

INTERNATIONAL SAVA RIVER BASIN COMMISSION

# 2<sup>nd</sup> Sava River Basin Management Plan

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INFORMATIVE SUMMARY

2022





**THE INTERNATIONAL SAVA RIVER BASIN COMMISSION  
STAYS DEDICATED TO LOOKING FOR TRANSBOUNDARY SOLUTIONS  
AS STEPS TOWARD SUSTAINABLE RIVER BASIN MANAGEMENT  
IN THE SAVA RIVER BASIN**



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# Introduction



Water resources, as a source of life, habitat for many important ecosystems, basis for socio-economic development, require dedicated management, careful protection, and conscious use.

*The 2<sup>nd</sup> Sava River Basin Management Plan (2<sup>nd</sup> Sava RBMP) has been developed with the aim to represent the basis for basin wide integrated, technically, environmentally, and economically sound and sustainable water management. Looking for transboundary solutions as steps towards agreed objectives, it describes the current water status within the basin, and provides Programme of measures planned to be implemented in the years to come.*

Finalization of the 2<sup>nd</sup> Sava RBMP, which is drafted based on official data and information provided by the Parties to the Framework Agreement on the Sava River Basin (Republic of Slovenia, Republic of Croatia, Bosnia and Herzegovina, Republic of Serbia), and Montenegro, is the result of joint and dedicated work and great collective effort of numerous institutions and individuals who contributed to its development and finalization.

The 2<sup>nd</sup> Sava RBMP preparation process represented the platform as well for the wide public and stakeholder consultation, and their involvement in the river basin management and planning.

# Cooperation in the Sava River Basin

Framework agreement on the Sava River Basin (FASRB), development-oriented, multilateral agreement is foundation for a cross-border cooperation of governments, institutions, and individuals towards sustainable development of the Sava River Basin.

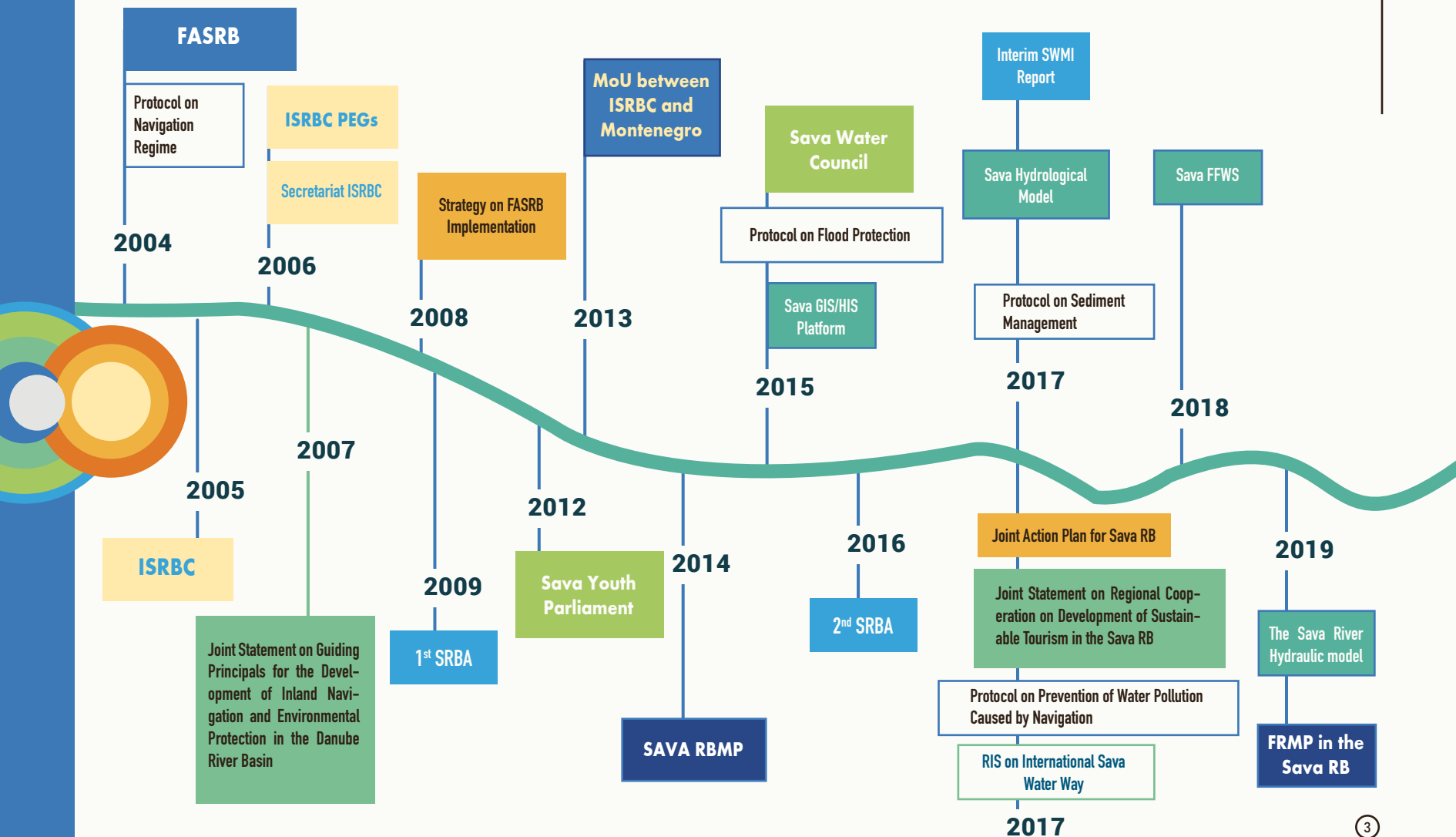
The Parties to the FASRB, for implementation of the FASRB nominated national competent authorities, and agreed to cooperate on the basis of, and in accordance with, *Directive 2000/60/EC of the EU Parliament and Council of October 23, 2000, establishing a Framework for Community Activities in the Field of Water Policy (WFD)*, and to make all efforts towards implementation of the WFD, on national and the shared international river basins.

For coordination of the FASRB implementation, International Sava River Basin Commission (ISRBC) was established in 2005, and ever since represents the reliable platform for trans-boundary basin wide cooperation, facilitating steps toward commonly agreed objectives.



*Basic documents providing framework for the cooperation in the Sava River Basin are available here:*





# Development of the 2<sup>nd</sup> Sava RBMP

## 2<sup>ND</sup> Sava RBMP (in seven languages) in numbers

14	CHAPTERS
10	ANNEXES
23	MAPS
296	SURFACE WATER BODIES
60	GROUNDWATER BODIES
431	AGGLOMERATIONS WITH >2,000 PE
133	AGGLOMERATIONS WITH WASTE WATER TREATMENT
168	SIGNIFICANT INDUSTRIAL POLLUTERS
33	RIVER LONGITUDINAL CONTINUITY INTERRUPTIONS
68	SURFACE WATER BODIES WITH GOOD ECOLOGICAL STATUS/POTENTIAL OR ABOVE
159	SURFACE WATER BODIES IN GOOD CHEMICAL STATUS
36	GROUNDWATER BODIES IN GOOD CHEMICAL STATUS
42	GROUNDWATER BODIES IN GOOD QUATITATIVE STATUS
525	PROTECTED AREAS >100 HA

The 2<sup>nd</sup> Sava RBMP follows the provision of the FASRB, and to the possible extent, requirements of the WFD aiming to enhance basin wide policy framework for prevention of further deterioration or/and improvement of the status of all waters, and to strengthen collaboration towards long-term and sustainable use of the water resources within the Sava River Basin.

