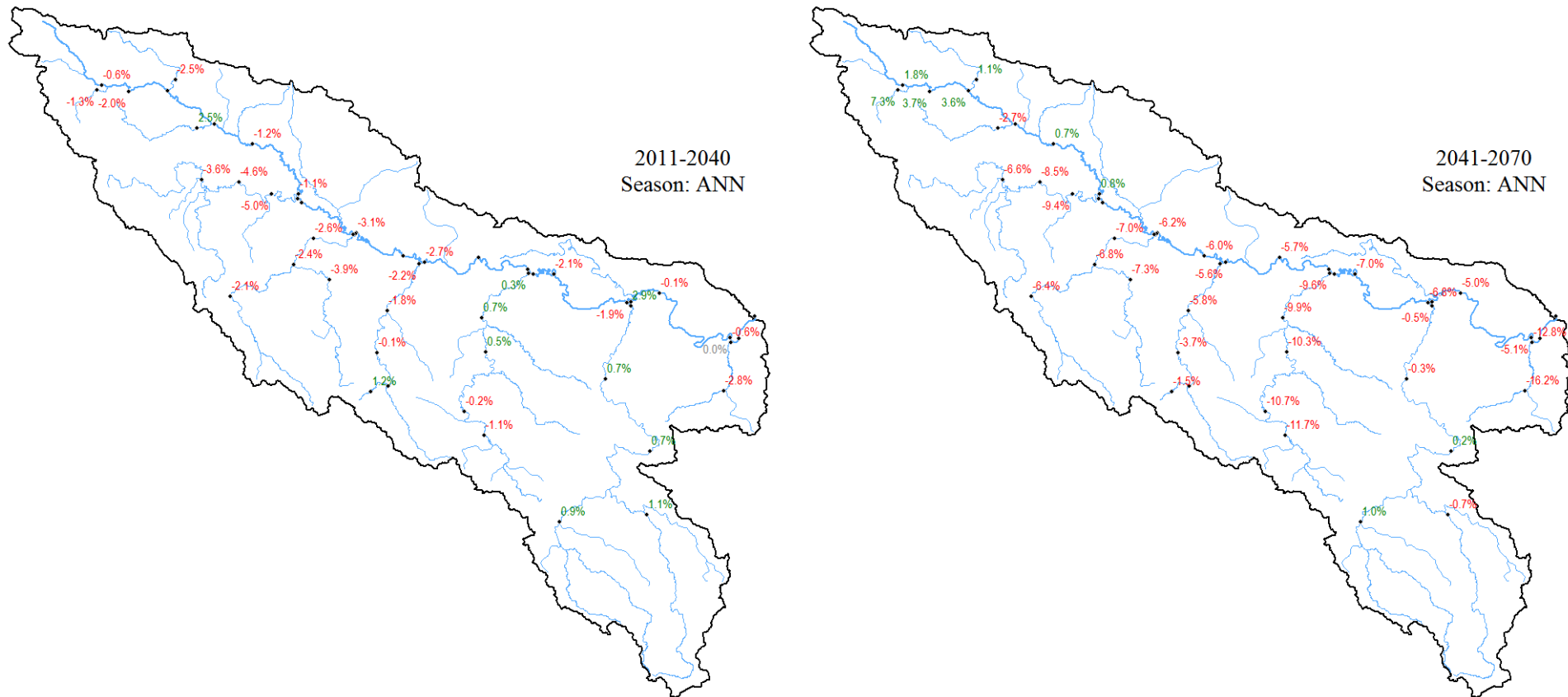
# Climate Adaptation Plan

- **Change in mean annual runoff**  
at selected locations for five climate scenarios



# Climate Adaptation Plan

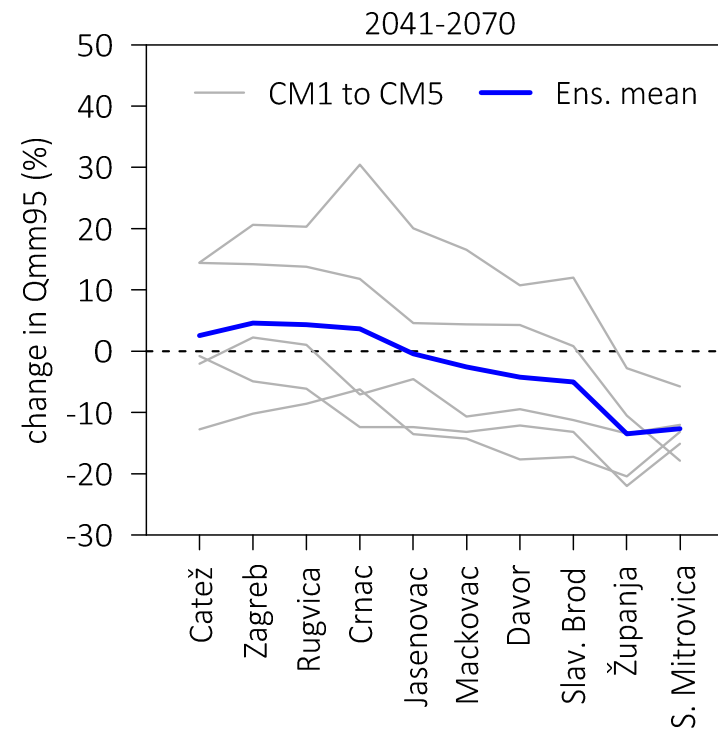
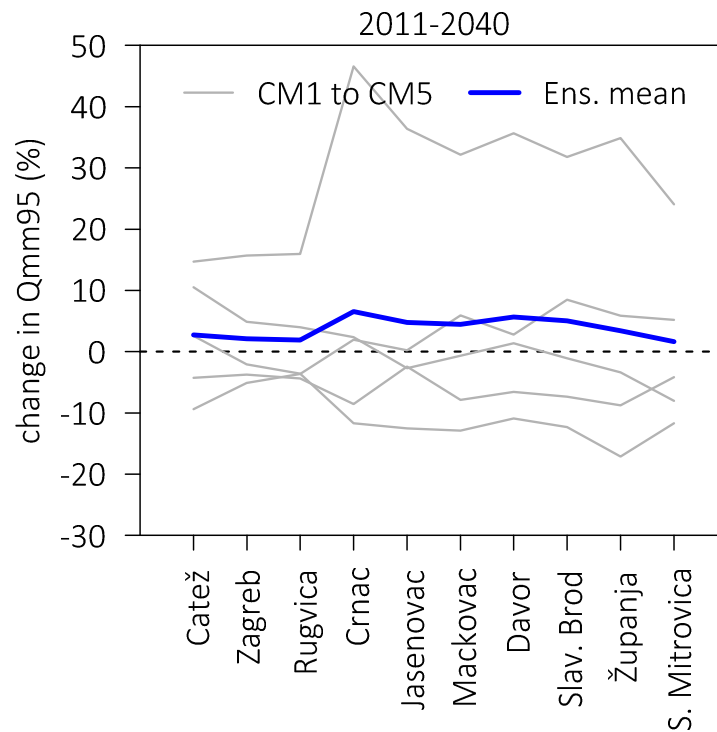
- **Change in mean annual runoff**





