



FLOOD RISK MANAGEMENT PLAN IN THE SAVA RIVER BASIN

SUMMARY



Supported by
Western Balkans Investment Framework **WBIF**
An initiative funded by the European Union

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 Sava FRMP at the Eight Meeting of the Parties held in Sarajevo (Bosnia and Herzegovina) on October 24, 2019



Through the centuries Sava countries were affected by many disastrous flood events, which caused numerous human casualties and the material damage. One of the ultimate goals of the Framework Agreement on the Sava River Basin (FASRB) is regulating the issues of sustainable flood protection in the basin, by undertaking the measures with the aim to prevent or limit hazard, to reduce flood risk and to reduce or mitigate adverse consequences of floods. According to Protocol on Flood Protection to the FASRB (Protocol) the Sava Commission represents the coordination platform for cooperation in all aspects of flood risk management, including development of the Sava Flood Risk Management Plan, establishment of a Flood Forecasting, Warning and Alarm System in the Sava River Basin, exchange of information relevant to sustainable flood protection as well as implementation of other unspecified measures and activities on mutual interest.

The joint Sava Flood Risk Management Plan (Sava FRMP) has been prepared in line with the Protocol and in accordance with the EU Directive on the assessment and management of flood risks (2007/60/EC) and taking into account Flood Risk Management Plan for the Danube River Basin (ICPDR, 2015).

Development of Sava FRMP started with the preparation of the Program for development of the Sava FRMP (2017). Also, important document for the development of the Sava FRMP is Preliminary Flood Risk Assessment in the Sava River Basin (Sava PFRA) prepared in 2014

The Sava FRMP is available here:
<http://www.savacommission.org/sfrmp/en/>



based on information gathered by the Parties about the results of their preliminary flood risk assessments and definition of areas with potentially significant flood risks.

Activities on development of the Sava FRMP were backed up through technical assistance provided by the Western Balkan Investment Framework (WBIF) through the project Improvement of joint Flood Management Actions in the Sava River Basin, administered by the World Bank, and finalized in 2018.

A very important role for successful development of the Sava FRMP belongs to the representatives of institutions responsible for flood risk management in the countries, Permanent Expert Group for Flood Prevention of the Sava Commission and to the Sava Commission Secretariat.

Flood protection in the Sava River basin

High waters and significant floods

Earliest recorded floods in the Sava River basin date from 1550, while in XVIII century in Slovenia three floods were recorded: 1704, 1707, and 1772. The flood events were also recorded in Slovenia in 1824 to 1924 period, on Drina in 1896, as well as events for all other Sava River countries from 1924 to 2014 period. This led to the conclusion that during the period of XX - XXI century there was at least one recorded flood each ten years while in period 1994 to 2004 larger floods were recorder in the basin each year.

The Sava FRMP stressed that the Sava River basin is prone to flooding, mainly in lowlands along the Sava River and on the confluence of larger tributaries into the Sava, but also in the upper parts of the basin where floods are characterised by certain torrential nature.



The 1964 flood in Zagreb. Around 6,000 ha of the immediate urban area of Zagreb were flooded, 17 human lives were lost, some 150,000 people were evacuated, and tens of thousands of people lost their homes.

Significant flood events in the Sava River basin

1896	October/November	Drina
1932	April	Sava
1933	October	Sava
1939		Kupa
1944	November	Sava
1964	October	Sava
1966	December	Sava, Kupa
1968	December	Bosna
1970	January	Sava and Bosut
1972		Kupa
1974	November	Sava, Krapina, Kupa and Una
1989	June	Krapina
1990	October/November	Upper Sava
1996		Kupa
1998	October/November	Upper Sava
1998	November	Kupa
1999	May	Tamnava, Ub and Gračica
2001	June	Kolubara, Jadar and Ljubovida
2006	March	Tamnava, Ub and Gračica
2006	April	Sava
2007	September	Upper Sava
2009	March	Tamnava, Ub and Gračica
2009	December	Upper Sava
2010	May/June	Middle Sava
2010	September	Middle Sava
2010	December	Drina, Kupa and Una
2014	February	Kupa
2014	May	Middle and Lower Sava and tributaries



The 1896 Drina flood in Višegrad. Recorded water level of the Drina was 1m over fence on the famous bridge of Mehmed Paša Sokolović in Višegrad. The entire Podrinje was affected by this flood.