The 2<sup>nd</sup> planning cycle in the Sava River Basin started after the approval of the 1<sup>st</sup> Sava RBMP at the Fifth Meetings of the Parties to the FASRB held in Zagreb (Republic of Croatia) on December 2, 2014.

It continued with preparation of the:

- *2<sup>nd</sup> Sava River Basin Analysis*, developed as an update of the analysis performed in 2009, accepted by the ISRBC in June 2017, and
- *Report on significant water management issues (SWMI)* with the interim overview of implementation of the Programme of measures from the 1<sup>st</sup> Sava RBMP -Interim SWMI Report (2017).

The 2<sup>nd</sup> Sava RBMP follows the methodology applied and processes on going at the Danube River Basin level, however with the increased level of details regarding the scale of the analysis, and it is developed in accordance with the structure and outline of the 1<sup>st</sup> Sava RBMP.

Documents representing important steps towards preparation of the 2<sup>nd</sup> Sava RBMP are available here

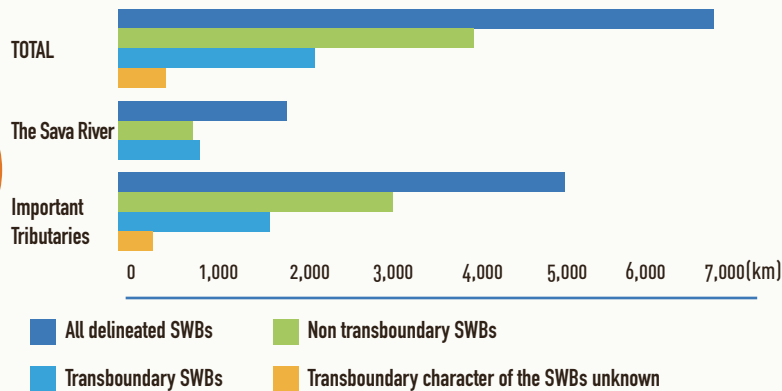




# Scale and scope for the analysis

## SURFACE WATER BODIES (SWB)

For the Sava RBMPs development, SWBs on the Sava River and its tributaries with a catchment size >1,000 km<sup>2</sup> and on the rivers defined as of a basin-wide importance (Sotla/Sutla, Lašva and Tinja; area <1,000 km<sup>2</sup>) are taken into consideration.



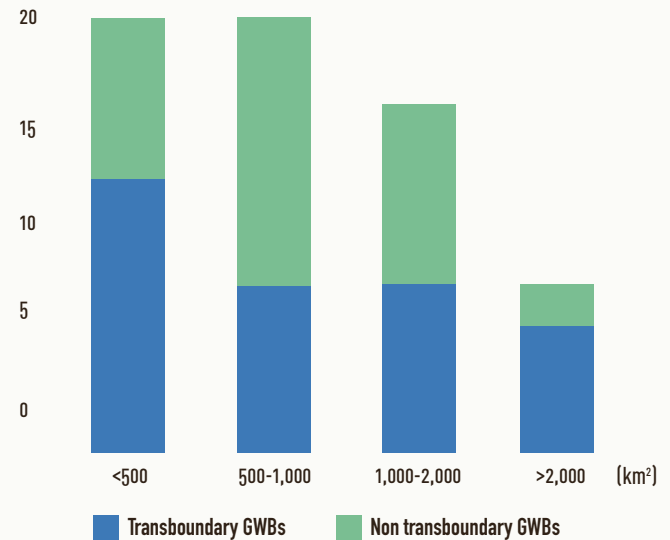
Length of the delineated SWBs with indicated transboundary character

In comparison to the 1<sup>st</sup> Sava RBMP numerous changes are introduced through the new delineation, based on further implementation of WFD requirements, and more accurate and detailed data and information used.

Of delineated SWBs, 81 (27%) are identified as transboundary (19 on the Sava River and 62 on tributaries) representing a specific challenge for the basin wide planning, highlighting the importance of basin wide cooperation.

## GROUNDWATER BODIES (GWB)

For the Sava RBMPs development, trans-boundary and national GWBs which are important due to their size (area >1,000 km<sup>2</sup>), and trans-boundary groundwater bodies (area < 1,000 km<sup>2</sup>) which are important due to various other criteria, e.g. socio-economic importance, significant uses, impacts, pressures, and/or interaction with aquatic eco-system are taken into consideration.



Number of GWBs per size with indicated transboundary character

# Significant anthropogenic pressures

Anthropogenic activities cause multiple pressures on surface and groundwater resources. Pressure analysis in the 2<sup>nd</sup> Sava RBMP is developed taking into consideration all SWMIs defined for the Sava River Basin.

For the Sava River Basin following SWMIs are defined:

- **Organic pollution**
- **Nutrients pollution**
- **Hydromorphological (HYMO) alterations**
- **Groundwater qualitative and quantitative issues**