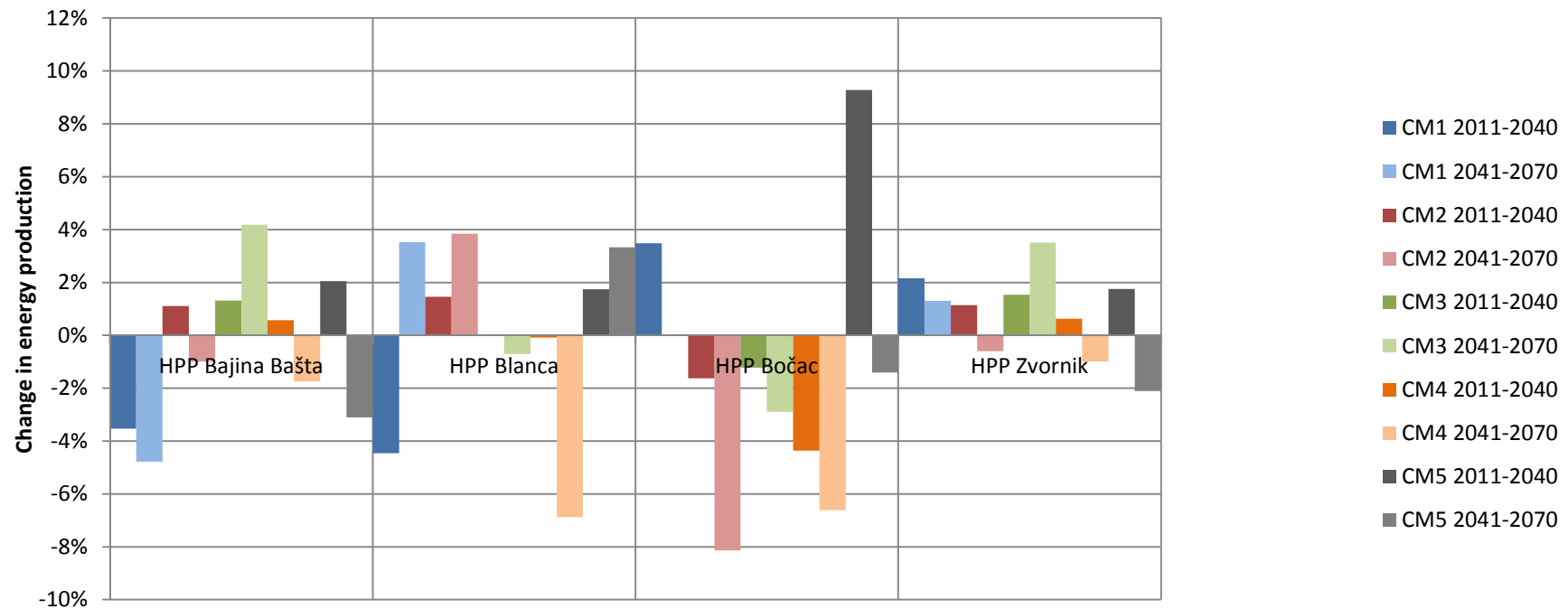
# Climate Adaptation Plan

- **Change in ensemble median values of low flows (95% mean monthly Q)**



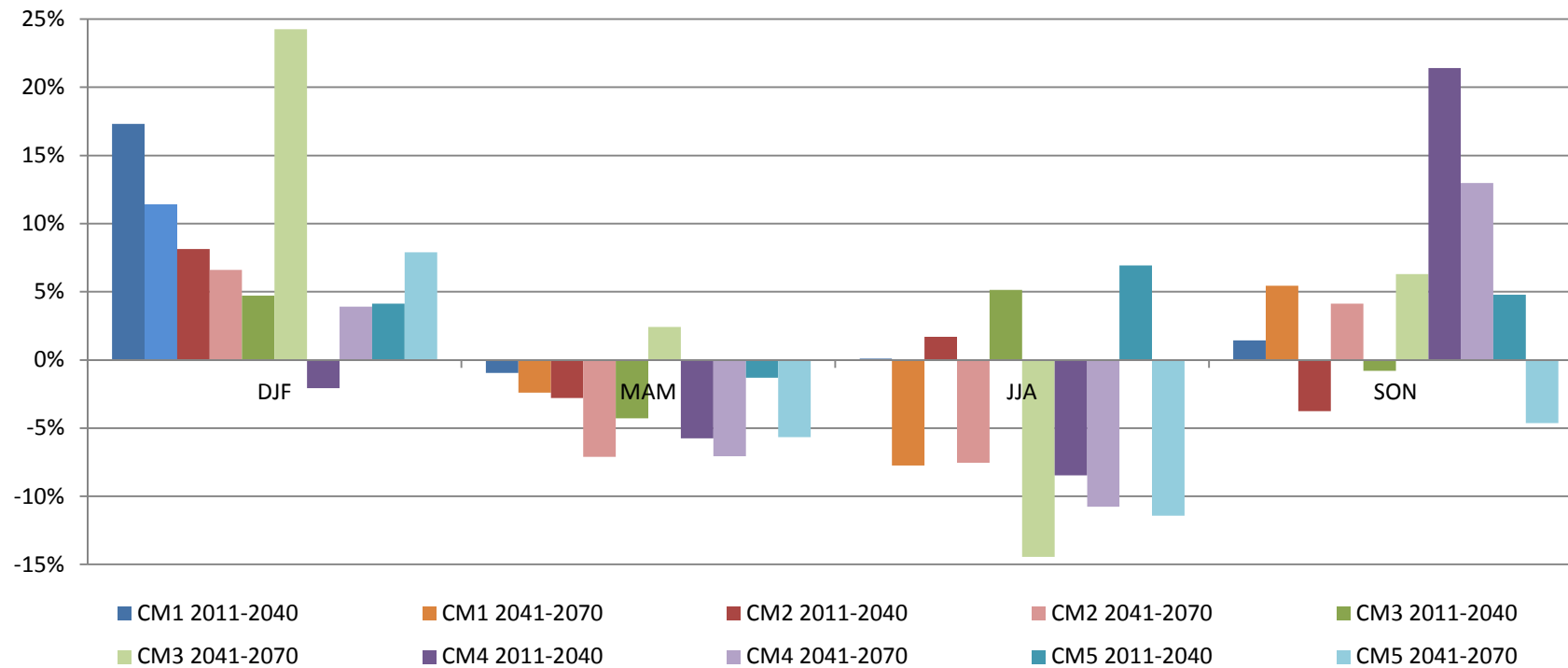
# Climate Adaptation Plan

- Changes in energy production



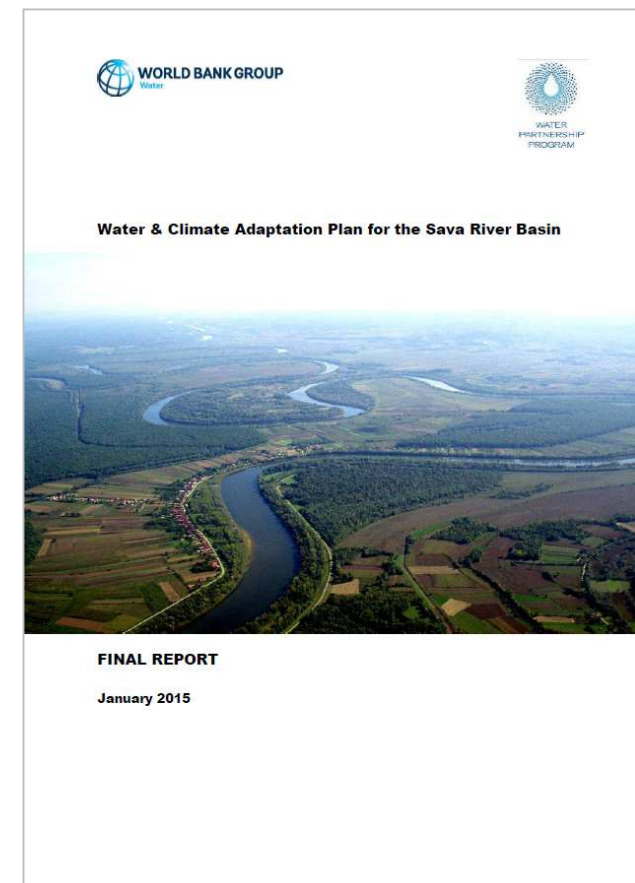
# Climate Adaptation Plan

- Seasonal energy production variability



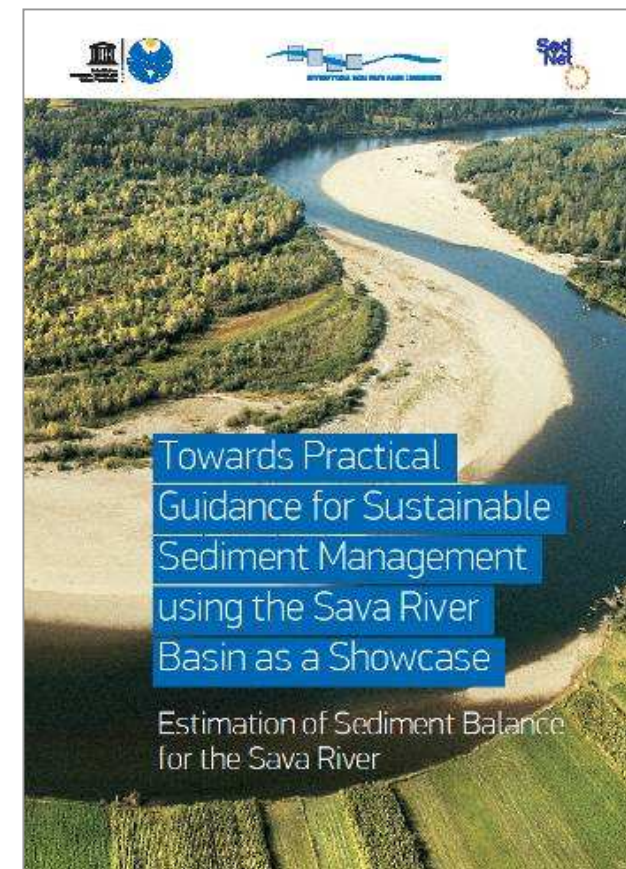
# Climate Adaptation Plan

- **Analysis of historic climate trends**
- **Climate** and **hydrological modelling**
- **Main report + Guidance notes**
  - Navigation
  - Hydropower
  - Agriculture
  - Flood protection
  - Economic evaluation of CC impacts
- **All outcomes available at:**  
[http://www.savacommission.org/project\\_detail/18/1](http://www.savacommission.org/project_detail/18/1)



# Sediment management

- **Protocol on sediment management to FASRB (2015)**
  - **Goal:** Sustainable sediment management
  - Sediment **quality** and **quantity** included
  - **Sediment Management Plan** (to be harmonized with the RBM Plan)
  - **Obligation** to prepare annually
    - Dredging programme
    - Report on realization of the programme
- **Projects** (sediment balance, monitoring system, etc.)



# Policy integration

- **Water – Food – Energy – Ecosystems Nexus Assessment**
  - **Sava Nexus** (UNECE Water Convention) – 2015
  - **Danube Nexus – Sava case study** (EC JRC) – 2016
  - **Drina Nexus** (UNECE Water Convention) – 2016



