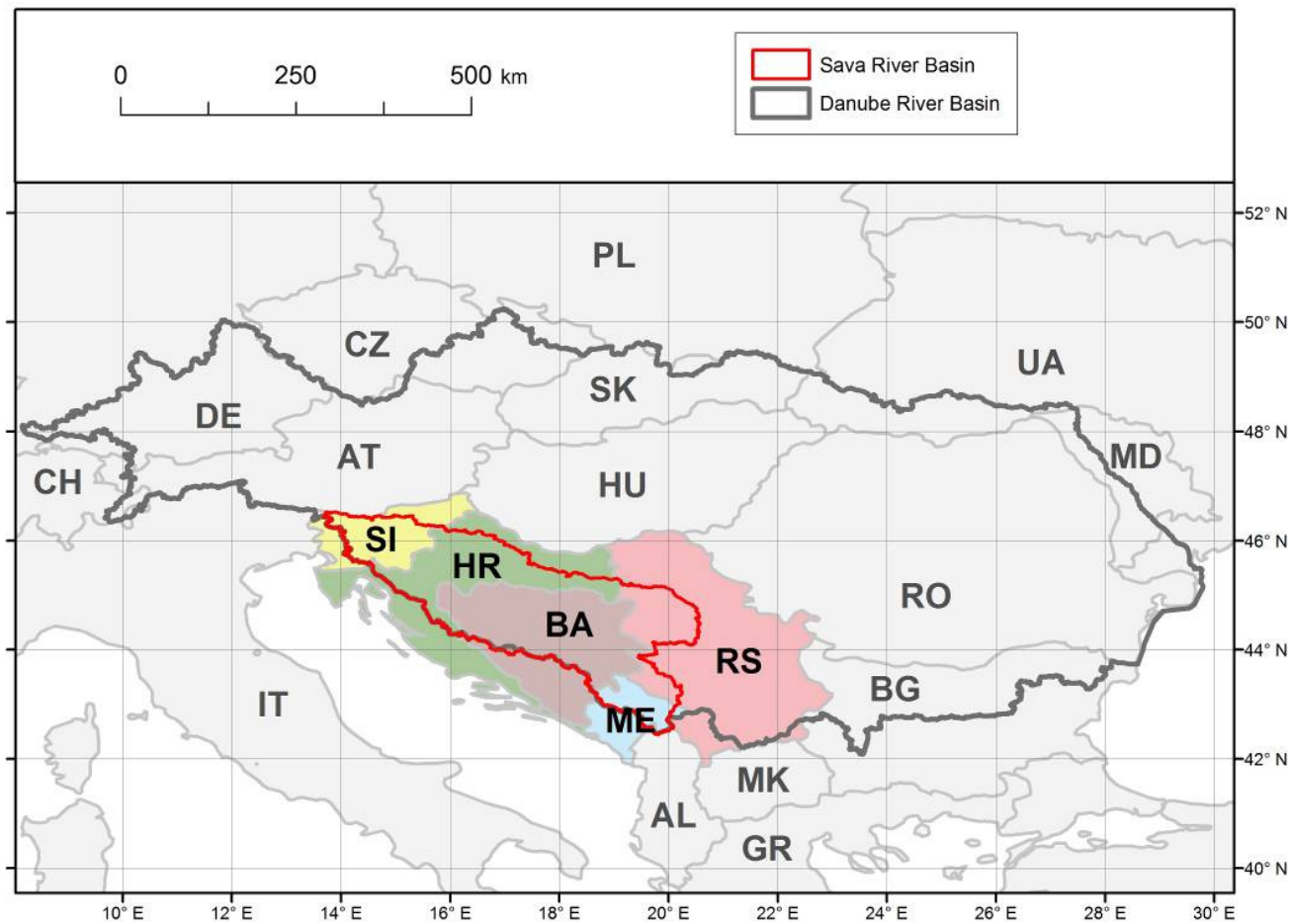




# **Developments in the Sava river basin relevant from the nexus viewpoint**

Dr Dejan Komatina,  
Secretary, ISRBC

# Sava river basin



## Sava river basin

- **Area:** 97 713 km<sup>2</sup> (the second largest Danube sub-basin; share: 12%)
- **Average flow** at the mouth: 1722 m<sup>3</sup>/s  
(the largest Danube tributary; contribution: 25%)
- **River length:** 940 km (594 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