Significant flood events



In May 2014, a large portion of the Sava River basin within Bosnia and Herzegovina, Croatia and Serbia, was affected by an unprecedented flood event. Intensive precipitation in the second half of April and the beginning of May preceded this event and caused a high saturation of soil. This combination caused flash floods, erosion and landslides along small watercourses, but also disastrous flooding along the Sava River main course and its right tributaries.



Sanski Most

1



Banja Luka

2



Željezno polje (landslides)

3



Maglaj

4



Dobo

5



Šamac

6



Gunja

7



Brčko

8

Overview of damages and losses in countries affected by the floods in May 2014

Country	Affected population	Evacuated population	Casualties	Total damage (€uro)	Cause
Bosnia and Herzegovina	1,000,000	90,000	25	2,037,000,000	Torrents, landslides, breach of dykes
Croatia	380,000	15,000	3	300,000,000 (refers to Vukovarsko-Srijemska county)	Breach of dykes
Serbia	1,600,000	32,000	51	1,532,000,000	Torrents, landslides, breach of dykes

The Sava dyke breaches during May 2014 floods



Krupanj (torrents)

9



Obrenovac

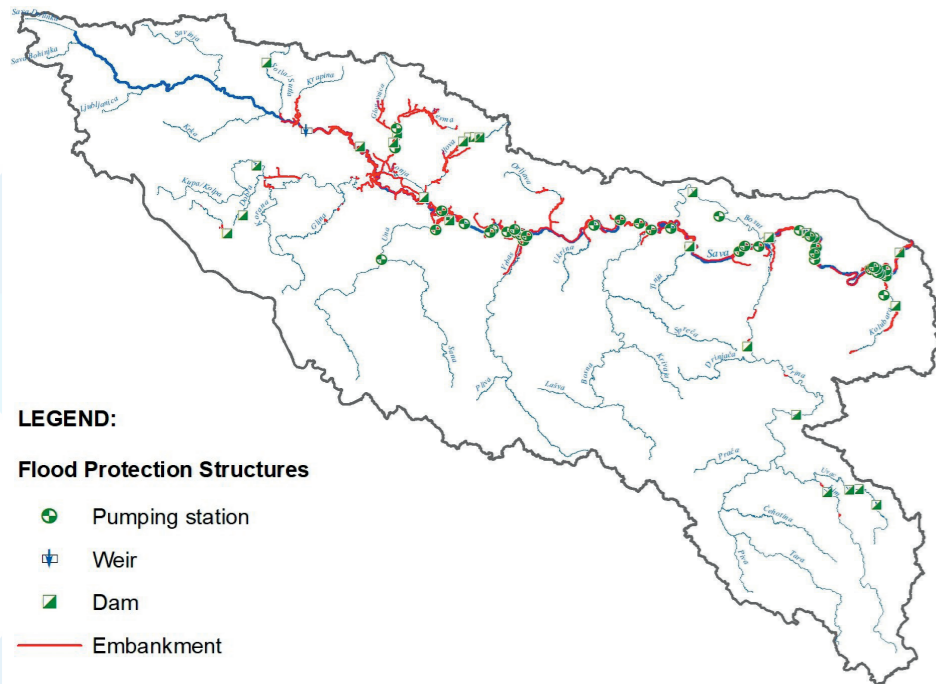
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Flood protection structures

Dykes along the Sava River, constructed with differently designed protection levels, and reservoirs, retention areas and diversion channels are used for improving flood protection in the Sava River basin.

Large number of dams and reservoirs were constructed in the Sava River basin over the past period. The constructed reservoirs mainly have a multi-purpose character (water supply, irrigation, flood protection, hydropower and recreation).

According to basin-level analyses, a total of 27 large dams and reservoirs (with volume greater than 5 million m³) of which 12 reservoirs were built that have a role in flood protection, among other purposes. Most of these reservoirs are on the Sava River watercourse in Slovenia, while in other countries are built mostly on tributaries.



Potential flood areas

The Sava FRMP have took into account potential flood areas defined in the Sava PFRA report, as well as additional national documents, primarily for part of areas in Bosnia and Herzegovina (entities of Republika Srpska and Brčko District BiH), and areas in Montenegro, which weren't included in the Sava PFRA report.

The total surface of all 1,926 considered potential flood areas is about 18,850 km² with a population of approximately 4.4 million. Within that surface, 10,600 km² is agricultural land, about 6,900 km² are forests and semi-natural areas, approx. 1,000 km² artificial surfaces, and the remainder of about 350 km² is made of wetlands and water surfaces.