# Flood management

- **2010 floods**



# Flood management

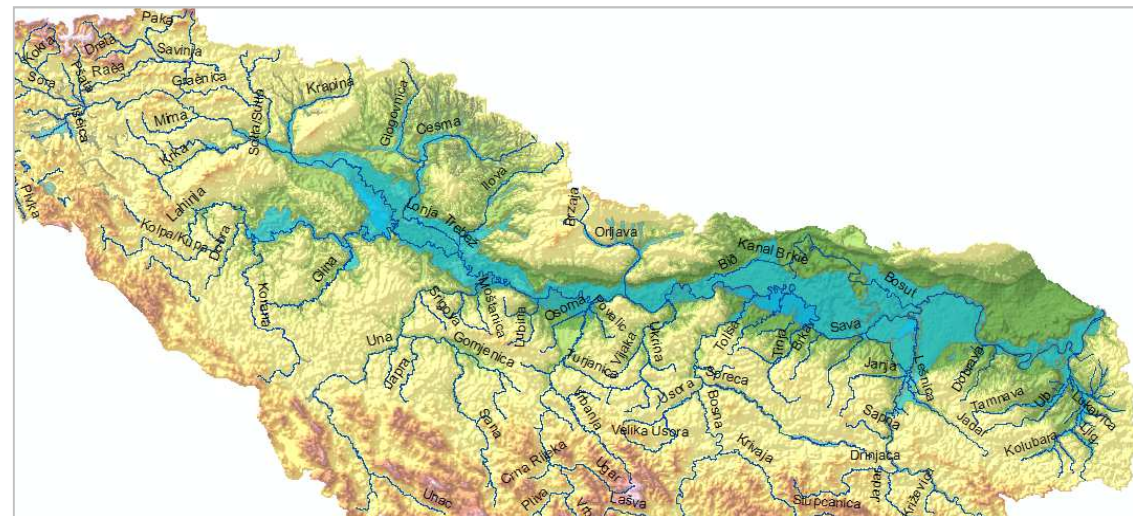
- **May 2014 flood**





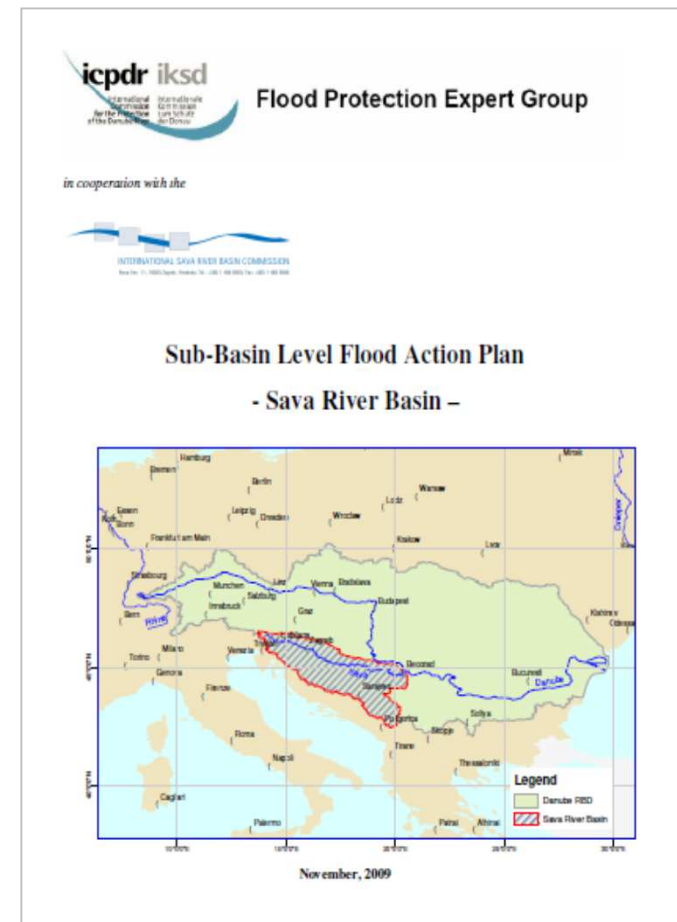
# Flood management

- **Protocol on Flood Protection to FASRB (2010)**
  - **Flood Risk Management Plan** (EU Flood Directive)
  - Flood **forecasting and warning system**
  - **Exchange** of (flood-related) information
  - Emergency **response** and mutual **assistance**



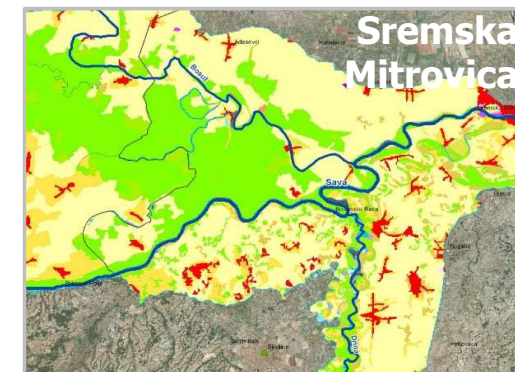
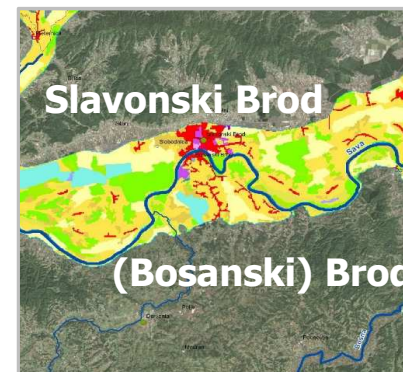
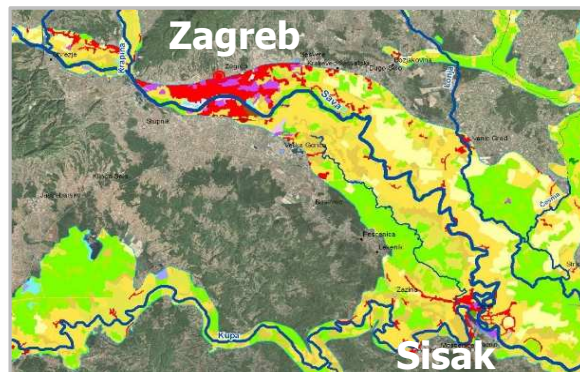
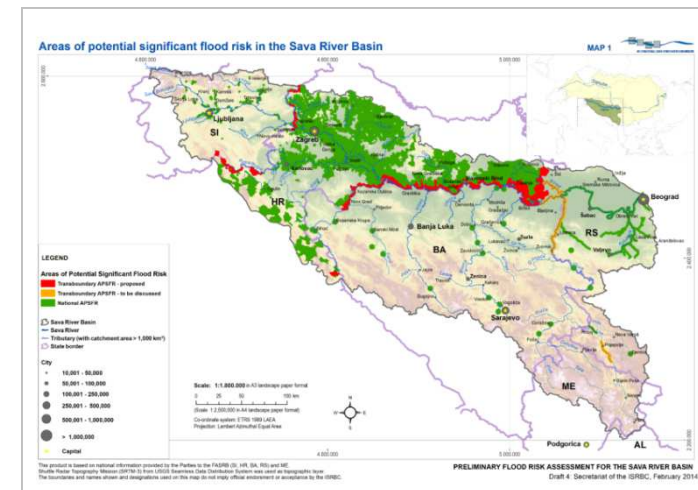
# Flood management

- **Sava Flood Action Plan (2009)**
  - Prepared **jointly with ICPDR**
  - First elaboration of **measures**



# Flood Risk Management Plan

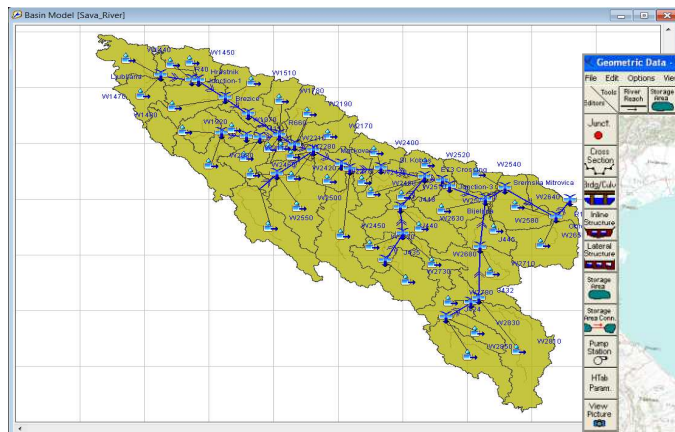
- **Initial steps**
  - **Draft Program**
  - Initial **flood vulnerab. assesment**
  - Joint **PFRA Report** (incl. May '14 flood)
- **Plan**, incl. Summary of Measures (2016-2018)



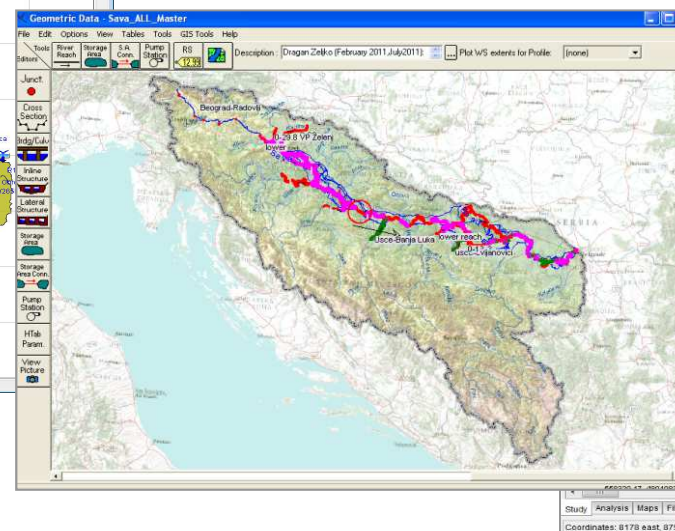
# Flood forecasting and warning

- **Simulation models** (2011, 2013)
- **Upgrade of models** (2016, 2017)
- **Flood Forecasting and Warning System** (2018)

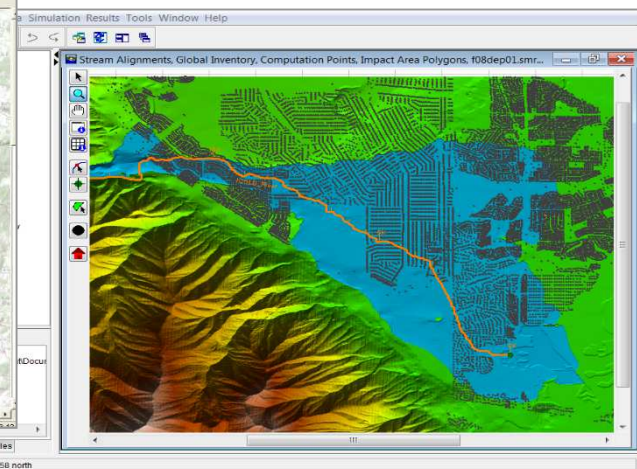
**Hydrologic model**



**Hydraulic model**



**Consequence assessment**



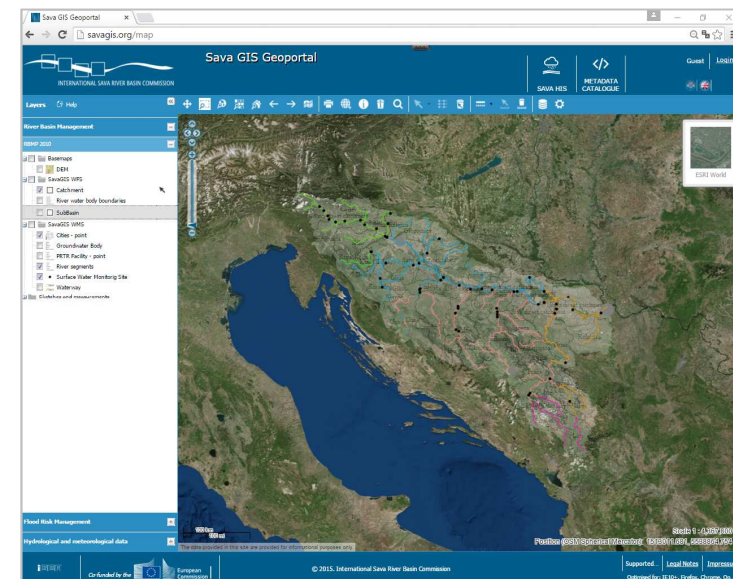
# Accident prevention and control

- **Accident Emergency Warning System**
  - Participation in testing of the existing system of ICPDR
  - Efforts to improve the work of PIACs in the Sava countries
  - PIAC ready to be established in Montenegro
- **Draft Protocol on Emergency Situations to FASRB (2010)**
- **Water Pollution Contingency Management Plan (planned)**