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



# Sava river basin

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



# Sava river basin

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



# Sava river basin

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



# Sava river basin

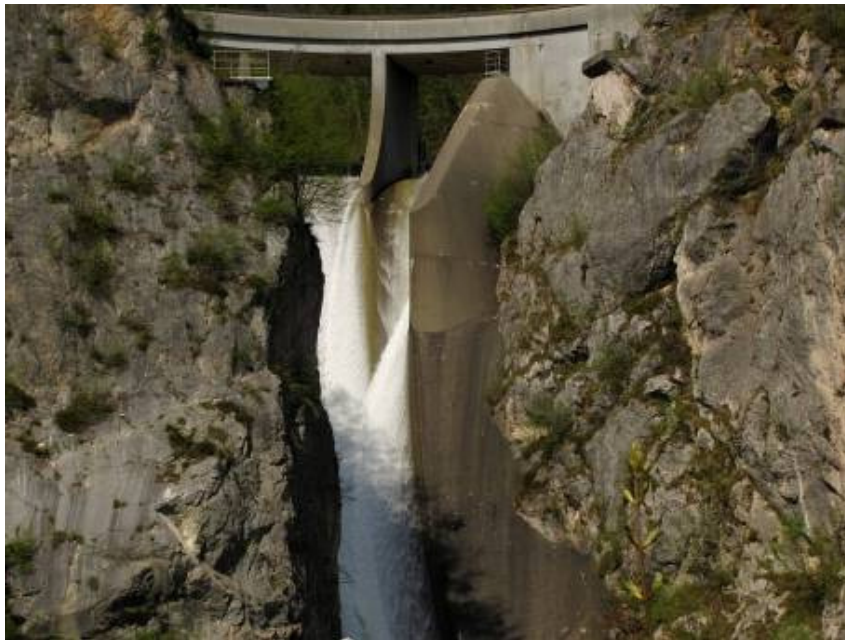
- **High environmental and socio-economic value**
  - Potential for transport of cargo and passengers





# Sava river basin

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



# Sava river basin

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



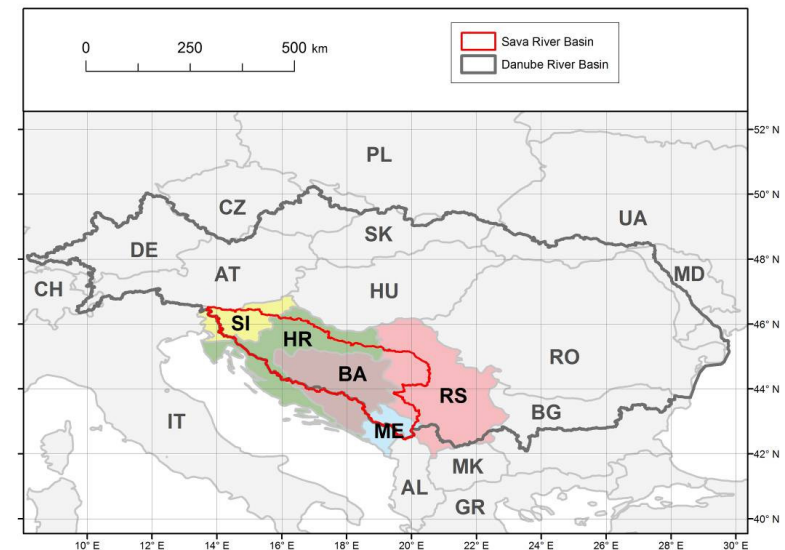
## Why sustainable development?

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



## Why transboundary cooperation?

- **Geopolitical changes** in the region in the 1990-ies – the main challenge for the water resources management in the basin
  - Sava: the largest **national** river → **international** river
  - **Water management restricted to national level** of the newly established countries
  - **New, international framework** required to manage water resources on the basin level



