

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**

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

- Joint Plan of Actions (JPA) developed and adopted by the ISRBC**

- Milestone for integrated RBM and socioeconomic development in the region



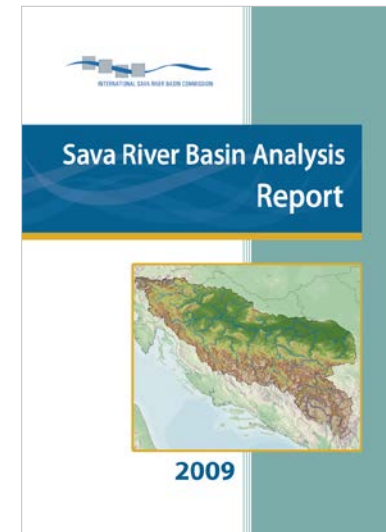
River basin management

- **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)**

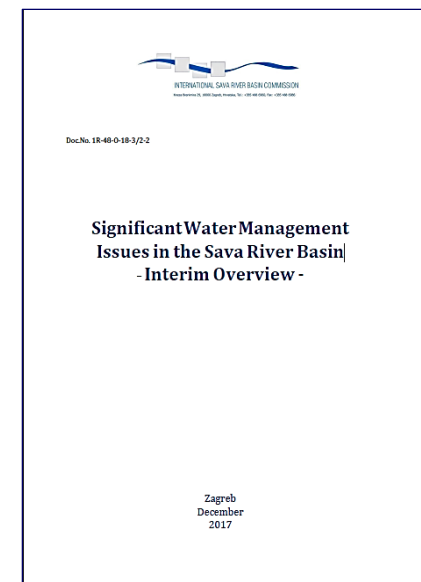
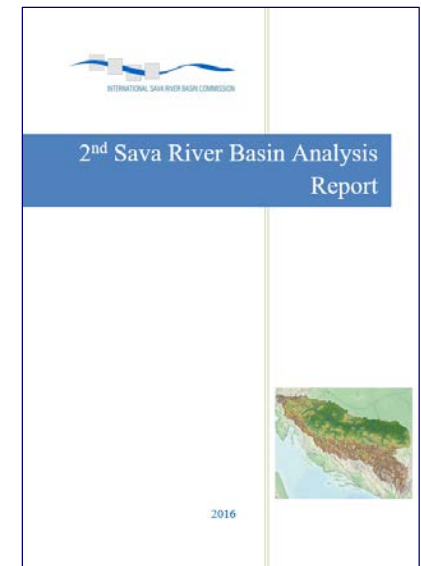
Criteria applied:

- 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



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**



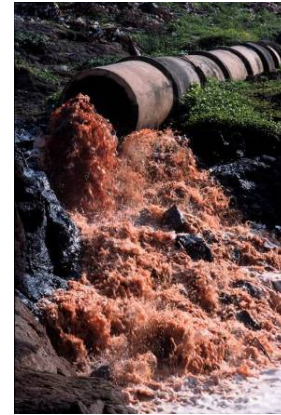
River basin management

- **Significant Water Management Issues**

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

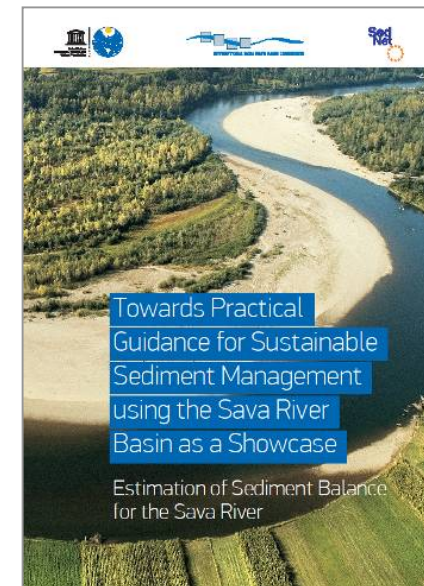
- **Other issues addressed**

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



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](#)



Flood management

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 WBIF**, 2014
- **Program** for development of the Sava FRMP, 2016
- Initial flood **vulnerability assesment** performed
- **Climate Change** issue addressed through different projects



Flood management

WBIF project

Official Title:

