Integrated river basin management and socioeconomic development in the region
Framework Agreement on the SRB

• **Main objectives - to establish:**
  - International regime of **navigation**
  - Sustainable **water management**
  - Sustainable **management of hazards**
    (floods, droughts, accidents involving water pollution, etc.)

• **Parties to the FASRB:** *BA, HR, RS and SI*

• Provides ISRBC with **the broadest scope of work** among
  European int’l basin organizations (river/lake commissions)
Water resources management

- **Protocols to the FASRB**

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Signed</th>
<th>In force since</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation Regime</td>
<td>Kranjska Gora, 3 Dec. 2002</td>
<td>29 December 2004</td>
</tr>
<tr>
<td>Prevention of Water Pollution caused by Navigation</td>
<td>Belgrade, 1 June 2009</td>
<td>08 October 2017</td>
</tr>
<tr>
<td>Flood Protection</td>
<td>Gradiška, 1 June 2010</td>
<td>27 November 2015</td>
</tr>
<tr>
<td>Sediment Management</td>
<td>Brčko, 6 July 2015</td>
<td>08 October 2017</td>
</tr>
<tr>
<td>Emergency Situations</td>
<td>Final harmonization expected</td>
<td></td>
</tr>
<tr>
<td>Transboundary Impact</td>
<td>Roundtable in January 2018</td>
<td></td>
</tr>
</tbody>
</table>

- **Joint Plan of Actions (JPA)** developed and adopted by the ISRBC
  - Milestone for integrated RBM and socioeconomic development in the region

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
River basin management

- **1st Sava River Basin Management Plan**
  - Water status assessment
  - Vision and management objectives
  - Programme of Measures
  - Integration of water protection in developments in the SRB (flood protection, navigation, hydropower, agriculture)
  - Climate change and RBM planning
  - Approved by MoP 5 (2014)

Criteria applied:

- The **Sava River and its tributaries** with a catchments size of >1,000 km² and rivers of a basin-wide importance (Sotla/Sutla, Lašva and Tinja; area <1,000 km²)

- **Trans-boundary and national GWBs** which are important due to the size of the GWB (area >1,000 km²), or for those < 1,000 km² trans-boundary GWBs which are important due to various other criteria, e.g. socio-economic importance; uses, impacts, pressures, interaction with aquatic eco-system

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
River basin management

- **2nd RBM planning cycle** in progress
  - **2nd Sava River Basin Analysis** (ISRBC, 2017)
    - Update of the first SRBA
  - **Significant Water Management Issues in the Sava River Basin - Interim Overview**, (ISRBC, 2018)
    - Includes an interim overview of implementation of measures
    - web-based consultation
  - **Outline of the 2nd Sava RBM Plan**
River basin management

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

• **Other issues addressed**
  - **Sediment** quantity & quality
  - **Invasive alien species**
  - **Water demand management**
  - **Other issues**
    - Unregulated solid & mining waste disposal
    - Lowland riparian forests

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Sediment management

- **Protocol on sediment management** to the FASRB (entered into force in October 2017)

- **Towards practical guidance for SSM**
  - Development and execution of a practical SSM training courses:
    - Practical SSM course;
    - Practical guidance (document) on how to achieve SSM plan;
    - Draft implementing program for development of Sava SSM plan;
    - Draft project fiches for different modules of Sava SSM plan.
  - Applying of the guidance in practice:
    - Overview of monitoring and sampling gaps and data uncertainties;
    - Estimation of a sediment balance for the SRB;
    - Proposal for the establishment of an effective sediment monitoring system.

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Protocol on flood protection to the FASRB

- Protocol regulates the issues of sustainable flood protection in the Sava River Basin with aim to prevent or limit flood hazard, to reduce flood risk and to reduce or mitigate detrimental consequences of floods

- Parties agreed to cooperate in the following activities:
  1. Preparation of the Sava Flood Risk Management Plan (Sava FRMP)
  2. Establishment of the Sava Flood Forecasting, Warning and Alarm System (Sava FFWS)
  3. Exchange of information significant for sustainable flood protection
  4. Implementation of all mutually agreed measures and activities

Flood risk management planning

- Sava Flood Action Plan, 2009
- Joint PFRA report prepared, 2014 (first list of APSFR)
- Sava FRMP development approved by WBI F, 2014
- Program for development of the Sava FRMP, 2016
- Initial flood vulnerability assessment performed
- Climate Change issue addressed through different projects

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Flood management

**WBI F project**

*Official Title:*
**Improvement of Joint Flood Management Actions in the Sava River Basin**

- **Beneficiary countries:** 19 institutions from 5 countries (BA, HR, ME, RS, SI)
- **Two Components:**

**C1 - Flood Risk Management Plan** for the Sava River Basin
- Project launched in March, 2017
- A Consultant **EPTISA** is contracted
- Implementation period: 2017-2018

**C2 - Flood Forecasting and Warning System** for the Sava River Basin
- Project formally launched on June 21, 2016
- A Consortium of technical experts is contracted, led by **Deltares**
- Implementation period: 2016-2018

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
H&H models

- **Hydrological model of the Sava River Basin**
  - Distributed to countries in Jan 2017, training in March 2017

- **Hydraulic model of the Sava River**
  - Finalized in April 2018, training 15-17 May 2018

- **Both models integral part of the Sava FFWS**

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Climate Change Adaptation

- **Water & Climate Change Adaptation Plan**
  - Implemented by the WB (2015)
  - Analysis of historic climate trends
  - Climate and hydrological modelling
  - Main report + Guidance notes
    - Navigation
    - Hydropower
    - Agriculture
    - Flood protection
    - Economic evaluation of CC impacts

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Climate Change Adaptation

- **Outline of the Climate Adaptation Strategy and priority measures basin-wide for the SRB**
  - to develop the **Outline** in consistence with ICPDR’s regional adaptation strategy;
  - to identify some **priority basin-wide measures** building on documents and studies available at national and regional levels;
  - to suggest **modalities and cost estimates** for the full development of the strategy and of its action plan.

  - **Timeframe (June- October 2017)**

The project was supported by: **French Ministry of Ecological and Inclusive Transition, International Office for Water** and **UNECE**.

- **Climate Change Adaptation activities and next steps in the ICPDR and I SRBC** (May 24-25.2018)

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Tourism development

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

- **Joint statement** on regional cooperation on development of **sustainable tourism** in the Sava River Basin (Bled, June 15 2017)
  - Task group for sustainable tourism established

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
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

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Data and information exchange

- **Sava GIS** (INSPIRE, WFD, FD, ICPDR)

Common platform for sharing and dissemination of information and knowledge about WRM in the basin

- River basin management data
- Flood risk management data
- Historical H&M data
- Other databases (in future)
  - Navigation
  - Sediment management
  - Accident prevention and control

www.savagis.org

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Data and information exchange

- **Sava HIS** (INSPIRE, WMO resolutions, WaterML 2.0)
  - ‘Real time’ H&M data
  - Sediment transport data (2016)

www.savahis.org

Drina Nexus follow up workshop, Sarajevo, June 25-26, 2018
Contact information

International Sava River Basin Commission
Kneza Branimira 29
10000 Zagreb
Croatia

www.savacommission.org