# 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, etc.)

- Development of **other economic activities** related to water use

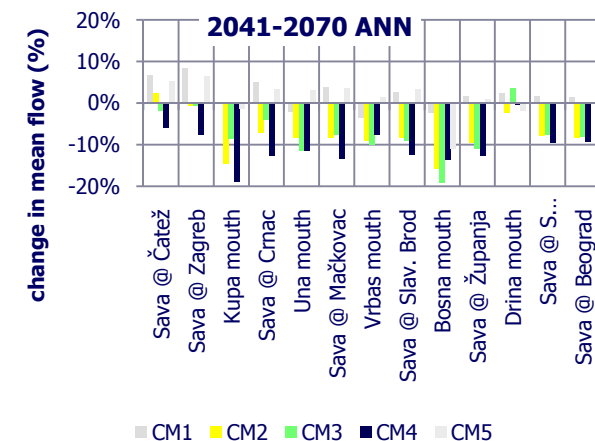
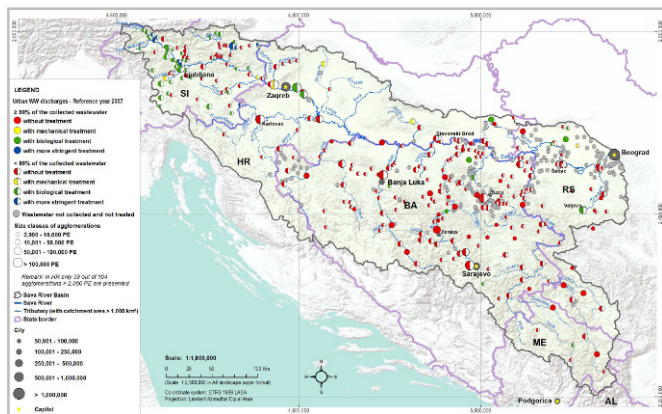
# FASRB

- **The first development-oriented multilateral agreement** in the region signed after the agreements on peace and succession
- Implementation coordinated by the **ISRBC**
  - **4 member countries**  
(Bosnia & Herzegovina, Croatia, Serbia, Slovenia)
  - **Montenegro**  
(cooperation on technical level until their full membership)



# ISRBC

- 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
    - **Sediment Management Plan**
    - **Water and Climate Adaptation Plan**







# ISRBC

- Development of water-related **economic activities** in the basin (navigation, river tourism)
- Harmonization of **regulation** (national → EU)
- Creation of additional **protocols to the FASRB**



# ISRBC

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

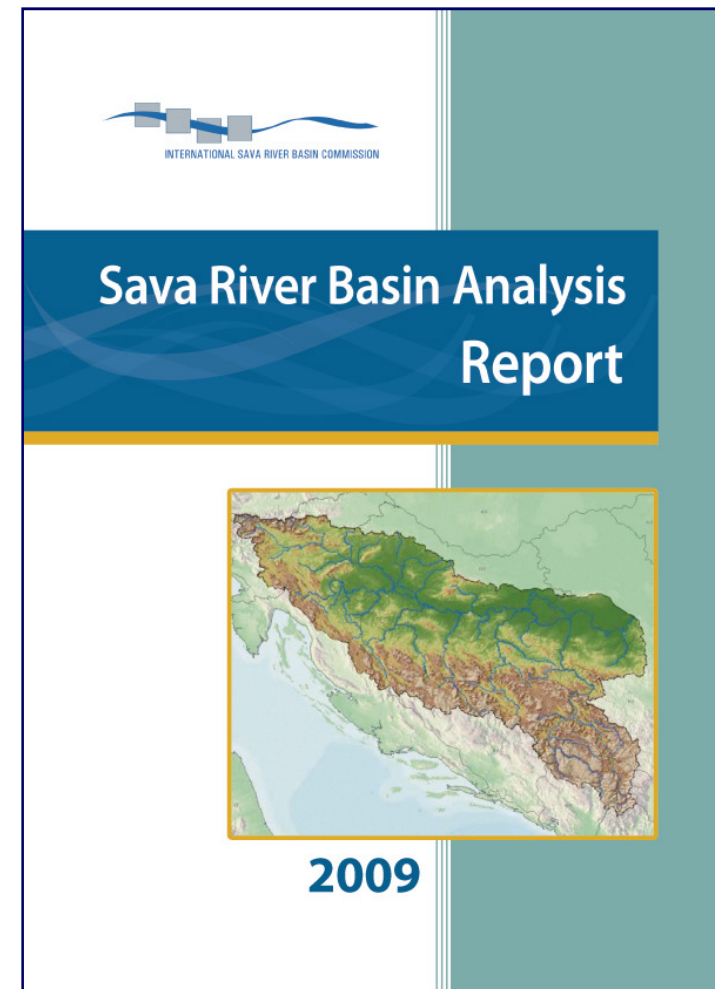
E – Water and aquatic  
ecosystem protection  
F – Flood management