Improvement of Joint Flood Management Actions in the Sava River Basin

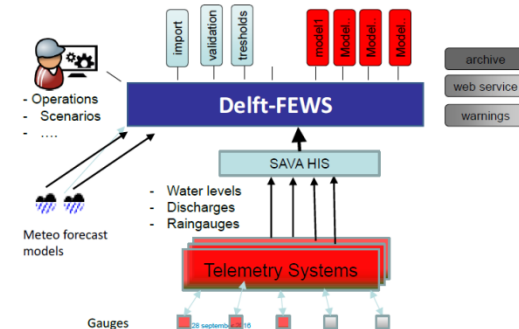
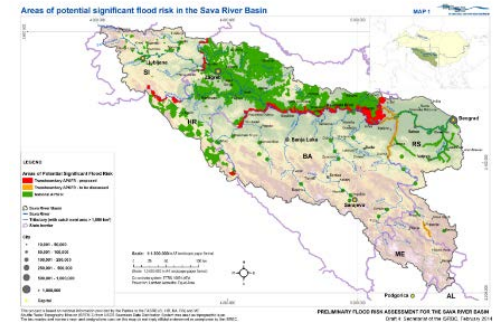
- **Beneficiary countries:** 19 institutions from 5 countries (BA, HR, ME, RS, SI)
- **Two Components:**

C1 - Flood Risk Management Plan for the Sava River Basin

- Project launched in March, 2017
- A Consultant **EPTISA** is contracted
- Implementation period: 2017-2018

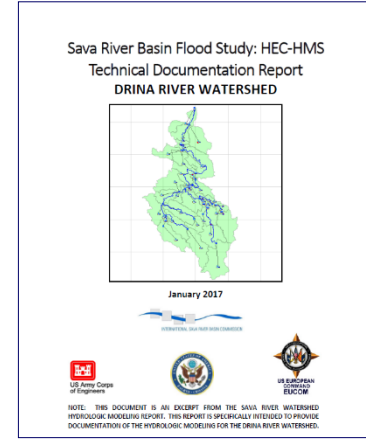
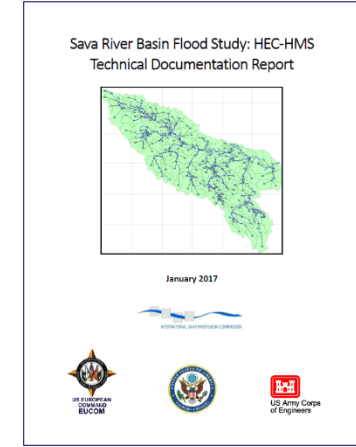
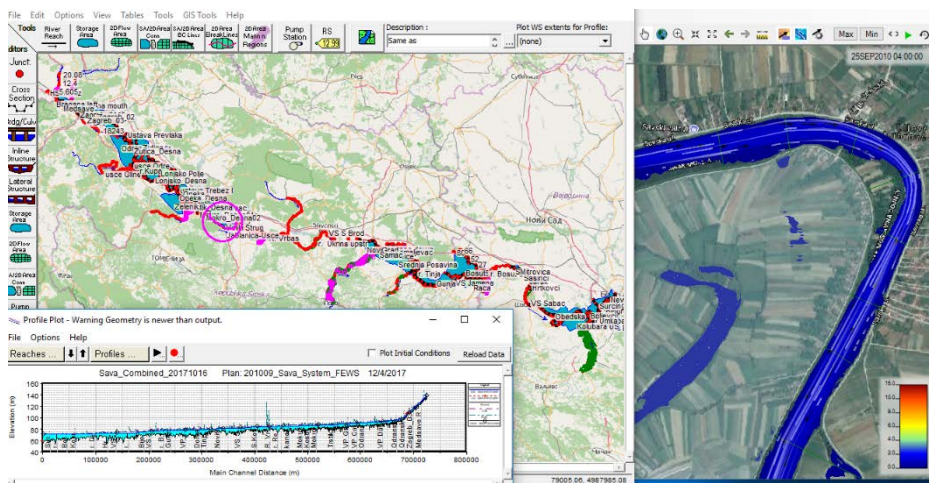
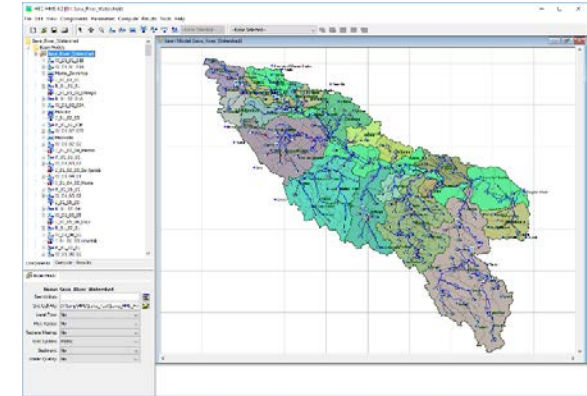
C2 - Flood Forecasting and Warning System for the Sava River Basin

- Project formally launched on June 21, 2016
- A Consortium of technical experts is contracted, led by **Deltares**
- Implementation period: 2016-2018