# Data and information exchange

- **Sava GIS Strategy** (2008)
- **Implementing documents** (2010)
- **Sava GIS** (INSPIRE, WFD, ICPDR) – 2015
  - **River basin management** data
  - **Flood risk management** data
  - **Historical H&M** data
  - **Other** databases (in future)

[www.savagis.org](http://www.savagis.org)



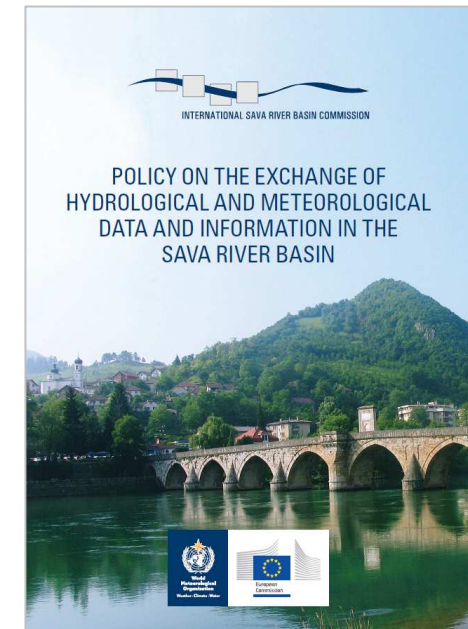
# Data and information exchange

- **H&M data and information**
  - Hydrological Yearbook
  - Data Portal
  - Data Exchange Policy (principles, minimum)



Hydrological stations with daily observation

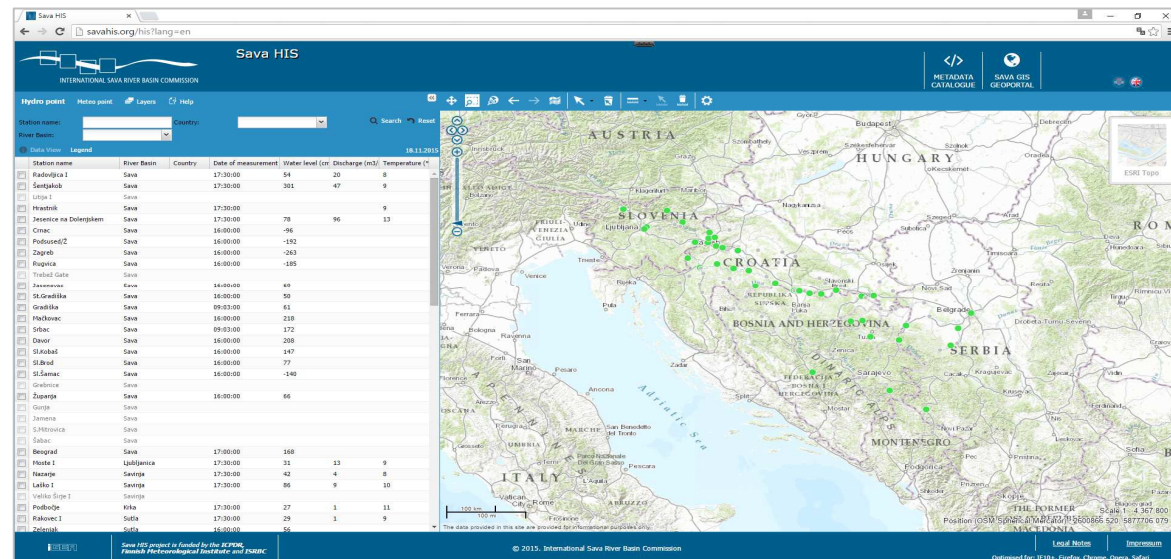
Station	Hydrological Station	Region	Station Code	Station Type	Height	Height of Bridge	Height of Dam
Belgrade	Belgrade	Belgrade	0101	0101	16	16	16
Bratislava	Bratislava	Bratislava	0102	0102	16	16	16
Budapest	Budapest	Budapest	0103	0103	16	16	16
Debrecen	Debrecen	Debrecen	0104	0104	16	16	16
Grad	Grad	Grad	0105	0105	16	16	16
Maribor	Maribor	Maribor	0106	0106	16	16	16
Novi Sad	Novi Sad	Novi Sad	0107	0107	16	16	16
Osijek	Osijek	Osijek	0108	0108	16	16	16
Plzeň	Plzeň	Plzeň	0109	0109	16	16	16
Prague	Prague	Prague	0110	0110	16	16	16
Regensburg	Regensburg	Regensburg	0111	0111	16	16	16
Salzburg	Salzburg	Salzburg	0112	0112	16	16	16
Vienna	Vienna	Vienna	0113	0113	16	16	16
Zagreb	Zagreb	Zagreb	0114	0114	16	16	16



# Data and information exchange

- **Sava HIS** (INSPIRE, WMO resolutions) – 2015
  - ‘Real time’ data
  - **Sediment transport** data (2016)
- **Joint measurements at border sections** – 2015

[www.savahis.org](http://www.savahis.org)





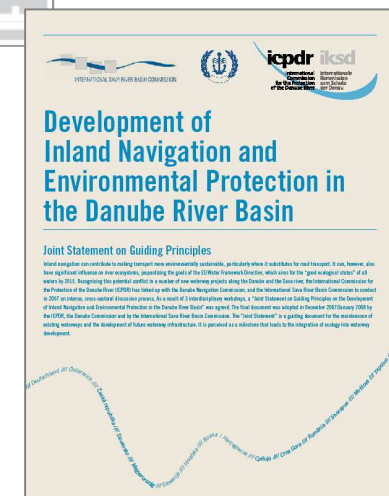
# Data and information exchange

- **Report on May 2014 flood**  
(made in cooperation with ICPDR)
  - **The entire affected area** covered
    - Causes
    - Consequences and actions taken
    - Lessons learned
    - Recommendations
  - **Dissemination**
    - E-version: ICPDR & ISRBC web-sites
    - Printed version
    - Sava NewsFlash No.15



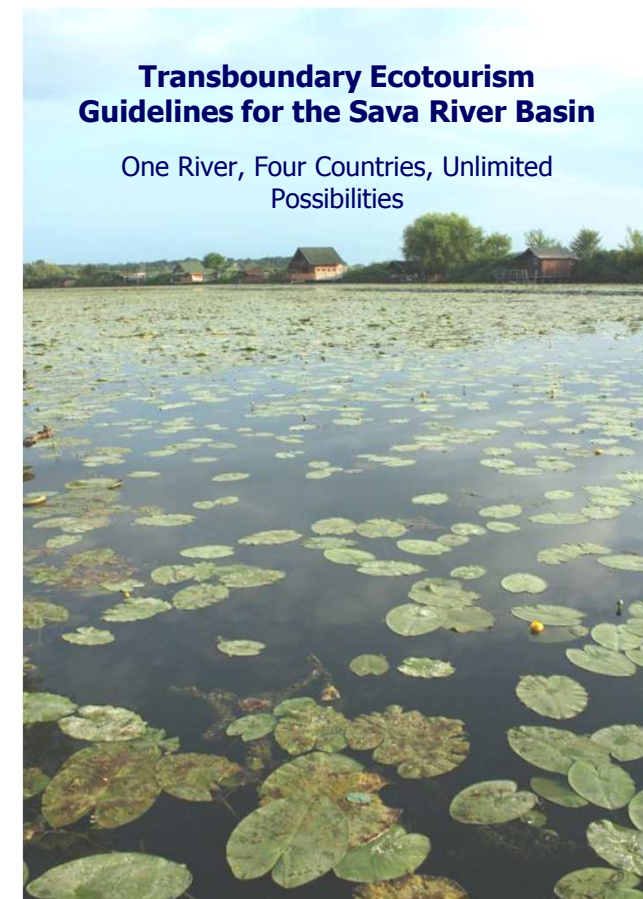
# Navigation development

- **Strengthening of administrative framework**
  - Technical standards
  - Navigation safety
  - River Information Services
  
- **Waterway rehabilitation**
  - Marking system
  - Studies and design (basis for construction works)
  - Integrated waterway planning (navigation – environmental protection)



# Tourism development

- **Sustainable river tourism (2009)**
  - **Nautical** (Guide)
  - **Ecotourism** (Guidelines)
  - **Recreational** (Cycling, rafting, kayaking)
  - **Culturally/socially conscious** (Sava Day)



## Other development activities

- **Fostering contribution of the SME sector to sustainable development of the Sava River Basin**
  - Infrastructure and facilities for river tourism (e.g. nautical tourism, recreation, fishing)
  - Food production and fish farming
  - Small hydropower plants
  - Waste water and manure treatment
  - Small shipyards and ports
- **Integration of water resources management with spatial planning and development**