Areas of Potentially Significant Flood Risk

In order to develop Sava FRMP, countries had exchanged information about all areas of significant potential flood risk (APSF). Information from Slovenia, Croatia, Bosnia and Herzegovina and Serbia are official results of national PFRAs and identified APSFR, and data about proposed APSFR in Montenegro were defined based on information from the Water Management Basis of Montenegro and municipal flood protection and rescue plans.

Areas of Potentially Significant Flood Risk



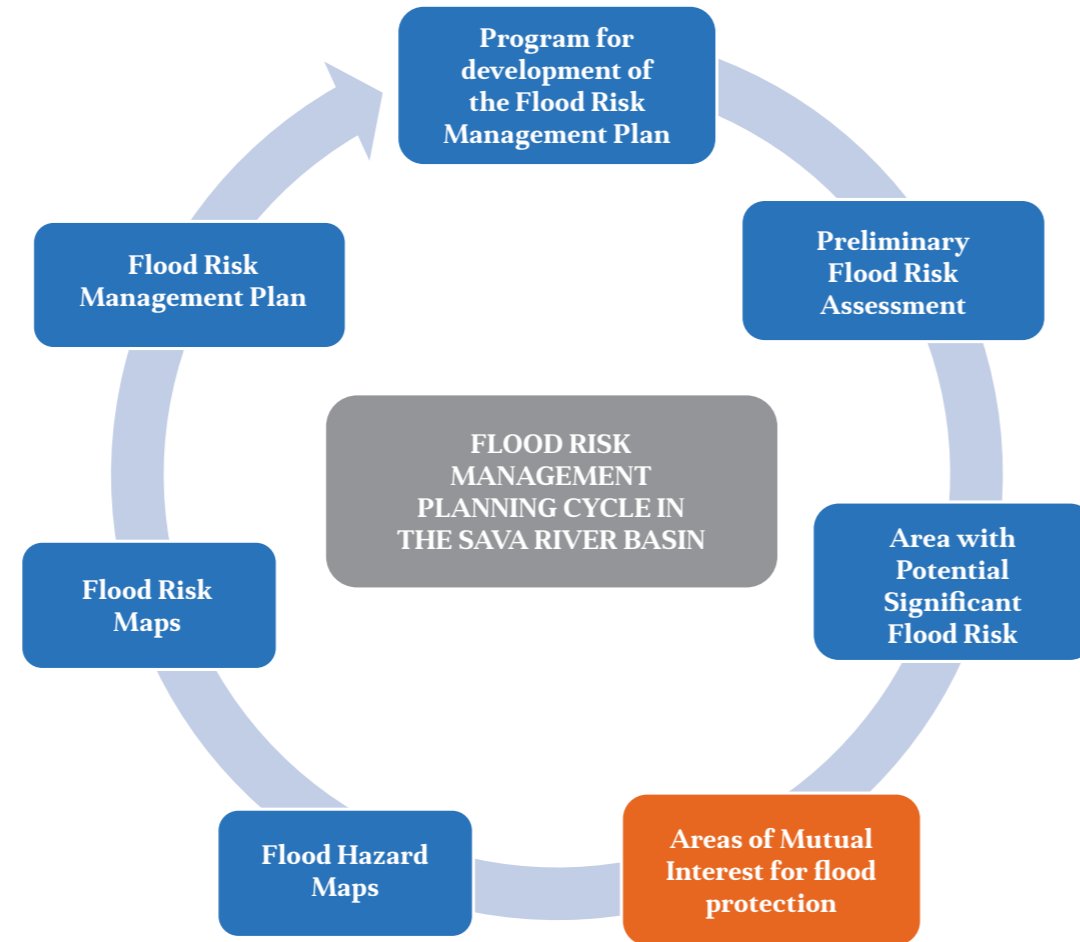
Areas of Mutual Interest for flood protection in the Sava River basin

Based on analysis of 1,926 areas with potentially significant flood risk defined at the national level, 251 areas with basin-wide importance were identified: 129 in Croatia, 46 in Bosnia and Herzegovina, 64 in Slovenia, 7 in Serbia and 5 in Montenegro. These areas were further grouped into 21 areas of mutual interest for flood protection at the Sava basin level (AMIs), as basic units for analysing the flood risks in the Sava FRMP. Total surface of AMIs is 5,659 km², which is 5.8% of the total Sava River basin surface, and a home to 1.4 million people, which is 16.2% of total population in the Sava River Basin.