N – Navigation  
H – Hydropower  
A – Agriculture

T – Tourism  
C – Climate change

# 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**



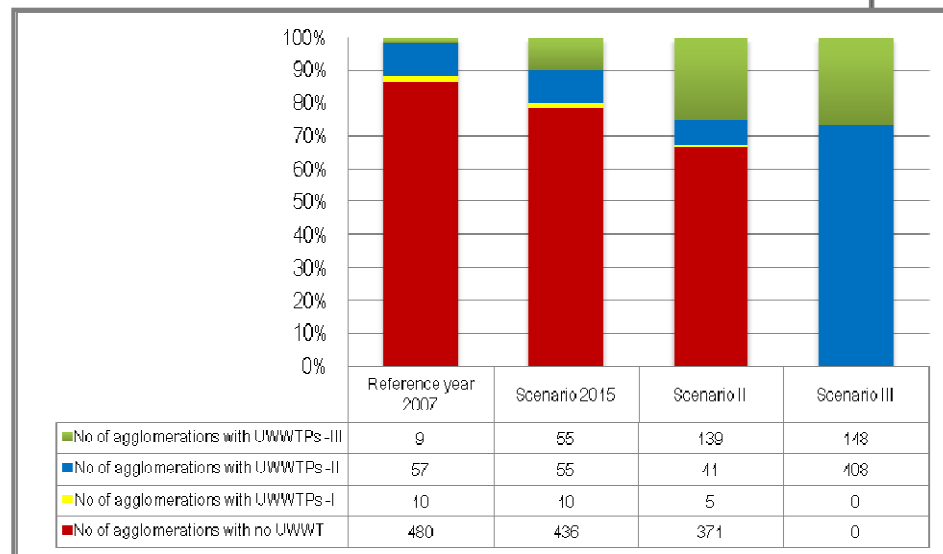
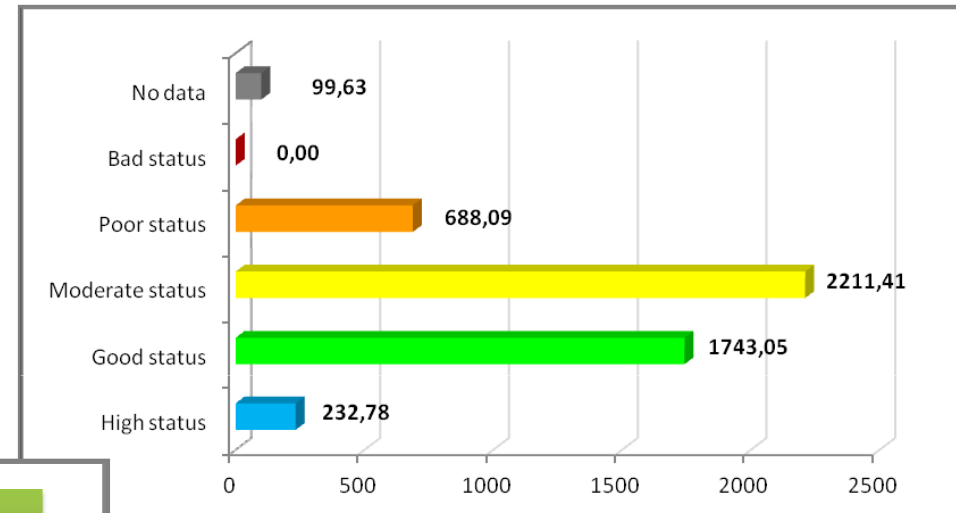
# Sava RBM Plan