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

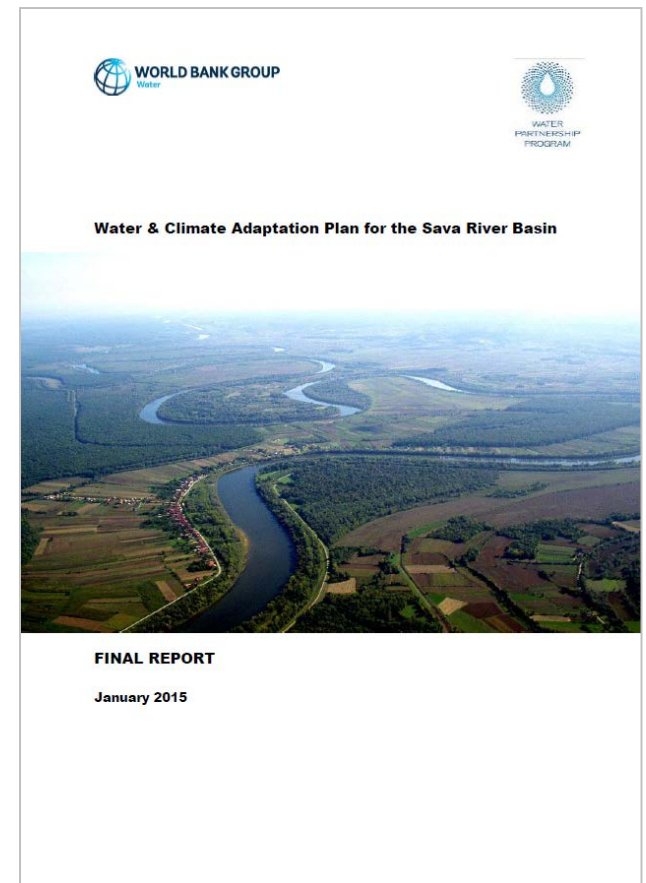


- **Both models integral part of the Sava FFWS**

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



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.**

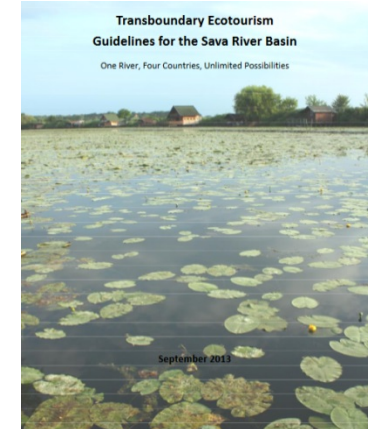
- **Climate Change Adaptation activities and next steps in the ICPDR and ISRBC (May 24-25.2018)**



Tourism development

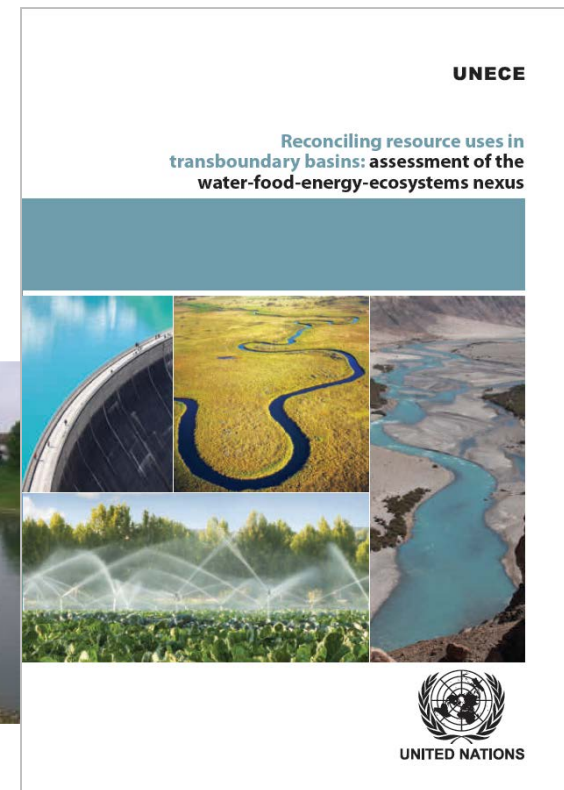
- **Sustainable river tourism** (MOP - 2009)
 - **Nautical** ([Guide](#))
 - **Ecotourism** ([Guidelines](#))
 - **Recreational** ([Cycling](#), rafting, kayaking)
 - **Culturally/socially conscious** (Sava Day)