# Protocols to FASRB

Issue	Signed	Ratified by	In force since
<b>Navigation Regime</b>	Kranjska Gora, 3 Dec. 2002	All Parties	29 Dec. 2004
<b>Prevention of Water Pollution caused by Navigation</b>	Belgrade, 1 June 2009	BA, HR, RS	
<b>Flood Protection</b>	Gradiška, 1 June 2010	All Parties	27 Nov. 2015
<b>Sediment Management</b>	Brčko, 6 July 2015	BA, HR, RS	
<b>Emergency Situations</b>	Final harmonization expected		
<b>Transboundary Impact</b>	Draft under reconsideration		

# ISRBC contribution

- Basic role: **Coordination of activities** on regional level
  - **Strategic plans**  
(river basin management, climate adaptation, flood risk management)
  - **Integrated systems**  
(GIS, RIS, data exchange / forecasting / early warning systems)
  - Water-related **economic activities** (navigation, river tourism)
  - Development and upgrade of **policy**



# ISRBC contribution

- Additional role: **Preparation and implementation of projects**
  - All projects are **regional** and **agreed by the 4 Parties**
  - All projects are **aligned with EU directives and strategies** (e.g. EU 2020 Strategy, EU Danube Strategy)
  - ISRBC is the **most distinguished project-oriented** international basin organization in Europe



# ISRBC contribution

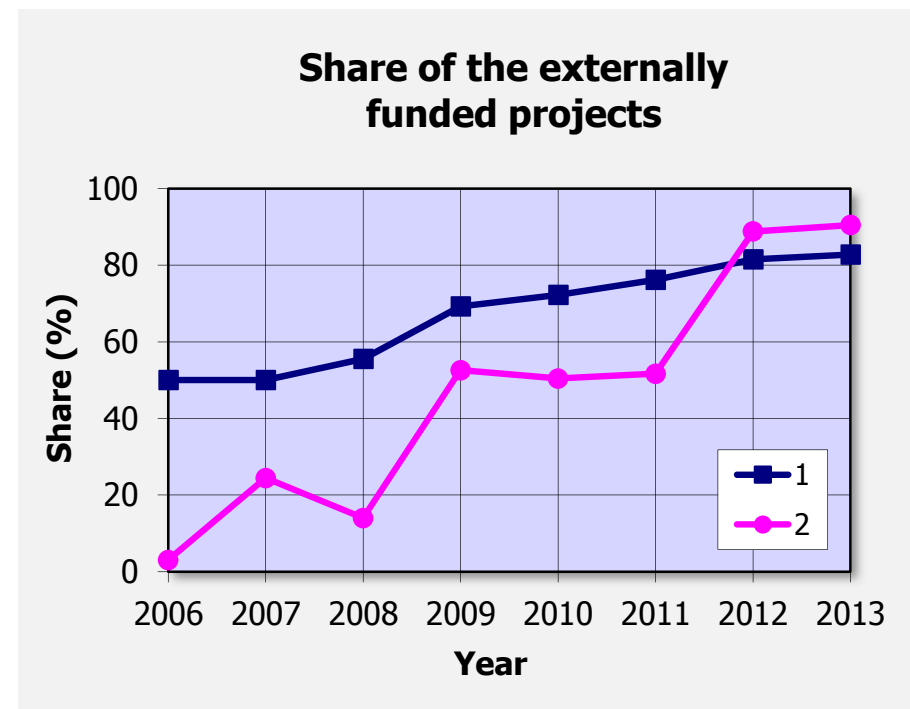
- **Direct** benefits
  - **Ensuring funding** from external sources
  - **Preparation and/or implementation** of projects
- **Indirect** benefits (when the countries finance and/or implement projects originating from the activities coordinated by ISRBC)
  - **Facilitation of fund-raising** for the countries
  - **Lower costs** for the countries in case of joint ventures





## ISRBC contribution

- **Total number of projects:** 44 (implemented or ongoing)
- **Total budget:** 27.8 M€
- **Share of external funding:** 92.3 % (25.7 M€)
  - European Union
  - U.S. Government
  - UN (UNECE, UNESCO)
  - World Bank
  - Other org. / institutions



1 – Share in terms of the projects' **number**

2 – Share in terms of the projects' **budget**

# ISRBC contribution

- Joint **work** ---> joint **priorities** ---> joint **vision** and **program** for sustainable development of the region
- List of 19 **priority regional projects** for the basin



## EUSDR as an opportunity

- EUSDR – an important **framework for implementation of the 'joint program'** in the period 2014 – 2020
- The 'joint program' **well recognized by EUSDR**  
(11 projects included in the implementing documents of EUSDR)



# Public participation

- **The broadest scope of work** among int'l basin organizations (river/lake commissions) in Europe
- **Inter-sectoral coordination** – an important task of ISRBC

Activity / Field of work	E	F	N	H	A	T	C
River Basin Management Plan (EU WFD)	+	+	+	+	+		+
Water and Climate Adaptation Plan		+	+	+	+		+
Integrated Information System (INSPIRE Dir.)	+	+	+	+	+		
Navigation	+		+	+		+	
Tourism	+	+	+	+		+	

E – Water and aquatic  
ecosystem protection  
F – Flood management

N – Navigation  
H – Hydropower  
A – Agriculture

T – Tourism  
C – Climate change

# Public participation

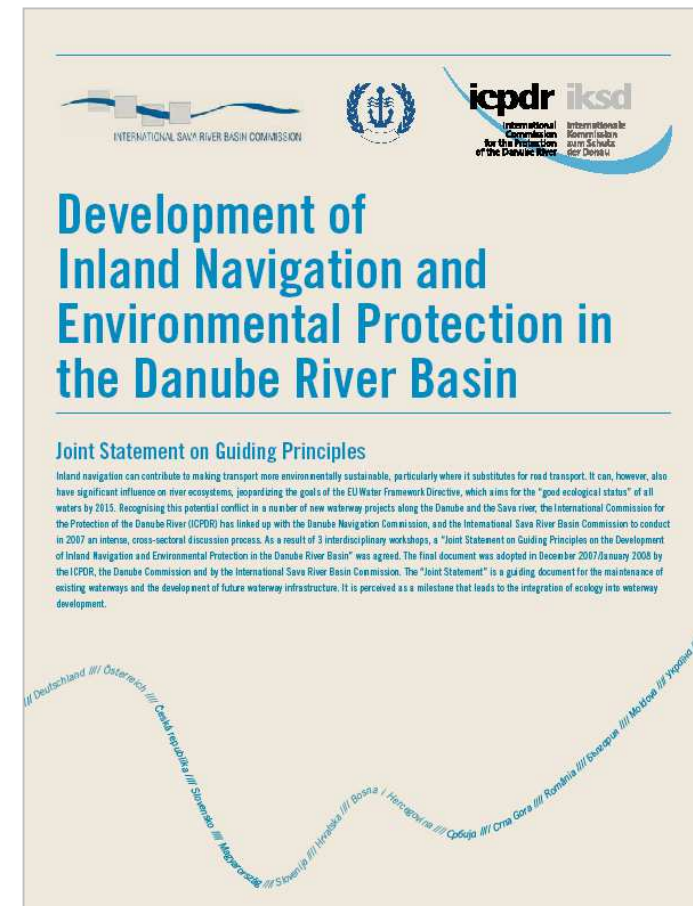
- **Wide range** of stakeholders
  - **Levels:** International, National, Local
  - **Water sub-sectors:**
    - Environment
    - Water management
    - Navigation
    - Hydropower
    - Agriculture
    - Tourism
  - **Sectors of society:** Governmental, Non-gov., Academic, Business

# Cooperation

- **Beyond the basin**
  - **Institutions of EU, UNECE** and other **UN** organizations (UNESCO, UNDP, UNEP, WMO)
  - **River commissions** (ICPDR, DC, ICPR, CCNR, etc.)
  - **Regional organizations / processes / initiatives** (OSCE, REC, RCC, SEETO, GWP, SECI, Danube Cooperation Process, Petersberg Phase II / Athens Declaration Process)
  - **Professional organizations / networks** (PIANC, GIS Forum, SedNet)
  - **Financial institutions / funding programs** (WB, EBRD, EIB, WBIF, GIZ)
  - **NGOs** (WWF, Euronatur)

# Cooperation

- **Cooperation with river/lake commissions**
  - MoUs with **ICPDR** and **DC** on cooperation / coordination of activities
  - **Navigation Joint Statement** (process led by ICPDR, DC and ISRBC)



# Cooperation

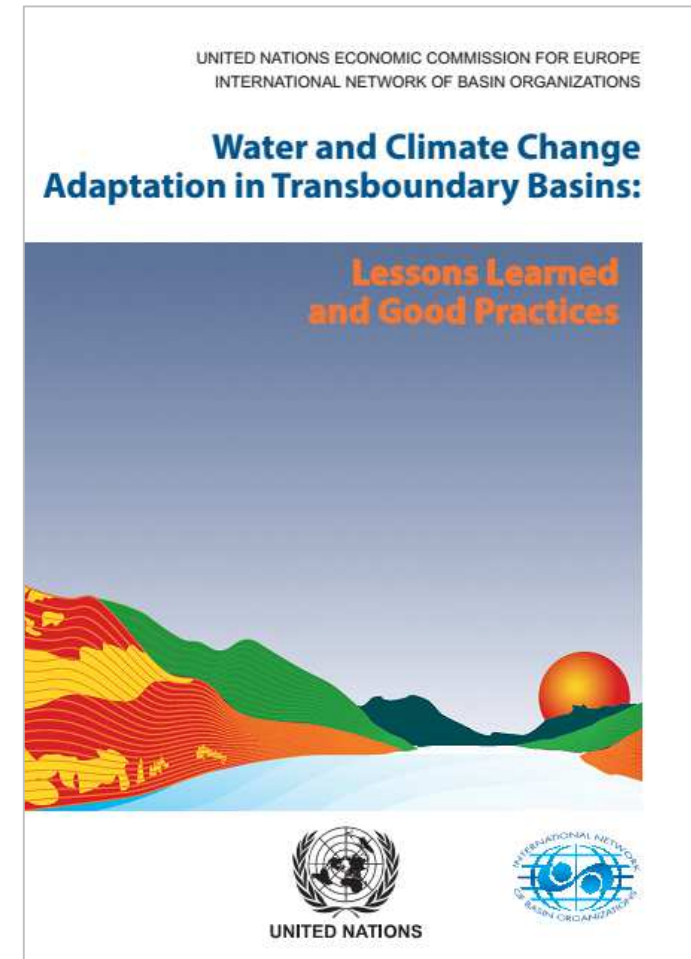
- **Cooperation with river/lake commissions** (cont.)
  - Annual meetings of the executive secretaries of **European river/lake commissions** (+ UNECE)