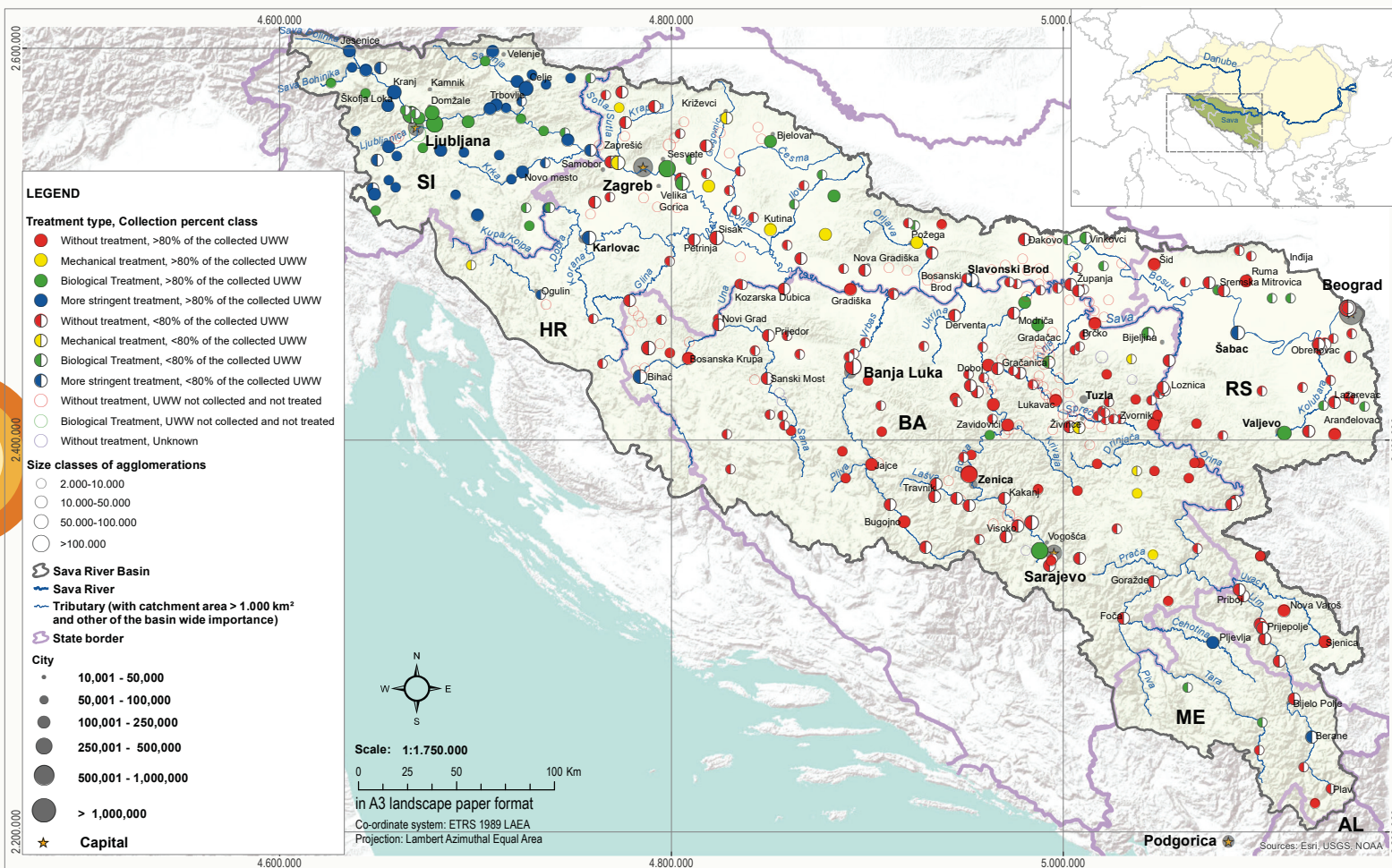
## SWMIs

Jointly defined on the Sava River Basin level, as key water management issues that can affect status of the surface and groundwater bodies.

Although justly important, but due to still significant lack of reliable data and information, following issues are recognized as SWMIs candidate:

- **Invasive alien species**
- **Sediment issues**
- **Water demand**





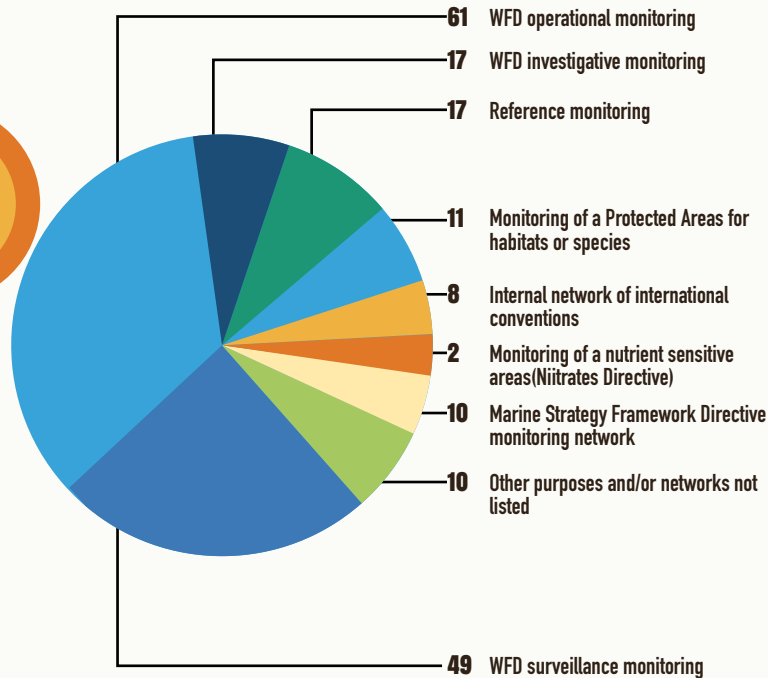
This product is based on national information provided by the Parties to the FASRB (SI, HR, BA, RS) and ME. The borders between the countries cooperating in preparation of the Sava River Basin Analysis have not been finally determined. The content and maps of this report do not prejudice the determination or demarcation of the borders in any way.

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Processed and compiled by the Secretariat of the ISRBC, March 2022

# Monitoring

## SURFACE WATER MONITORING

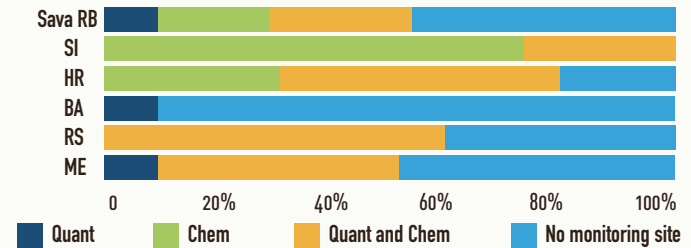
The 2<sup>nd</sup> Sava RBMP provides a brief elaboration of national surface monitoring practices, locations of the monitoring sites on the SWBs of interest for the basin wide planning, and monitoring purposes.



Number of the monitoring sites with the specific purposes.

## GROUNDWATER MONITORING

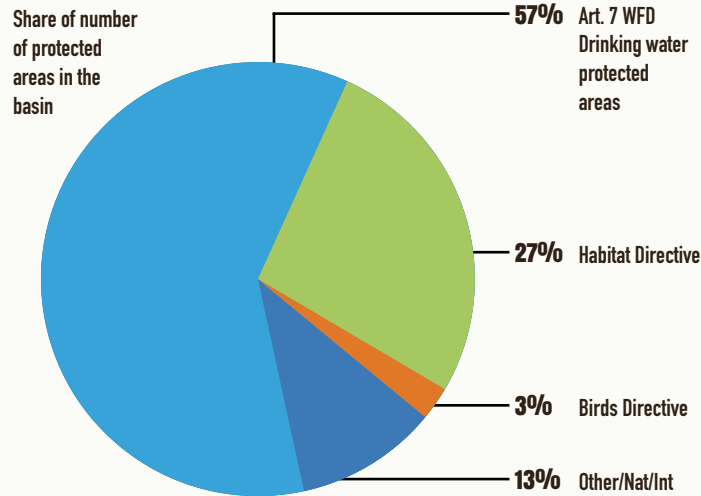
The 2<sup>nd</sup> Sava RBMP provides a brief elaboration of national ground monitoring practices, locations of the monitoring sites on the GWBs of interest for the basin wide planning, and density of the groundwater monitoring network. In general, better spatial coverage of GWBs by the monitoring network indicates the possibility for a more reliable status assessment.