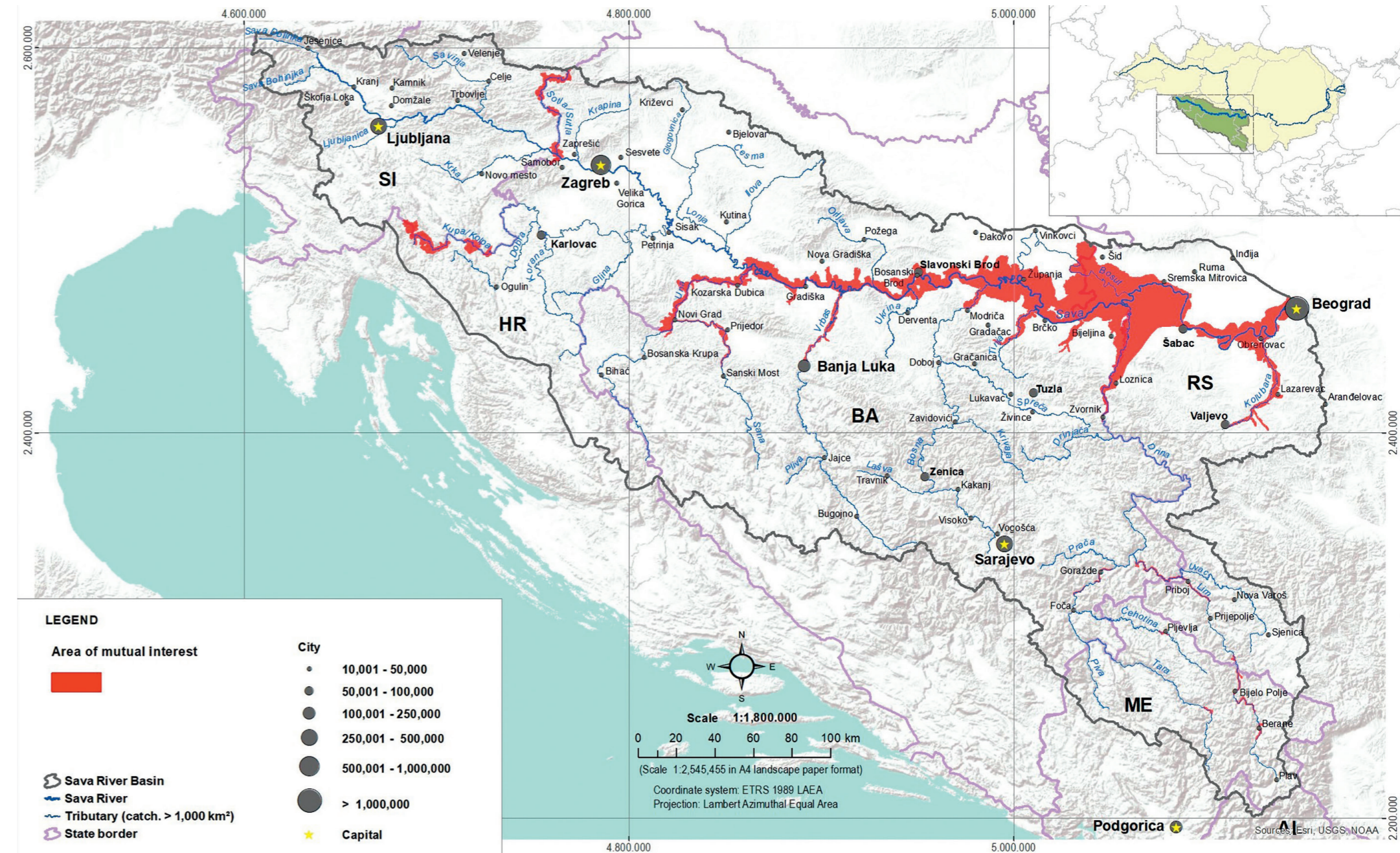
On Sava River, 4 AMIs were identified, as follows: 1 between Slovenia and Croatia; 1 between Croatia and Bosnia and Herzegovina; 1 between Croatia, Bosnia and Herzegovina, and Serbia; and 1 area entirely in Serbia.