- **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



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



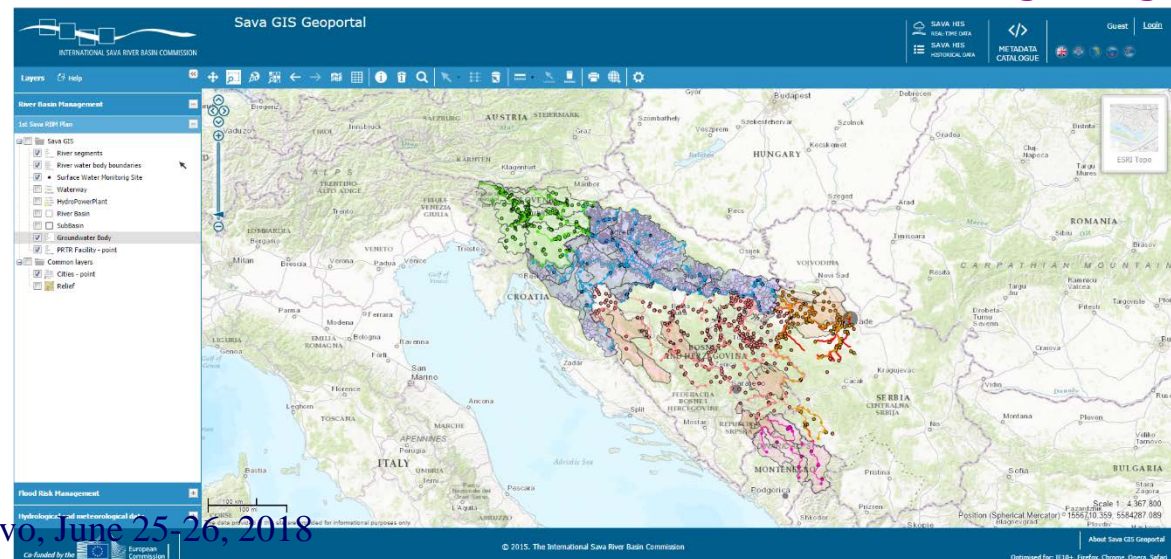
Data and information exchange

- **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

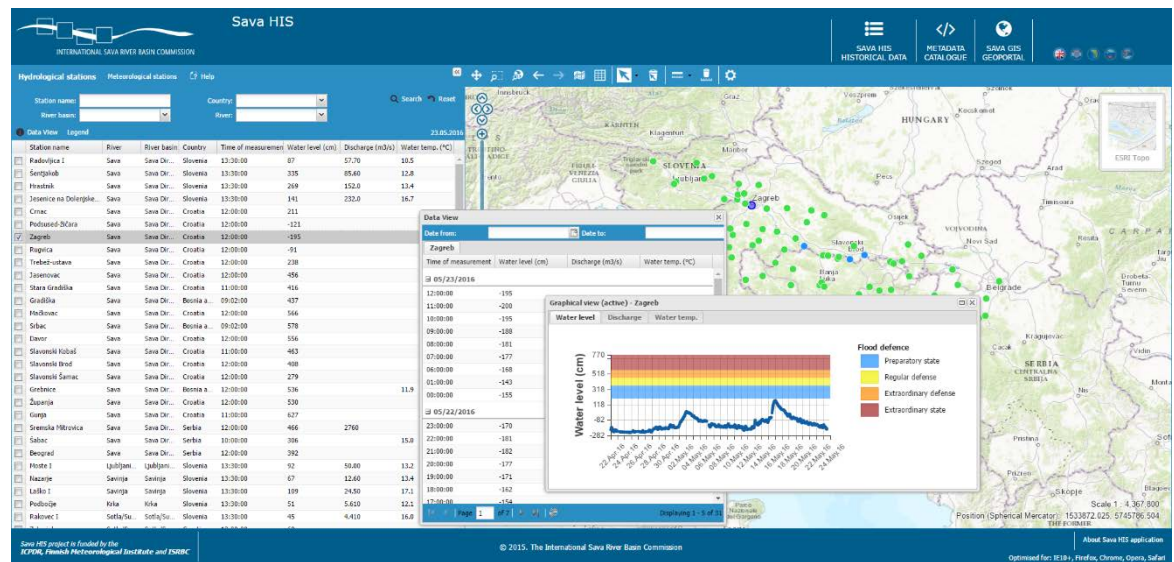
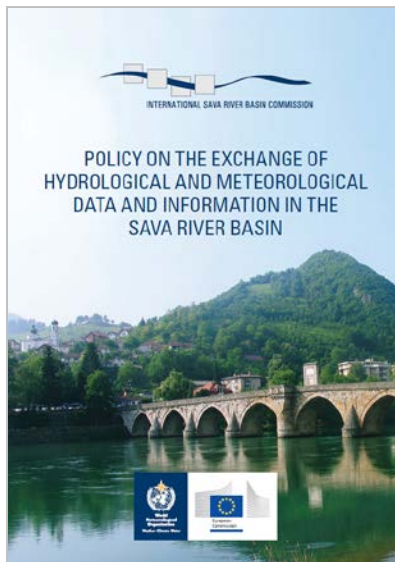
www.savagis.org



Data and information exchange

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

www.savahis.org



Contact information

International Sava River Basin Commission

Kneza Branimira 29

10000 Zagreb

Croatia

www.savacommission.org