Share of the GWBs (in riparian countries and basin wide) covered by the Quant-Quantitative, Chem-Chemical monitoring.

Country	Number of GWBs	Range of density (GWB km <sup>2</sup> /monitoring sites) of on the GWB of interest	
		Quantitative monitoring	Chemical monitoring
<b>SI</b>	<b>11</b>	<b>7-33</b>	<b>8-358</b>
<b>HR</b>	<b>14</b>	<b>27-5,189</b>	<b>6-1,372</b>
<b>BA</b>	<b>17</b>	<b>0-47</b>	<b>/</b>
<b>RS</b>	<b>5</b>	<b>254-2,489</b>	<b>254-2,489</b>
<b>ME</b>	<b>13</b>	<b>69-526</b>	<b>203-703</b>

# Protected areas

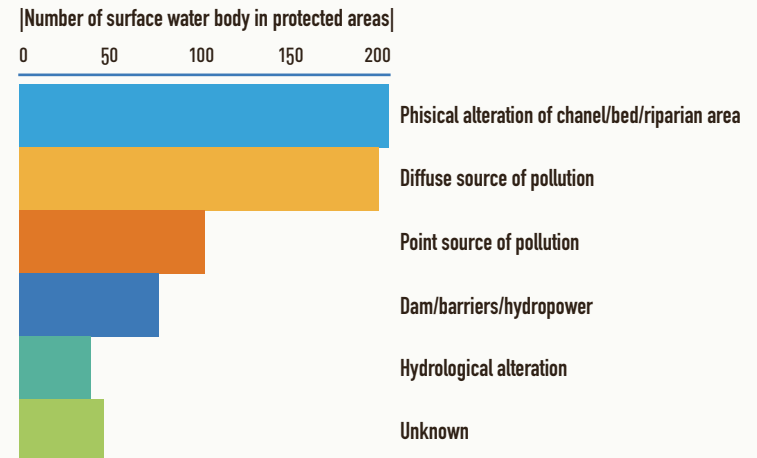


Water bodies in protected areas are affected by anthropogenic activities which may cause water pollution, change of the surface water flow regime, and/or alteration of groundwater level and volume.

Significant pressures on water resources can adversely affect and contribute to the degradation of protected areas, affecting the structure and functioning of water dependent ecosystems, and/or prevent intended downstream uses.

Updated preliminary register of protected areas in the Sava River Basin (larger than 100ha), includes the following:

- Areas for the protection of habitats and/or species that are protected under the relevant international legislations;
- Areas important for the protection of habitats and/or species protected by national legislation;
- A preliminary register of areas used for the abstraction of drinking water - groundwater.

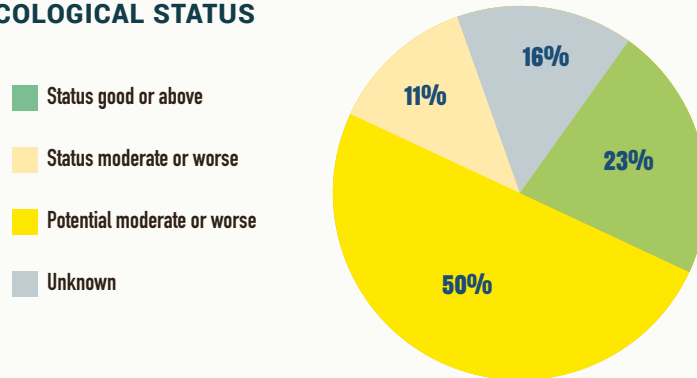


Main significant pressures affecting water bodies in protected areas

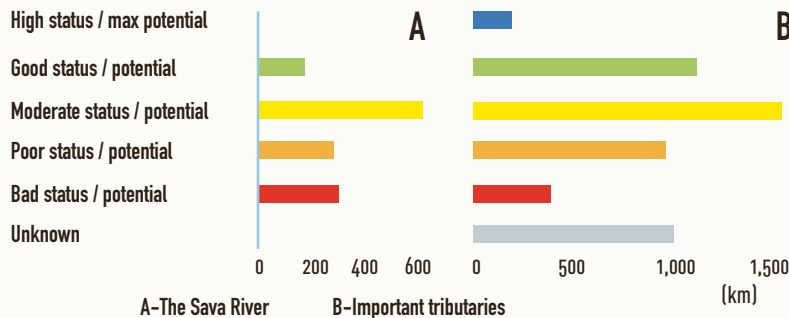
# Surface water status

For the surface water bodies in the Sava River Basin status is defined in accordance with established criteria, applying nationally adopted status assessment methodologies.

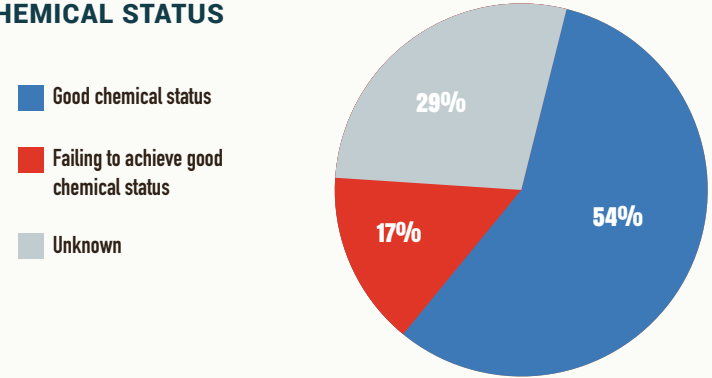
## ECOLOGICAL STATUS



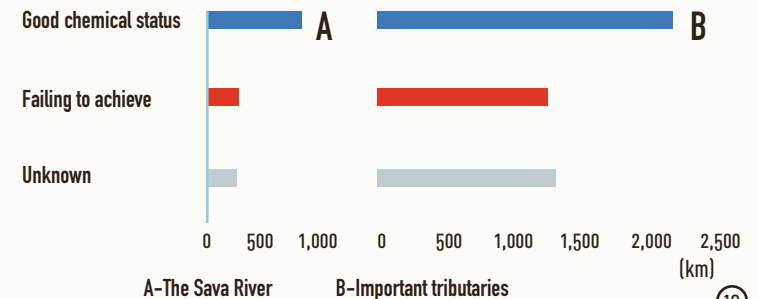
Ecological status, measuring the effects of human activities to water, is an expression of the quality of the structure and functioning of an aquatic ecosystem, and classified in five categories by using biological, hydromorphological, and physico-chemical quality elements.



## CHEMICAL STATUS



Chemical status of the surface water describes whether the concentrations of pollutants exceed environmental quality standards. Good chemical status of the surface water is achieved if these standards are not exceeded.





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Processed and compiled by the Secretariat of the ISRBC, March 2022

NEW SURFACE AND GROUNDWATER DELINEATION RESULTED IN **37% AND 20% INCREASE OF NUMBER OF SURFACE AND GROUNDWATER BODIES** RESPECTIVELY, ENSURING AMELIORATED BASIS FOR MORE COMPREHENSIVE ANALYSIS.