A total of 17 AMIs were identified on the following tributaries: Sutla, Bregana, Kupa, Una, Sana, Vrbas, Ukrina, Bosna, Tinja, Drina, Tara, Čehotina, Lim, Bosut, and Kolubara.

The largest area (1,643 km²) belongs to AMI in transboundary part of middle Sava, which includes 43 APSFRs in Croatia and 24 APSFRs in Bosnia and Herzegovina. The share of this AMI in the entire Sava River basin is 1.7%. The smallest surface (4.9 km²) belongs to AMI on transboundary part of Bregana River, which includes 1 APSFR of 2.8 km² in Slovenia, and 1 APSFR of 2.1 km² in Croatia. The largest AMI located in the territory of one country, but on a transboundary watercourse – Sava River is in Serbia, and present 1 APSFR covering a total of 1,330 km².



Areas of Mutual Interest for flood protection



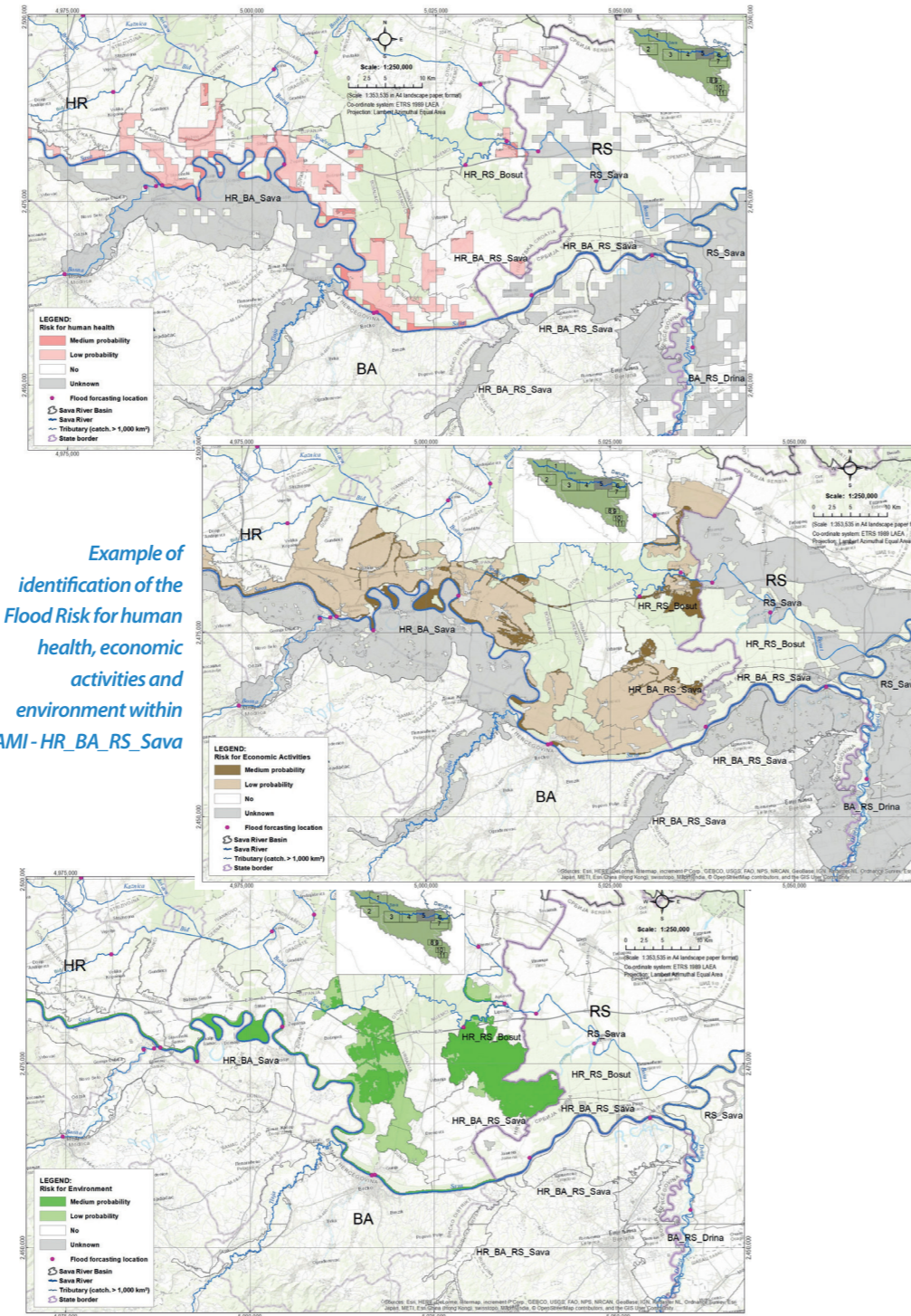
Flood Hazard and Risk Maps

Before the development of the Sava FRMP, flood hazard and risk maps on the Sava River basin level haven't been considered. Although flood maps were not available for all the countries, for each of AMIs the areas with or without flood hazard were identified with an indicative assessment of number of affected population and economic activity.