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



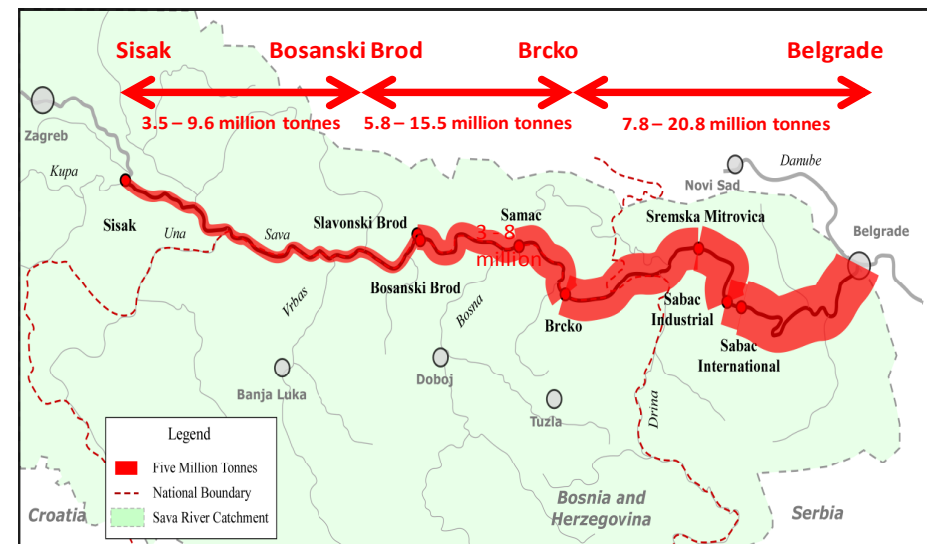
# Sava RBM Plan

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



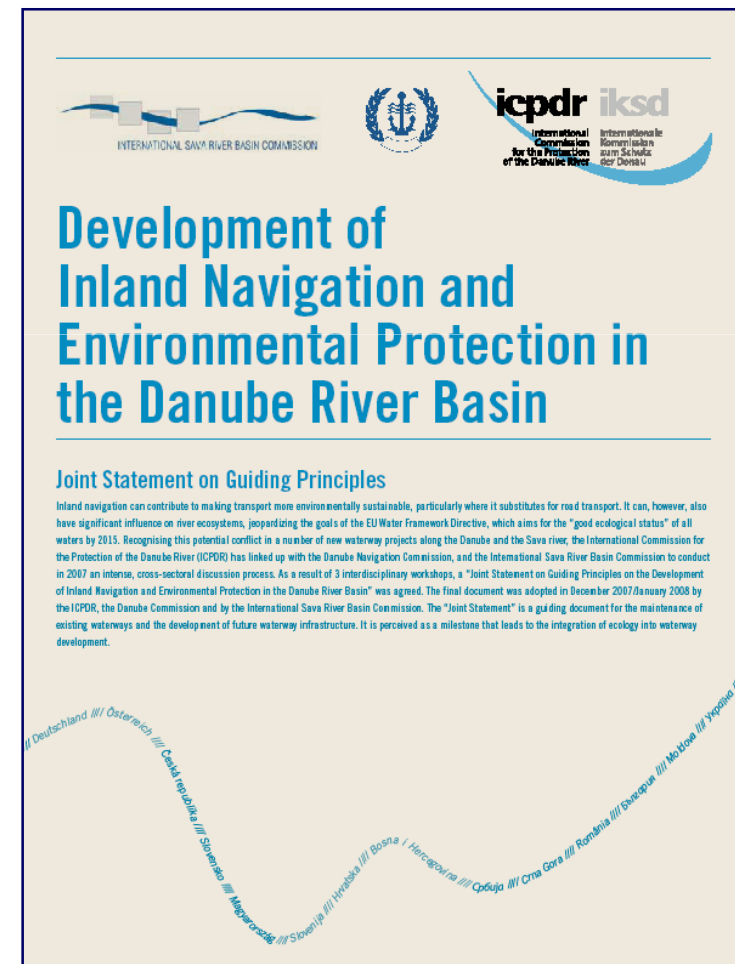
# Navigation development

- **Addressed in the Plans** (RBM, climate, sediment)
- **Integrated planning approach** is applied
  - **Sustainable solutions** (administrative, legal and technical)
    - Improvement of technical standards and safety of navigation (harmonization with the EU standards)
    - Lower waterway class than economically feasible
    - No river straightening (one-way navigation in sharp bends)