NUMBER OF AGGLOMERATIONS PE>2.000, WITH WASTE WATER TREATMENT PLANTS **INCREASED BY 40%.**



TOTAL NUTRIENT LOAD CONTRIBUTION FROM THE SAVA RIVER BASIN TO THE DANUBE RIVER **DECREASE APPROX. FOR TN AND TP BY 15%**

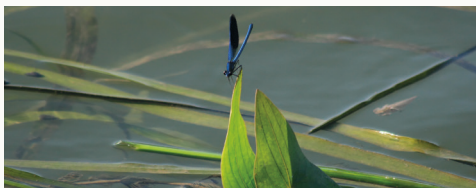


# 2015 - 2022

SHARE OF AGGLOMERATIONS PE>2,000, WITH SEWAGE SYSTEM COVERAGE >80% **INCREASED FROM 13% TO 29%.**



CALCULATED POINT SOURCES' EMISSION OF TN AND TP FROM AGGLOMERATIONS >2,000 PE IN THE BASIN **DECREASED BY 24% AND 32%, RESPECTIVELY.**



PROTECTED AREA IMPORTANT FOR BIODIVERSITY PROTECTION **INCREASED FOR MORE THAN 20%.** NUMBER OF AREAS PROTECTED IN ACCORDANCE WITH **HABITAT DIRECTIVE INCREASED BY 25% AND WITH BIRDS DIRECTIVE BY 14%.**



CALCULATED POINT SOURCES' EMISSION OF COD AND BOD5 DISCHARGED IN THE BASIN, FROM AGGLOMERATIONS >2,000 PE **DECREASED BY 40% AND 34%, RESPECTIVELY.**



DATA EXCHANGED / UPDATED THROUGH A COMMON DATA SHARING PLATFORM SAVA GIS **INCREASED, FROM 85% TO 95% FOR SPATIAL DATA SETS REQUIREMENTS AND FROM 15% TO 55% FOR RELATED (ATTRIBUTE) DATA.**



SHARE OF THE BARRIERS PASSABLE FOR FISH, IN TOTAL NUMBER OF RIVER CONTINUITY INTERRUPTIONS **INCREASED BY 10%.**



THE NUMBER OF SURFACE WATER MONITORING SITES **INCREASED BY 50%.**

BASIN WIDE DATA BASE OF 463 GROUNDWATER MONITORING SITES IS ESTABLISHED.



## Steps towards visions and objectives for the Sava River Basin



DATA COLLECTION ON EXECUTED AND PLANNED DREDGING ARE ONGOING REGULARLY.



THE CONFIDENCE LEVEL OF THE SURFACE AND GROUNDWATER BODIES' STATUS ASSESSMENT **SIGNIFICANTLY INCREASED.**



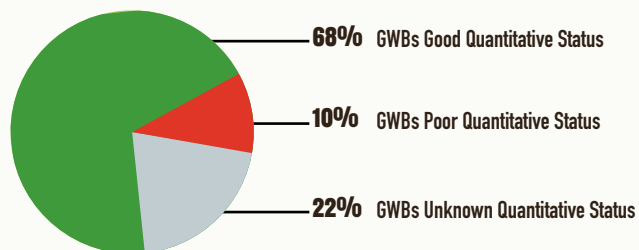
INVASIVE ALIEN SPECIES ARE DEFINED IN 13 SUB CATCHMENTS OF THE SAVA RIVER BASIN.

# Groundwater status

For groundwater bodies in the Sava River Basin status is defined in accordance with established criteria, applying nationally adopted status assessment methodologies.

## QUANTITATIVE STATUS

Groundwater quantitative status is an expression of the degree to which a groundwater bodies are affected by direct and indirect abstractions.

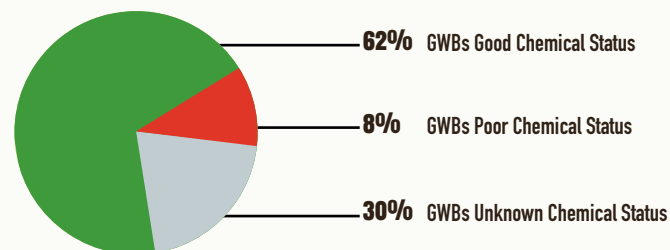


Quantitative status of groundwater bodies may have an impact on the ecological status of surface water and terrestrial ecosystems associated with that groundwater body.

Important GWBs		Sava River Basin	
Total Number		60	
National (N) or Transboundary (T)		N	T
Number		32	28
Quantitative status	Good status	24	16
	Poor status	6	1
	Unknown status	2	11