Flood risk analysis was done for all 21 AMI. In the largest AMI, the area exposed to flood hazard for medium probability scenario (1/100 years) is about 300 km², and for low probability scenario (low probability or extreme events, regardless of the return period considered by the country) about 900 km². In that area, almost 150,000 inhabitants are potentially affected (1.8% of total population in the Sava River basin) for medium probability scenario, and 200,000 inhabitants (2.5% of total population in the Sava River basin) for low probability scenario. The area under flood risk is about 90 km² for medium probability scenario, and about 500 km² for low probability scenario.

The protected areas (WFD) potentially affected amount to about 200 km² and about 500 km² for medium and low probability scenarios, respectively.

Proposal of elements for development of a joint methodology for preparation of flood hazard and risk maps for AMI areas in the Sava River basin was developed, which should be used as a starting point for further adjustments and improvements in joint projects.



AMI	Area km ²	Flood hazard area		Indicative number of inhabitants potentially affected		Potentially affected area for economic activities		Potentially affected protected areas (WFD)	
		km ²		MP	LP	km ²		km ²	
		MP	LP			MP	LP	MP	LP
SI_HR_Sava	15.67	10.80	11.07	5,757	5,757	9.72	9.99	0.83	0.84
HR_BA_Sava	1,643.42	28719	92765	145,504	197,998	86.19	52722	20975	471.35
HR_BA_RS_Sava	294.80	743	30.83	1,474	2,304	0.08	18.41	3.41	3.48
RS_Sava	1,329.58	90.47	266.47	151,975	401,206	62.71	193.72	3.93	4.35
HR_SI_Sutla_1	13.30	3.68	4.11	7,279	7,279	3.50	3.89	1.00	1.07
HR_SI_Sutla_2	15.31	2.13	2.58	1,348	1,493	2.08	2.50	0.98	1.04
HR_SI_Sutla_3	66.05	2.28	3.06	8,217	16,421	1.95	2.53	1.77	2.19
HR_SI_Bergana	4.86	0.49	0.61	2,378	2,378	0.26	0.32	0.04	0.04
HR_SI_Kupa_1	9.04	0.30	0.35	313	313	0.09	0.12	0.29	0.33
HR_SI_Kupa_2	3782	0.53	0.57	262	262	0.09	0.10	0.53	0.57
HR_SI_Kupa_3	111.38	2.98	3.42	2,776	2,776	1.78	1.95	2.98	3.42
HR_BA_Una_Sana	218.30	29.04	40.60	26,967	27,622	16.66	25.07	26.78	3785
HR_RS_Bosut	736.81	126.10	318.64	2,118	8,141	17.15	155.69	108.28	153.19
BA_Drina	6.02	2.17	2.41	65,207	65,207	1.21	1.34	**	**
BA_RS_Drina	954.67	*	*	**	**	**	**	**	**
ME_Cehotina	2.76	1.35	1.49	3,978	3,978	0.72	0.80	0.020	0.04
ME_Lim	13.05	11.07	11.97	21,450	21,741	4.79	5.21	0.13	0.13
ME_RS_Lim	10.19	8.01	8.70	23,771	23,771	5.55	5.87	**	**
RS_BA_Lim	1779	*	*	**	**	**	**	**	**
ME_Tara	3.41	2.89	2.98	3,358	5,743	0.91	0.94	0.10	0.10
RS_Kolubara	155.06	84.47	105.43	44,884	55,536	74.11	91.28	0.20	0.20

* hazard area not identified

** data for risk on receptors not available

Objectives of the flood risk management of mutual interest on the Sava River basin level

- ❖ Avoidance of new flood risks
- ❖ Reduction of existing flood risks (during and after the floods)
- ❖ Strengthening resilience
- ❖ Raising awareness about flood risks
- ❖ Implementing solidarity principle

Summary of measures

Common understanding of the objectives of flood risk management at the Sava River basin level, with the aim of reducing possible negative consequences of floods to human health and life, their property and economic activities, environment, and cultural-historic heritage, and the identification of mutual benefits for the Sava River countries represented the basis for compilation of non-structural measures on the basin level and national structural measures in areas of mutual interest.