# Navigation development

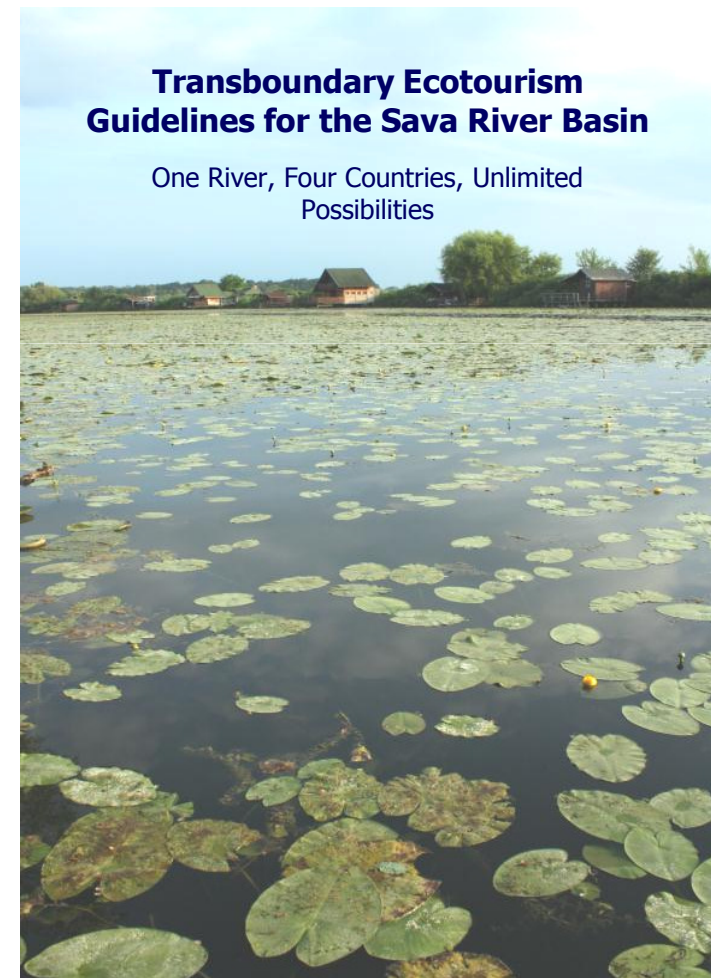
- **Integrated planning approach** is applied (cont.)
  - **Based on the Joint Statement** (ICPDR, Danube Commission; ISRBC)
    - Water, environ. and navigation sectors
    - Governmental, NGO, academic and business sectors
    - Sava navigation project monitoring and coordination committee
- **“Top-down”** being complemented by **“bottom-up”** approach





# Tourism development

- **Sustainable river tourism**  
(integrating sustainability and development)



# Tourism development

- **New stakeholders** (from all societal sectors) involved
- **“Bottom-up” approach** applied, **stakeholder network** created
- ISRBC recognized by the stakeholders as **a good platform for coordination** of further activities in the field



Sava Nexus Assessment Workshop, Zagreb, 4-6 March 2014

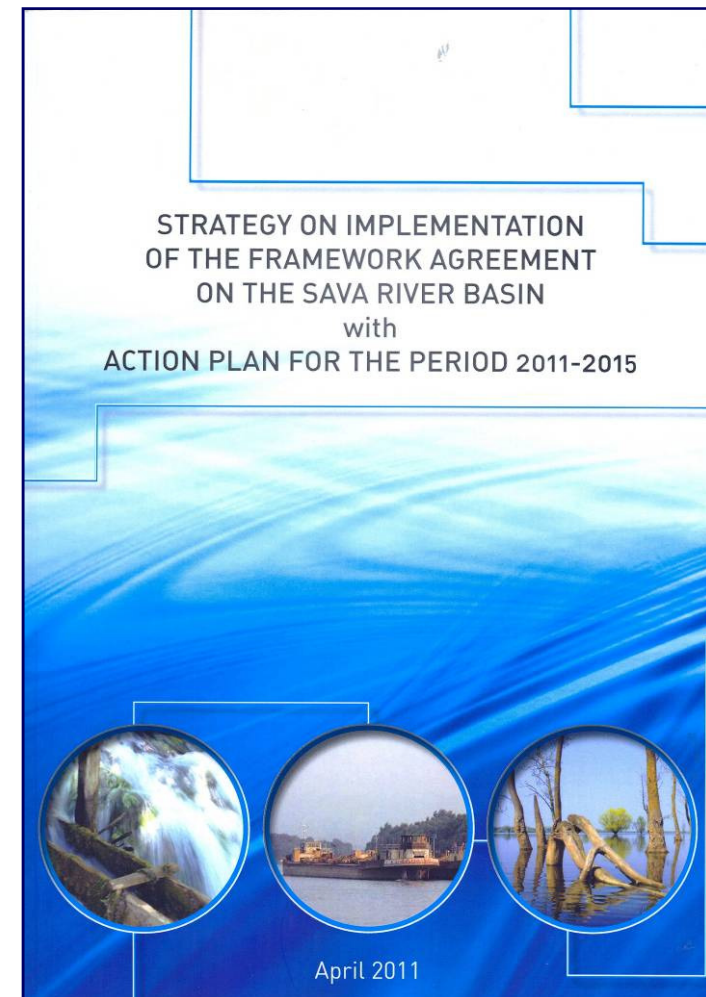


# Hydropower and agriculture

- **Addressed in:**
  - **Sava RBM Plan** (only partially)
  - **Water and Climate Adaptation Plan**
- Involvement in **the processes on the Danube basin level**, led by the ICPDR
- **Future activities** to address the two sectors
  - **Nexus assessment**
  - **2<sup>nd</sup> planning cycle** in accordance with EU WFD