# Cooperation

- **Global network** of transboundary basins working on adaptation to climate change
- **Created by UNECE and INBO** in 2013
- **Exchange of experiences and lessons learned**
- **14 basins** from all over the world (incl. Danube, Drin, Rhine, Sava)



# Cooperation

- **Paris Pact** on Water and Adaptation to Climate Change in the Basins of Rivers, Lakes and Aquifers (prepared by INBO, UNECE, etc.)
- Non-binding document **calling for action on climate change adaptation** in basins
- **Over 300 signatories** worldwide
- **Presented at COP21** (Paris, 1 Dec. 2015)

Budapest, 17 Nov. 2015



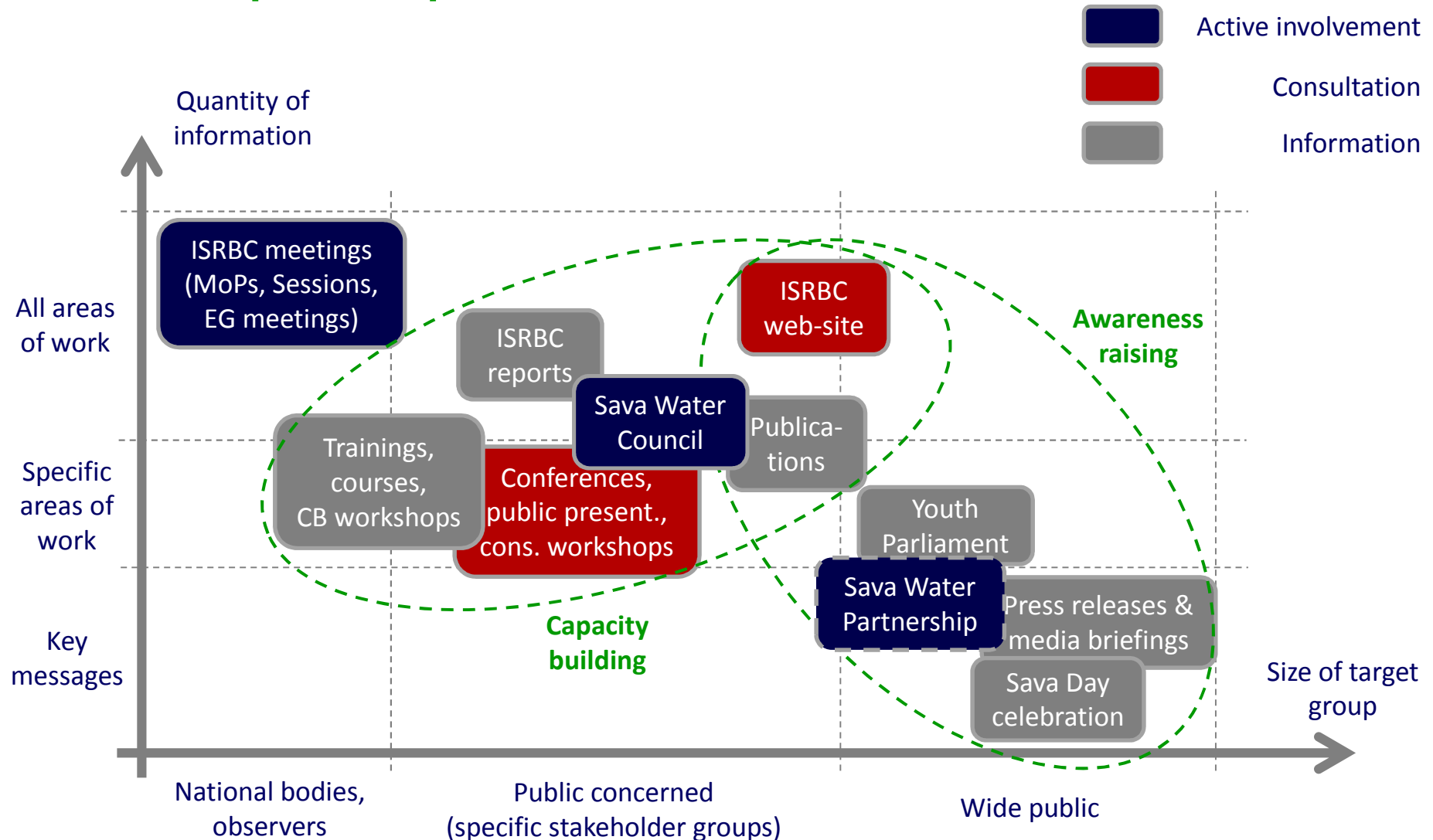
# Cooperation

- **Within the basin**
  - **Governmental** sector
    - Authorities / bodies **responsible** for implementation of FASRB
    - **Other** institutions (Hydro-meteorological institutes / services, Port master offices, Water / Waterway agencies, Regional chambers of commerce, etc.)
  - **Non-governmental (civil)** sector
  - **Academic** sector (universities and institutes)
  - **Business** sector (e.g. Coca-Cola)

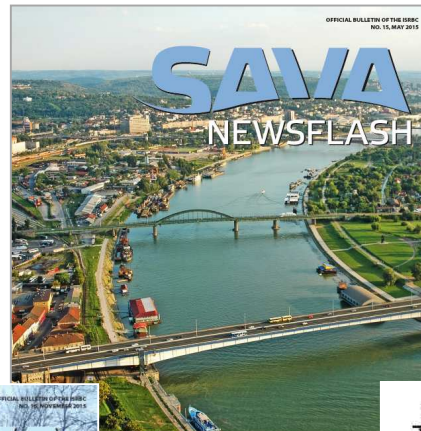
# Cooperation

- **Organizations with the observer status at ISRBC**
  - International organizations (ICPDR, DC)
  - NGOs (WWF, Euronatur, etc.)
  - GWP CEE, REC
  - (FYR of) Macedonia, Montenegro
- **Key stakeholders** (partnership within ISRBC projects / activities)
  - Preparation of the Sava RBM Plan
  - Rehabilitation and development of navigation
  - Development of river tourism in the basin

# Public participation



# Provision of information

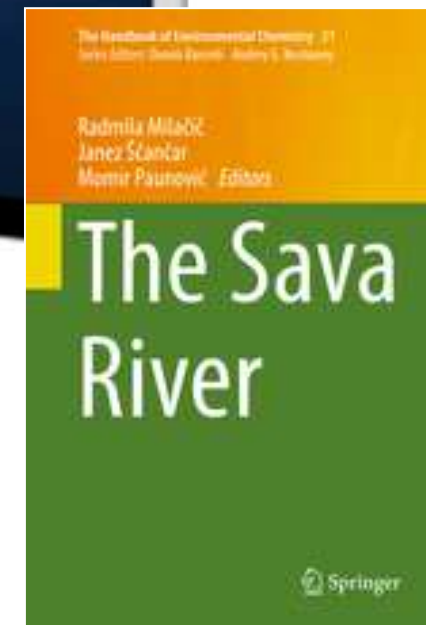
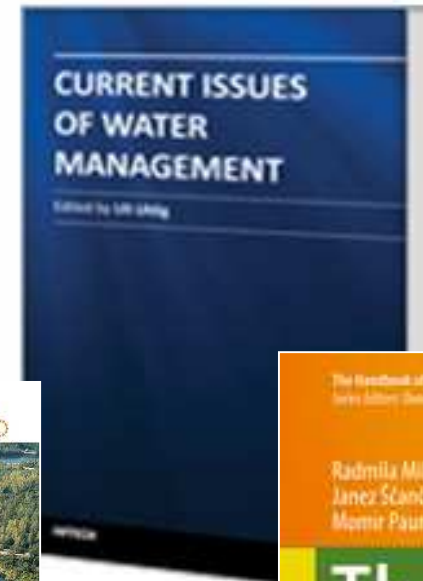
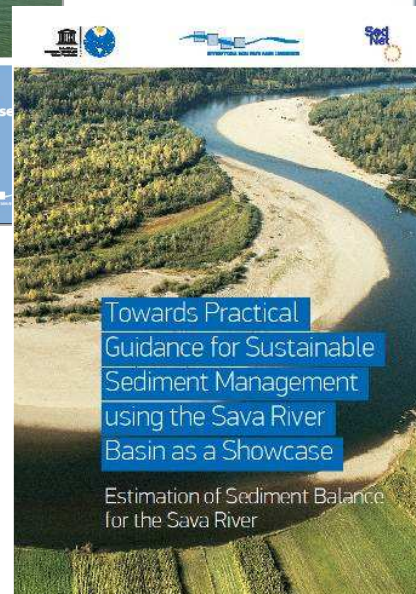


**NEWS: JEAN-ERIC PAQUET,**  
We cannot eliminate natural phenomena, but we can minimise their consequences

... of the Framework Agreement:  
... public of Serbia

... ce and innovation for improvement of water quality

... tive is to increase cargo traffic on waterways



# Provision of information

- **Trainings, courses, capacity building workshops**
  - Water-food-energy-ecosystems nexus
  - AEWS
  - Sediment management
  - Water quality monitoring & river morphology
  - Flood management
  - Hydrological modelling
  - GIS, HIS



Course “TB water cooperation and int’l water law”, Athens, 14-15 June 2016

# Provision of information

- Leaflets
- Posters
- Flyers
- Press-releases
- Press-conferences & media briefings