Within the Sava FRMP, 38 structural measures in AMIs with a total value of over 250 million € were identified. They were provided on the basis of national flood risk management plans in Croatia and Slovenia, as well as planning and strategic documents in Bosnia and Herzegovina, Serbia and Montenegro.

42 non-structural measures were agreed. They mostly relate to entire AMIs or the Sava River basin as a whole, with a particular focus on data collection, preparation of studies and other activities aimed at improving the planning basis for the next planning cycle.

Although a lot of analysed projects are located at the transboundary rivers, the expected environmental impact of national structural

measures planned in areas of mutual interest, i.e. construction works planned by the countries in the forthcoming period is spatially limited to local level, without significant transboundary effects.

Catalogue of measures

A common catalogue of measures was prepared in accordance with the Floods Directive, as a set of consolidated non-structural and structural measure types from all phases of flood risk management cycle, tailored to countries' needs.

Aspect of flood risk management	Type	Measure Group
No Action	M11	No Action
Prevention	M21	Avoidance
	M22	Removal or re-location
	M23	Reduction
	M24	Other prevention measures
Protection	M31	Natural flood management / runoff and catchment management
	M32	Water flow regulation
	M33	Channel, riverbanks and floodplain works
	M34	Surface water management
	M35	Other protection measures
Preparedness	M41	Flood forecasting and warning
	M42	Emergency event response planning / Contingency planning
	M43	Public awareness and preparedness
	M44	Other measures for preparedness
Recovery and review	M51	Individual and societal recovery
	M52	Environmental recovery
	M53	Other recovery measures
Other	M61	Other

Spatial distribution of structural measures in Areas of Mutual Interest for flood protection



Non-structural measures

Prevention (M23) – Reduction

1. Promotion of best practice for integrated and sustainable flood risk management (use of green infrastructure, construction/relocation of residential and other objects from flood-prone areas, spatial planning etc.)
2. Facilitate and speed up the process for the provision of mutual and international aid
3. Promotion of measures for population self-defence in case of floods

Prevention (M24) - Other prevention measures

4. Identification/adjustment of AMIs for flood protection
5. Review and as necessary updating of PFRA
6. Exchange of relevant information in the development of national PFRA, for international basins
7. Upgrade of the Sava Portal in terms of presentation of national PFRA and FRMPs
8. Coordination of APSFR in international basins/areas of mutual interest (AMI)
9. Prior exchange of information in the development of flood hazard and risk maps for internationally important APSFR
10. Further development of draft joint methodologies for development of flood hazard and risk maps for AMIs
11. Development of flood hazard and risks maps as potential bases for joint projects and analyses
12. Preparation of the hydrological study for the SRB
13. Preparation of a spatial layer for cultural heritage for the entire basin
14. Promotion of best practices in emergency flood defence
15. Drafting a guide for dyke status assessment

Protection (M31) - Natural flood management / runoff and catchment management

16. Promotion of measures for natural water retention
17. Analysis of needs and possibilities for creating new retentions
18. Creating synergies with the Sediment Management Plan
19. Promotion of best practices in managing multipurpose accumulations
20. Integrated transboundary monitoring and management systems for flood risks, environmental and biodiversity protection and forestry through transboundary forest retentions and other measures in Spacva-Morovic

Protection (M35) - Other protection measures

21. Drafting a guide for application of the best solutions in the protection against floods
22. Studies for optimal measures for protection against floods, in accordance with the best practices (assessment of validity and concept update of the existing systems)
23. Analysis of the effects of accumulations and reservoirs on downstream transboundary areas in the Sava River Basin
24. Monitoring and control of riverbeds for high waters
25. Regular monitoring, analysing and reporting on the state of structures and flood defence systems
26. Drafting and regular updating of maps with overview of facilities in flood defence systems