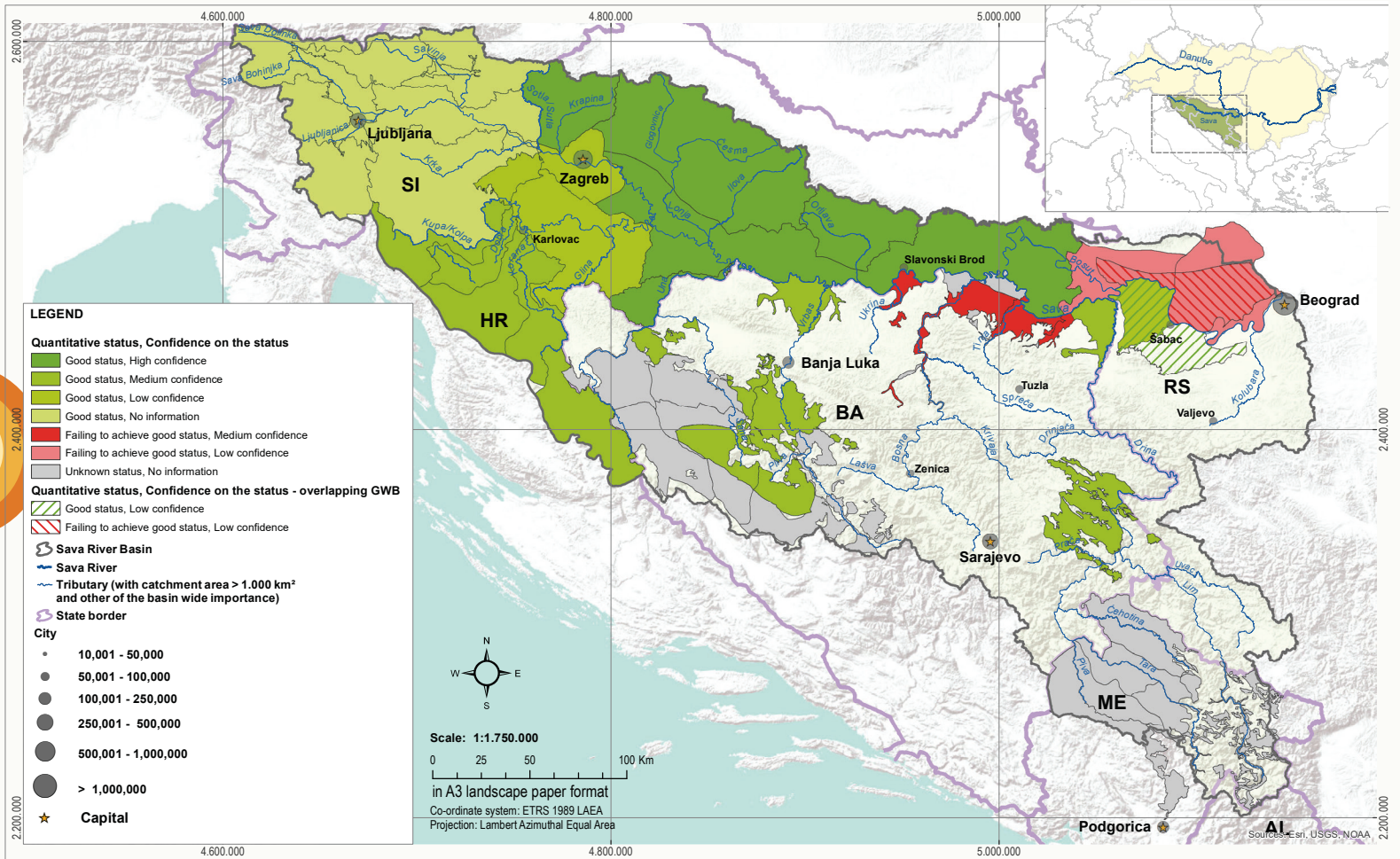
## CHEMICAL STATUS

Chemical status of the groundwater describes whether the concentrations of pollutants exceed quality standards.



Good chemical status of the surface water is achieved if quality standards are not exceeded.

Important GWBs		Sava River Basin	
Total Number		60	
National (N) or Transboundary (T)		N	T
Number		32	28
Chemical status	Good status	21	16
	Poor status	4	1
	Unknown status	7	11



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### **INVASIVE ALIEN SPECIES**

Coordinated basin-wide policy and management framework established to minimize the risk of invasive alien species to the environment, economy, and society with the commitment to not knowingly introduce high-risk invasive alien species into the basin.

### **HYDROMORPHOLOGICAL ALTERATIONS**

Balanced management of past, current, and future structural changes of the riverine environment, so that the aquatic ecosystem functions holistically and all native species are present.

### **ORGANIC POLLUTION**

No emission of untreated wastewater into the water.



### **GROUNDWATER QUALITY**

Emissions of polluting substances do not cause any deterioration of groundwater quality, also taking into consideration the potential climate change impact, along with restoration of already polluted groundwater to good quality.

### **NUTRIENT POLLUTION**

Reduction of nutrient emissions from point and diffuse sources in order to avoid any negative impacts from eutrophication.

### **SEDIMENT ISSUES**

Based on an evaluation of sediment balance and sediment quality and quantity, ensured integrity of the water regime and protection of the wetlands, floodplains and retention areas, along with prevented pollution and impacts on water or sediment.

### **GROUNDWATER QUANTITY**

Water use is appropriately balanced and does not exceed the available groundwater resources, taking into consideration as well the potential future climate change impacts .

### **HAZARDOUS SUBSTANCES POLLUTION**

No risk or threat to human health or to the aquatic ecosystem.

# **Visions for the Sava River Basin**

# Programme of measures–conceptual framework

The Programme of measures in the 2<sup>nd</sup> Sava RBMP aims to respond to all the significant pressures at achievement of the environmental objectives according to the WFD, visions and management objectives developed for the Sava River Basin. It is built on the national measures that are already in place and outlines the actions to be taken in the forthcoming planning cycles to achieve the good water status.

Effective implementation of national measures of the basin wide importance calls for the further international coordination.



**Organic pollution measures**

**Nutrient pollution - measures**

**Hazardous substances pollution measures**

**Hydromorphological alterations measures**

**Groundwater quality and quantity measures**

**Invasive alien species measures**

**Sediment measures**

**Protected areas measures**

**Other issues measures**

# Management objectives

Management objectives for the Sava River Basin respond to the commonly defined visions, describe the steps towards the achievement of the WFD environmental objectives, and represent the basis for formulation of the Programme of measures in the 2<sup>nd</sup> Sava RBMP.

Different situation regarding the EU membership, impose different binding conditions for the riparian countries regarding

the measures and management objectives planning and implementation. The deadlines for the EU Member States-MS (Republic of Slovenia, Republic of Croatia) are set down in accordance with the EU Accession Treaties, while given the specific situation in the non-EU countries (Bosnia and Herzegovina, Republic of Serbia, and Montenegro), these are defined according to the country's specific, realistic and acceptable timeframe.

## Management objectives defining steps towards the achievement of the established visions and the WFD environmental objectives

<p><b>Organic pollution measures</b></p>	<p>EU MS:</p> <ul style="list-style-type: none"> <li>- Further Implementation of the UWWT Directive (91/271/EEC), the Sewage Sludge Directive (86/278/EEC), the Industrial Emission Directives-IED (2010/75/EU) and implementation of the increased efficiency and/or of treatment level when/where necessary;</li> </ul> <p>Non EU MS:</p> <ul style="list-style-type: none"> <li>- Specification of number of existing wastewater collecting systems (connected to respective WWTPs), number of municipal and industrial WWTPs which are planned to be constructed by 2027 including specification of the treatment level and emission reduction targets;</li> </ul>
<p><b>Nutrient pollution measures</b></p>	<p>EU MS:</p> <ul style="list-style-type: none"> <li>- Further Implementation of the UWWT Directive (91/271/EEC), and the Nitrate Directive (676/91/EEC);</li> </ul> <p>Non EU MS:</p> <ul style="list-style-type: none"> <li>- Introduction of a maximum limit of 0.2 to 0.5% P for the content of total P in laundry detergents for consumer use;</li> <li>- Working towards a market launch of polyphosphate-free dishwasher detergents for consumer use;</li> <li>- Definition of basin-wide and/or national quantitative reduction targets (for point and diffuse sources) taking the respective reconditions and requirements of the Sava countries into account;</li> <li>- Specification of number of wastewater collecting systems (connected to respective WWTPs), which are planned to be constructed by 2027;</li> <li>- Creation of baseline scenarios for nutrient input taking the respective preconditions and requirements of the Sava countries into account;</li> </ul>

**Management objectives defining steps towards the achievement of the established visions and the WFD environmental objectives**