**1.6.2015. DAN SAVE**  
**ДАН САВЕ**

**SAVA, rijeka koja spaja!**  
**САВА, река која спаја!**  
**reka, ki spaja!**

**Biciklistička tura „Sava 2015“ / Kolesarska tura „Sava 2015“ / Бициклистичка тура „Сава 2015“**

29.5. Крањка Гора – Јасеница – Блед – Воћин (71 км)  
 Крањка Гора – Јасеница – Блед – Бољне (71 км)

30.5. Воћин – Крај – Лjubljana (87 км)  
 Бољне – Крај – Лjubljana (87 км)

31.5. Самобор – Загреб (Бунски) (40 км)  
 Самобор – Загреб (Бунски) (40 км)

1.6. Загреб – Лjева Мартинска Вeа – Лонд (109 км)  
 Загреб – Лjева Мартинска Вeа – Лонд (109 км)

2.6. Лонд – Крај – Јасеница – Градишка (88 км)  
 Лонд – Крај – Јасеница – Градишка (88 км)

3.6. Градишка – Оувака – Славонски Брод (110 км)  
 Градишка – Оувака – Славонски Брод (110 км)

4.6. Славонски Брод – Одак – Сатац – Већко (95 км)  
 Славонски Брод – Одак – Сатац – Већко (95 км)

6.6. Већко – Врбања – Ст. Митровица – Засавица (114 км)  
 Већко – Врбања – Ст. Митровица – Засавица (114 км)

6.6. Засавица – Бољнеци – Биоград (111 км)  
 Засавица – Бољнеци – Биоград (111 км)

**SAVA 2015**  
 INTERNATIONAL SAVA RIVER BASIN COMMISSION

**SAVA 2015**  
 INTERNATIONAL SAVA RIVER BASIN COMMISSION

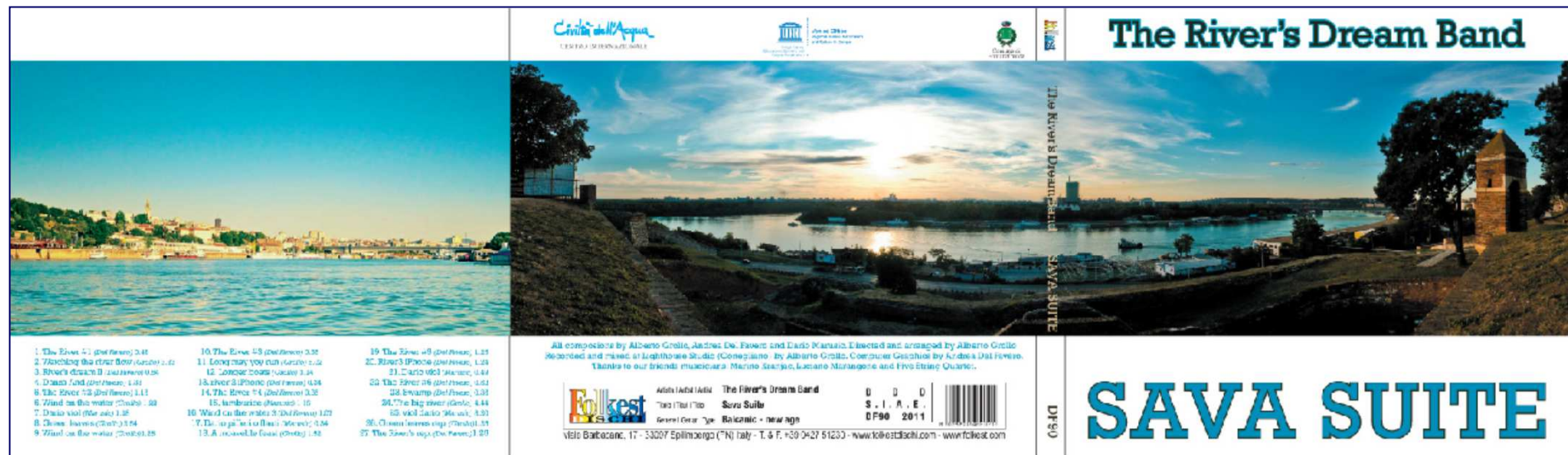
**Parlament mladih (Bihać, 29.-30.5.)**  
**Парламент младих (Бихаћ, 29-30.5.)**





# Provision of information

- “Sava Suite” project



# Provision of information

- “H2OoooH” project



# Provision of information

- **Youth Parliament of the Sava River Basin**



# Provision of information

- **Sava Day (1 June)**
  - Rafting, kayaking, canoeing



# Provision of information

- **Sava Day**
  - Cycling tours



# Provision of information

- **Sava Day**
  - Concerts & exhibitions



# Provision of information

- **Sava Day**
  - National projects of the Parties



# Provision of information

- **Sava Day**
  - National projects of the Parties




**Lijepa naša Sava**

**VRATIMO SE SAVI!**

Savski sajam  
Zagreb, Bundeš  
subota, 29. svibnja 2010.  
od 9.00 do 14.00 sati

- degustacija ribljih specijaliteta
- tradicijski obrti i zanati
- savski suveniri i rukotvorine
- izložba „Život na Savi tijekom stoljeća“

**Dodite i uživajte!**



# Provision of information

- **Sava Day**
  - National projects of the Parties



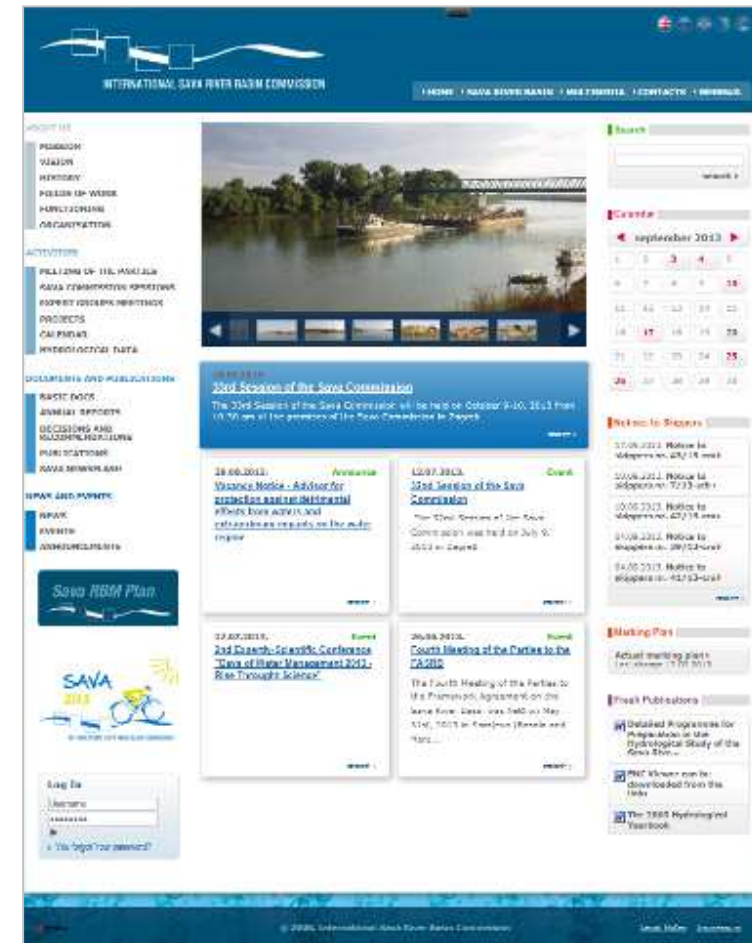
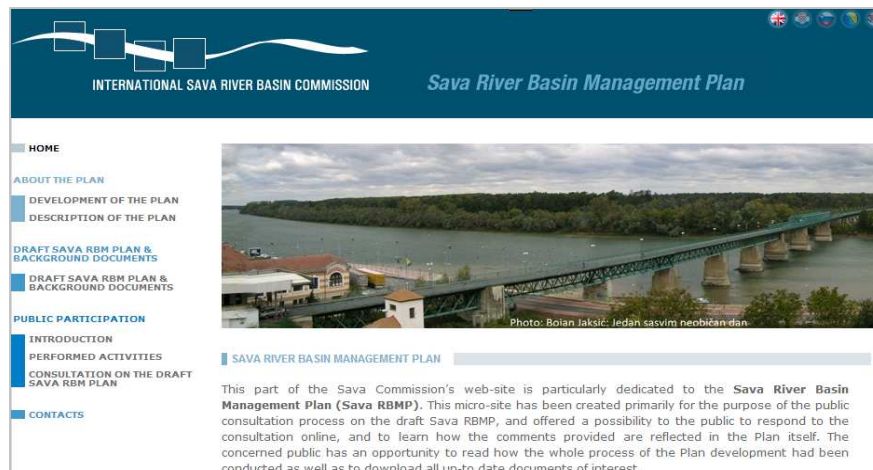
# Provision of information

- **Sava Day**
  - National projects of the Parties



# Information / consultation

- **Web-site** (7 languages)
  - Data sharing platforms / portals (GIS, HIS, NtS)
  - Consultation sections (RBM Plan)
  - Applications (Waterway Marking Plan, navigation safety inspection)



# Consultation

- **Consultation workshops and meetings** with stakeholders
  - Sava RBM Plan
  - Sava FRM Plan
  - Water and Climate Adaptation Plan
  - Sava GIS
  - Waterway rehabilitation
  - Eco-tourism Guidelines



# Active involvement

- **MoPs, Sessions and Expert Group meetings of ISRBC**
  - National institutions ('responsible' and 'other')
  - Observers