# Conclusions

- **Objectives** (in the nexus context):
  - Dialogue with sectoral stakeholders
  - Integration of policies
  - Inter-sectoral coordination
- **Progress** has been made (on national and transboundary level)
- **Further improvement** is needed
- **Nexus assessment** expected to contribute to the improvement



# Contact information

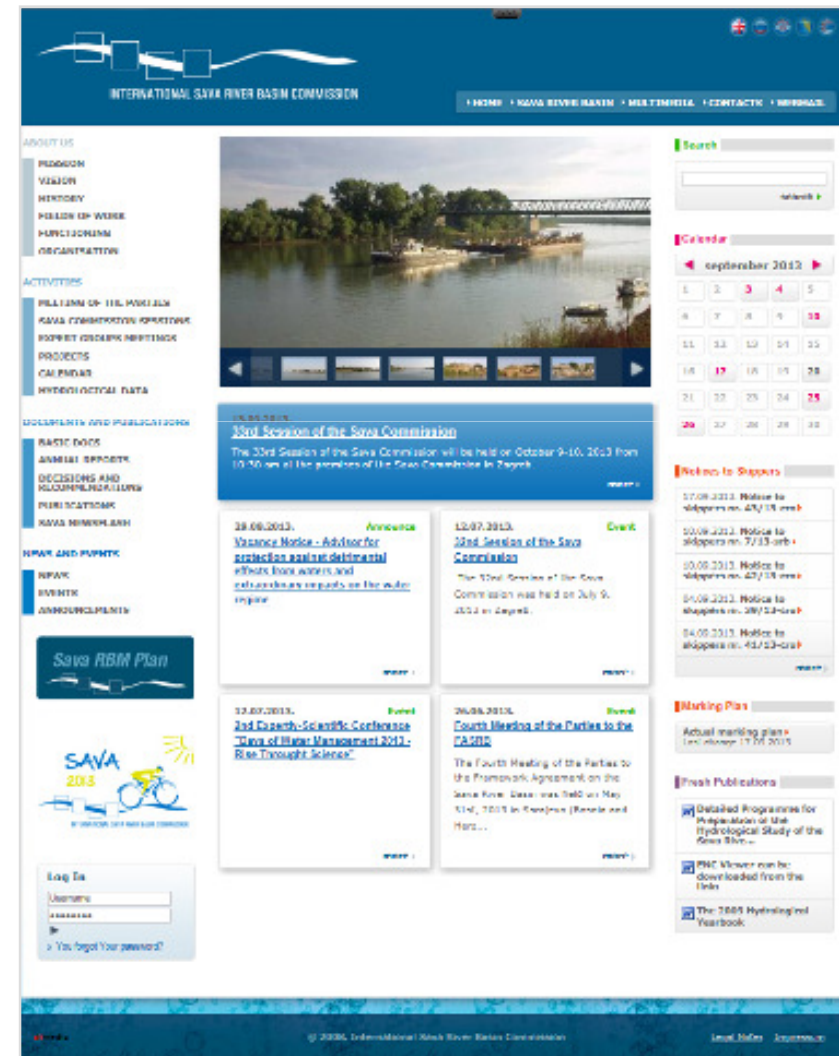
**International Sava River Basin  
Commission**

**Kneza Branimira 29**

**10000 Zagreb**

**Croatia**

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



The screenshot shows the homepage of the International Sava River Basin Commission website. The header includes the organization's name and navigation links for Home, Sava River Basin, Multimedia, Contacts, and Members. The main content area features a large image of a river scene, a search bar, a calendar for September 2013, and a 'News to Shoppers' section with several news items. A 'Marking Plan' section is also visible. The footer contains copyright information for 2006 and links for 'Local Sites' and 'Institution'.