<p><b>Hazardous substances pollution</b></p>	<p>EU MS:</p> <ul style="list-style-type: none"> <li>- Further implementation of the Industrial Emission Directive- IED (2010/75/EC) which also relates to the Directive 2008/105/EC and Directive 2013/39/EC;</li> </ul> <p>Non EU MS:</p> <ul style="list-style-type: none"> <li>- Implementation of the Best Available Techniques and the Best Environmental Practices including further improvement of treatment efficiency, treatment level and/or substitution;</li> <li>- Exploring the possibility to set down quantitative reduction objectives for pesticide emission in the Sava River Basin;</li> </ul>
<p><b>Hydromorphological alterations measures</b></p>	<p>Interruption of river and habitat continuity;</p> <ul style="list-style-type: none"> <li>- Specification of number and locations, funding needs and sources for building fish migration aids and other measures to achieve /improve river continuity as well as for restoration, conservation, and measures for improvements of habitats and their continuity on the Sava River and its tributaries, to safeguard reproduction and the self-sustaining of migratory species;</li> </ul>
	<p>Hydrological alterations:</p> <ul style="list-style-type: none"> <li>- Water abstraction measures are focused to ensure sufficient residual flow downstream of a water abstraction, meeting ecological flow requirements (i.e., for ensuring habitat conditions or for meeting good status in the section influenced by the water abstraction). Impoundment's measures are focused on morphologically restructuring the sections of impoundments, and the hydropeaking measures are focused to the improvement of operational modifications;</li> </ul>
	<p>Morphological alterations:</p> <ul style="list-style-type: none"> <li>- Restoration of natural river morphology where possible and, if it is not possible, implementation of the "no net-loss" principles;</li> </ul>
	<p>For future infrastructure projects:</p> <ul style="list-style-type: none"> <li>- Conduction of an Environmental Impact Assessment and/or a Strategic Environment Assessment in conjunction with the requirements of WFD Article 4(7) during the planning phase of future infrastructure projects if required;</li> <li>- Fulfilment of the conditions set out in WFD Article 4, in particular the provisions for new modifications specified in Article 4, Paragraph 7;</li> <li>- Recommendations for stakeholders regarding the implementation of the best environmental practices and the best available techniques;</li> </ul>

**Management objectives defining steps towards the achievement of the established visions and the WFD environmental objectives**

<p><b>Groundwater quality measures</b></p>	<ul style="list-style-type: none"> <li>- Further implementation and prevention/limitation of pollutants inputs into groundwater according to the Groundwater Directive (2006/118/EC), Nitrates Directive (91/676/EEC), Sewage Sludge Directive (86/278/EEC), Sustainable Use of Pesticides Directive (Directive 2009/128 /EC), Plant protection directive (Regulation No.1107/2009)), and Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products, UWWT Directive (91/271/EEC) and Directive on industrial emissions IED (2010/75/EC) which also relates to the Directive 2008/105/EC on environmental quality;</li> </ul> <p>Supplementary measures comprising of:</p> <ul style="list-style-type: none"> <li>- Implementation of the management objectives described for organic and nutrient pollution of surface water;</li> <li>- Increase of wastewater treatment efficiency;</li> <li>- Implementation of Best Available Techniques and Best Environmental Practices;</li> <li>- Reduction of pesticide / biocides emission in the Sava River Basin;</li> </ul>
<p><b>Groundwater quantity measures</b></p>	<ul style="list-style-type: none"> <li>- Over-abstraction from GWBs within the Sava River Basin should be avoided by sound groundwater management;</li> <li>- Implementation of WFD (2000/60/EC) requirements that groundwater resources are not depleted by the long-term annual average rate of abstraction;</li> </ul>
<p><b>Invasive alien species measures</b></p>	<ul style="list-style-type: none"> <li>- Promoting research into methods and approaches that improve the ability to assess whether or not alien organisms will have an adverse impact on biodiversity including an investigation of the influence of invasive species on ecological status;</li> <li>- Developing and implementing effective ways to identify and monitor alien organisms;</li> <li>- Determining priorities for allocating resources for the control of harmful alien organisms based on their impact on native biodiversity and economic resources, and implementing effective controls or, where possible, eradication measures;</li> <li>- Identifying and eliminating common sources of unintentional introductions;</li> <li>- Developing national and international databases to support the identification and anticipation of the introduction of potentially harmful alien organisms in order to develop control and prevention measures;</li> <li>- Ensuring adequate legislation and enforcement to control introductions or escapes of harmful alien organisms and improving preventative mechanisms such as screening standards and risk assessment procedures;</li> <li>- Enhancing public education and awareness of the impacts of harmful alien organisms and the steps that can be taken to prevent their introduction;</li> </ul>



**Management objectives defining steps towards the achievement of the established visions and the WFD environmental objectives**

<p><b>Sediment measures</b></p>	<ul style="list-style-type: none"> <li>- Evaluation of sediment balance and sediment quality and quantity;</li> <li>- Control erosion processes;</li> <li>- Ensure the integrity of the water regime with regard to quality and quantity and to protect wetland, floodplains and retention areas;</li> <li>- Monitoring of sediment;</li> <li>- Prevent impacts and the pollution of water or sediment;</li> <li>- Maintain conditions for safe navigation;</li> <li>- Determination of designated areas for capital dredging;</li> <li>- Guidance for sediment disposal, sediment treatment and use;</li> </ul>
<p><b>Protected areas measures</b></p>	<ul style="list-style-type: none"> <li>- Step-by-step harmonization of national legislation with EU legislation (relevant for non-EU MS) with regard to the protection of habitats and/or species (Natura 2000, sites subject to the Birds Directive (2009/147/EC) and the Habitats Directive (92/43/EEC)) and provision of effective instruments for the implementation of mentioned documents;</li> <li>- Preparation of relevant legislation regarding the areas designated to protect economically significant aquatic species in accordance with the WFD;</li> <li>- Identification and characterization of bathing waters (relevant for non-EU MS), harmonization of national legislation with Bathing Water Directives 2006/7/EC (not relevant for EU MS);</li> <li>- Further work on the implementation of the Nitrates Directive (91/676/EEC) and the UWWT Directive (91/271/EEC);</li> <li>- Finalization of the delineation of drinking water protection zones in the region and the preparation of standardized national registers of drinking water protection zones (for groundwater and surface water) including all the necessary data, above all the size of the protected area and the amount of abstraction (relevant for non-EU MS);</li> </ul>
<p><b>Other issues measures</b></p>	<ul style="list-style-type: none"> <li>- Elaboration of a basin-wide inventory of potential accident risk spots;</li> <li>- Estimation of the real risk at a particular site including assessment of an accidental pollution risk from the operational mines using checklists based on the related products of the ICPDR and the provisions of the Seveso-III- (Directive 2012/18/EU) and the UNECE Convention on the Transboundary Effects of Industrial Accidents;</li> <li>- Elaboration of inventory of abandoned sites contaminated by waste disposal and by former industrial activities including abandoned tailing deposits with a special attention given to risk of flooding or leaking;</li> </ul>

## Integration issues

River basin management and planning, takes into consideration multiple water dependent sectors as significant water users and/or water polluters that can significantly adversely affect water resources and dependent ecosystems. Integration of sectoral policies and coordinated development which will ensure water protection and preservation, could enhance potential progress synergy, and prevent prospective conflicts, by decoupling future sectoral development from water resources deterioration.

For sustainable water resources management and planning within the Sava River Basin the most significant integration issues are:

- flood risk management,
- navigation,
- hydropower production,
- agriculture.

The 2<sup>nd</sup> Sava RBMP, elaborates recognized best environmental practices that should be followed towards achievement of the environmental objectives in the Sava River Basin, while looking for the opportunities that water resources facilitate water dependent sector's development.