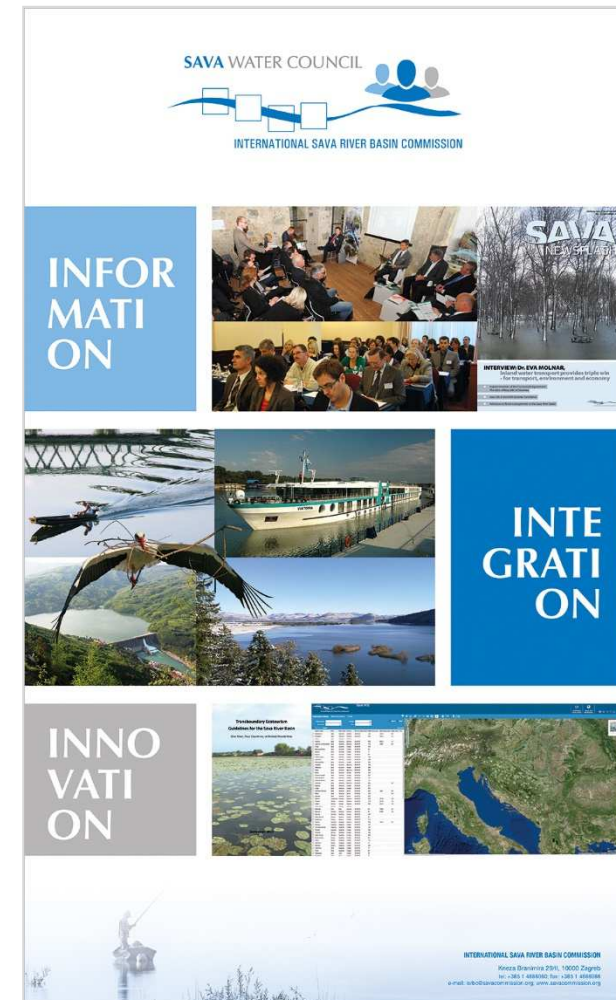


# Active involvement

- **Sava Water Council**
  - Advisory platform of ISRBC (NG, academic, business sectors)
  - 55 institutions / organizations
    - 9 fields of activity
    - 10 types of institutions

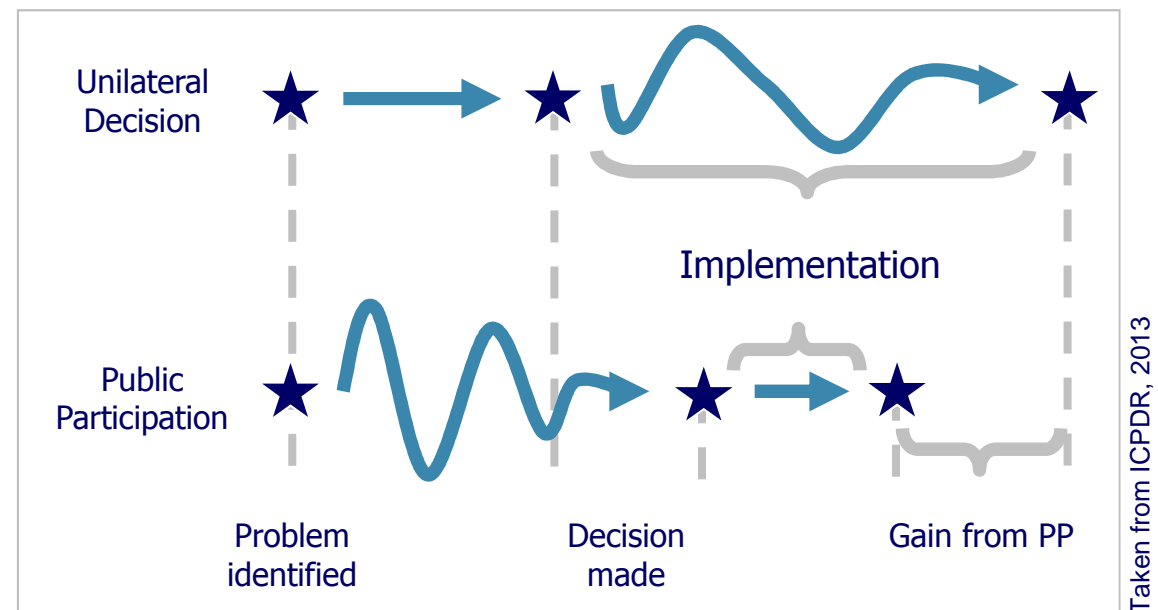


Course “TB water cooperation and int’l water law”, Athens, 14-15 June 2016



# Public participation

- **Wide range** of stakeholders → **Strong need** for public participation
- **Both costs and benefits increase** across the three PP levels
- Public participation – **demanding, but helps** find solutions faster



# Commitment of the Parties

- Sessions of ISRBC
- Meetings of the Parties (ministerial level)
- Other high-level meetings

Belgrade, 1 June 2016

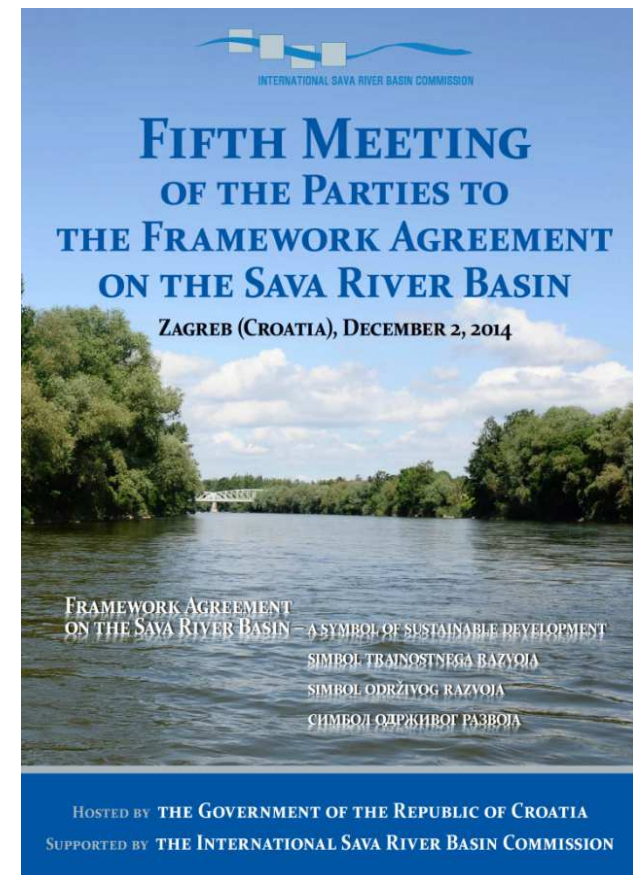


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# Approach

- **Integrated** (whole basin, scope of work, all societal sectors, 'top-down' + 'bottom up')
- **Aligned** with UNECE conventions and EU regulation / strategies
- **Complementary** with the processes on the Danube level
- **Pragmatic** and **practical**
- **Educative** (capacity building, awareness raising)



# Challenges

- **Differences between the countries**
  - **EU membership** status
    - Level of implementation of EU directives
    - Eligibility for approaching funds
  - Level of **economic development**
  - **Organizational structure**
  - **Environmental awareness** of the public
- **Financing**
  - **Priority projects** / strategic studies
  - Establishment of **integrated systems**

# Challenges

- **Broad scope of work**
  - **Resolving** conflicts of interests of different users of water (within a country / between countries / climate change)
  - **Twofold legal capacity** of ISRBC (Decisions vs. Recommendations)
  - Need for **many focal points** and **good inter-sectoral coordination and communication** within a Party
  - Need for **additional protocols** to regulate specific issues of FASRB
- Continuous **commitment** and **support at high political level**
- Number of **official languages** of ISRBC

# Benefits

- Improved **cooperation**
- Increased **level of trust**
  - Whole basin, comparable benefits
  - Part of the basin, unequal benefits
  - Resources provided by one country, benefits shared by more countries



# Benefits

- Implementation of **projects / activities of common interest** (plans, systems, infrastructure)
- Harmonization of **regulation, methodologies and procedures**
- Enhancement of **cross-sectoral cooperation on national level**



# Relevance for other regions

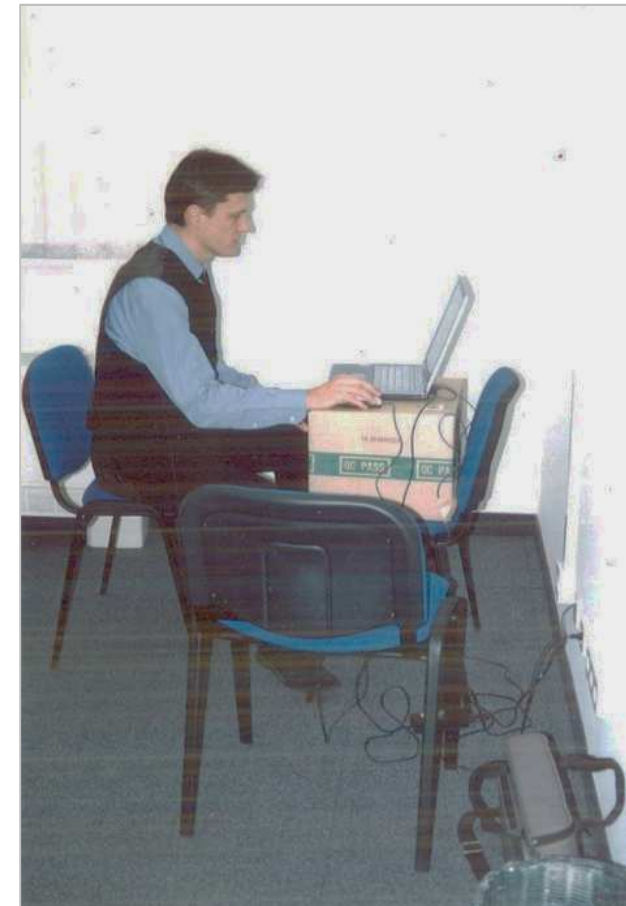
- **Interest for ISRBC approach**  
(Europe, Asia, Africa)



## Key message

- **Sound legal framework**
  - FASRB
  - Protocols to FASRB
- **Solid institutional framework**
  - Regional network of institutions / people (political and expert levels)
  - Achievements / ongoing activities
  - Mechanism for preparation and implementation of regional projects
- **Complex and demanding, yet beneficial process**

**2006**



# Contact information

**International Sava River Basin  
Commission**

**Kneza Branimira 29**

**10000 Zagreb**

**Croatia**

[www.savacommission.org](http://www.savacommission.org)