## Climate change adaptation



Climate change poses significant and complex challenges to transboundary water basins. As climate change increases, transboundary cooperation on adaptation and resilience-building strategies is essential for the advancement toward sustainable development, serving to ensure social and political stability for all basin countries and their people.

Considering the significance and the complexities of the climate change challenges for transboundary river basins, in November 2015, the ISRBC signed *Paris Pact on Water and Adaptation to Climate Change in the Basins of Rivers, Lakes and Aquifers*.

The climate change issues are addressed in the 2<sup>nd</sup> Sava RBMP based on the *Outline of the Climate Adaptation Strategy and basin-wide priority measures for the Sava River Basin*, national climate change policies and legislations, available information, and results of the relevant projects, providing the suggestions and guidelines for further adaptation steps.

# Public consultation

Public participation is one of the core principle in sustainable water management as required by the FASRB and WFD. ISRBC stays devoted to ensuring and facilitating broad and active public participation in river basin management and planning process.

Considering the utmost importance of the broad stakeholder as well as the wide public involvement, ISRBC continuously throughout the process of the 2<sup>nd</sup> Sava RBMP development, worked to ensure, and encourage active public participation, and to create a mechanism which can facilitate involvement of all relevant stakeholders.

Public consultation process for the 2<sup>nd</sup> Sava RBMP was organized via the web aiming to contribute to the pandemic suppression.

To launch and promote public consultation campaign, Sava Stakeholder Forum was organized on the December 17, 2021, as an online event. Sava Stakeholder Forum gathered more than 80 participants, representatives of the Ministries, national authorities, public companies, NGOs, academia, scientific institutes, and private sectors, as well as international organizations and Observers to the ISRBC.

Comments collected during the public consultation process were used for the facilitation of the final version of the 2<sup>nd</sup> Sava RBMP development.

Detailed overview of all activities performed aiming at public involvement in all phases of the 2<sup>nd</sup> Sava RBMP preparation will be available as *Summary on Public Participation Activities-Process and Outcomes* on the ISRBC official web page [www.savacommission.org](http://www.savacommission.org).

The image shows a screenshot of the ISRBC website's public consultation page. The page features a blue header with the ISRBC logo and navigation links: About us, Activities, Calendar of Events, Documents and publications, Media, and Contact. The main content area includes a blue box with the text: "Public consultation 23 November 2021-23 March 2022 www.savacommission.org". Below this is a central graphic titled "Consultation" showing a group of people around a table. To the right of the graphic are four vertical buttons: SAVA GIS, SAVA HIS, SAVA WATERBMP PLAN, and SAVA ENC. At the bottom of the page are three buttons: SAVA PLAN RBM, SAVA PLAN FRM, and SAVA YOUTH PARLIAMENT. A "Thank you!" message is displayed. A circular inset on the right shows a video conference with six participants in a grid layout.

## THE SAVA RIVER BASIN FACTS AND FIGURES

<b>Basin area</b>	approx. 97,700 km <sup>2</sup> , (between 13.67 °E and 20.58 ° E longitudes and 42.43 °N and 46.52 °N latitude)	
<b>Countries sharing the basin territory</b>	Republic of Slovenia (12.1%), Republic of Croatia (26.1%), Bosnia and Herzegovina (39.4%) Republic of Serbia (15.6%), Montenegro (6.7%), Republic of Albania (0.2%)	
<b>Population reside in the basin</b>	approx. 8.134 million	
<b>Average annual air temperature</b>	approx. 9.5 C. (in January falls to approx. -1.5°C, whilst in July it can reach almost 20°C)	
<b>Average annual rainfall</b>	approx. 1,100 mm	
<b>Average evapo-transpiration</b>	approx. 530 mm/year	
<b>Long-term average unit-area-runoff</b>	approx. 18 l/s/km <sup>2</sup>	
<b>Mean elevation of the basin</b>	approx. 545 m a.s.l. (71 m a.s.l - 2,864 m a.s.l)	
<b>Main land cover classes</b>	Forests and semi natural areas (56.4% of the basin area)	
	Agricultural land (40.0% of the basin area)	
	Artificial surface (2.8% of the basin area)	
	Wetlands and water bodies (0.8% of the basin area)	
<b>Ecoregions in the basin</b>	No.5 Dinaric Western Balkan (64% of the basin area)	
	No.11 Hungarian lowlands (31% of the basin area)	
	No.4 Alps (4.5% of the basin area)	
	No.6 Hellenic western Balkans (0.5% of the basin area)	
<b>Lenght of the Sava River</b>	945 km from the confluence of Sava Dolinka and Sava Bohinjka until it joins the Danube River, with the longer headwater Sava Dolinka River in the north-west, the Sava River measures 990 km	
<b>Average discharge at the confluence</b>	approx. 1,700 m <sup>3</sup> /s	
<b>The largest catchment area tributaries</b>	Right (>10,000 km <sup>2</sup> )	Drina, Kupa/Kolpa, Bosna
	Left (>2,000 km <sup>2</sup> )	Bosut, Lonja

## ACKNOWLEDGEMENTS

Special acknowledgments for the development and finalization of the 2<sup>nd</sup> Sava RBMP should be given to the:

**Members, Chairs and co-Chairs of the Permanent expert groups for River Basin Management and GIS of the ISRBC in the period 2015-2022;**

**Different institutions' representatives and individuals who in various ways contributed to the preparation of the 2<sup>nd</sup> Sava RBMP;**

**Secretariat of International Commission for the Protection of the Danube River for its valuable support;**

**ISRBC Secretariat for the process facilitation, preparation of the draft documents, and overall coordination.**

**PHOTOGRAPHY  
CONTRIBUTORS**

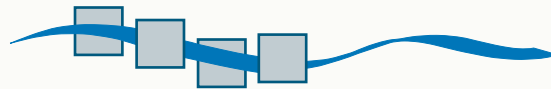


Janez Zalaznik  
Boško Tintor  
Hvala Jože  
Sašo Meško  
Jelka Mihajlovska  
Miroslav Jeremić  
Branislav Stanković  
Vladimir Djinić  
Boris Krstinić  
Maja Pap  
Matea Radoš  
Milan Vogrin  
Gordana Ignjatić  
Dušan Stegić  
Ivica Brlić  
Barbara Kostanjšek  
Urška Omahna



*The Parties to the Framework Agreement on the Sava River Basin (Bosnia and Herzegovina, Republic of Croatia, Republic of Serbia and Republic of Slovenia) approved the 2<sup>nd</sup> Sava River Basin Management Plan at the 9<sup>th</sup> Meeting of the Parties, held in Zagreb (Republic of Croatia) on December 9, 2022.*





INTERNATIONAL SAVA RIVER BASIN COMMISSION

**INTERNATIONAL SAVA RIVER BASIN COMMISSION**

**Kneza Branimira 29/II**

**10000 Zagreb, Republic of Croatia**

**phone: +385 1 488 6 960**

**e-mail: [isrbc@savacommission.org](mailto:isrbc@savacommission.org)**

**web site: [www.savacommission.org](http://www.savacommission.org)**