Preparedness (M41) - Flood forecasting and warning

27. Continuous improvement of the system for hydrological and meteorological observations and data transfer systems
28. Improvement of national forecast and early warning systems
29. Support to linkages between national forecast and early warning systems
30. Supporting development of joint protection and rescue plans in flood events
31. Support to preparing and updating Standard Operational Procedures (SOP) between the countries that do not have them
32. Support to procedures for mutual notifying about hazards, manners of border crossing, mutual information and data exchange about hazards of occurrence and occurrence of natural and other disasters in border zones, etc.
33. Based on best practices, support development of unified procedures for actions in case of floods at the basin level in order to improve response to support actions or development of plans in case of floods at the basin level
34. Support establishment of operational centres with a comprehensive overview of contacts for mutual communication of parties within SOPs, and regular updating thereof in order to ensure efficient functioning of the notification and warning system
35. Supporting joint simulation exercises of response in flood events

Preparedness (M43) - Public awareness and preparedness

36. Encouraging interested public to take part in implementation of FRMP in SRB
37. Support to raising public awareness on issues relevant for flood risk management and active flood defence
38. Support to improving cooperation and activities during emergency situations

Preparedness (M44) - Other measures for preparedness

39. Support to establishing bilateral cooperation between countries that have no agreements in place
40. Information exchange and coordination of activities in operational flood defence
41. Support to drafting joint plans for protection and rescue in flood events

Recovery and review (M53) - Other recovery measures

42. Documenting and post flood event analysis

Structural measures

Protection (M33) - Channel, riverbanks and floodplain works

1. City of Belgrade water protection - Reconstruction and superelevation of Belgrade riverbanks, mobile system
2. Reconstruction of Ada Ciganlija embankement - Dyke works (2+150 - 2+400)
3. Protection from high waters for left Sava bank area from Prodgar to Hrtkovci - Construction of an dyke near Kupinovo (0+000 to 8+300)
4. Protection from high waters for left Sava bank area from Prodgar to Hrtkovci - Dyke reconstruction near Klenka 3.8 km
5. Protection of urban area of Sremska Mitrovica and Mačvanska Mitrovica - Mobile protection
6. Protection of urban area of Šabac - Mobile protection
7. Stabilization of left Sava bank in the settlement of Martinci, 2 km long
8. Reconstruction of right Sava bank protection system in Mačva - 31 km in length
9. Construction of Slavonski Brod flood protection system - Rehabilitation of the Sava left bank in Slavonski Brod by constructing riverbank protection structures from km 363 +100 to km 363 +700 in order to stabilise the bank
10. Construction of Slavonski Brod flood protection system - Construction of floodgate and pumping station on the course of Glogova, and reconstruction of related section of the Sava protective dyke in the zone of Brod port
11. Reconstruction and construction of Sava dykes and rehabilitation of riverbanks
 - Reconstruction of left-bank Sava protective dyke from Oprisavca to Svilaja, 5 km long
 - Reconstruction of the left-side dyke Davor-Pričšac from km 6 +250 to km 15 +550 2
 - Rehabilitation works on landslide on the left Sava bank in the village of Štitar by constructing a riverbank protection structure, rkm 275+770 to rkm 276+277 in order to stabilise the bank
 - Reconstruction of left bank Sava dyke in Davor km 22+500 - km 23+800 with construction of a protective wall
 - Rehabilitation of the Sava left bank by constructing a riverbank protection structure on the section from rkm 498+961 to rkm 499+761 in the settlement of Mlaka in order to stabilise the bank
12. Construction works on rehabilitation and level raising of dykes
 - Raising the Sava River dykes level near Semberija, Bijeljina
 - Rehabilitation of dyke on Sava River near pumping station Topolovac, Bijeljina
13. Works on channel cleaning
 - Cleaning of Sava River lateral channels, Gradiška
 - Cleaning of Sava River lateral channels, Srbac
14. Works on dyke rehabilitation (Gradiška)
15. Works on pumping station rehabilitation and upgrade - Repair and upgrade of pumping station on the Sava River, Srbac
16. Construction of drainage infrastructure Bidj-Bosutsko polje - Construction of pumping station Teča on the Sava near Račinovci
17. Waterflow improvement measures - Works on improving flood protection of Rigonc and Dobova
18. Waterflow improvement measures - Works on improving flood protection of Rogatac
19. Flood protection for Hum settlement on Sutla - River flow regulation of the Sutla river in the section of 900 m near Hum on the Sutla, with the removal of old and construction of new bridge with the aim of protecting the settlement centre from flooding

20. Construction works

- Riverbank protection, Dubička Ravan
 - Dyke level raising, section Kozarska Dubica, Kozarska Dubica/ Bjeljina
21. Construction of flood protection system for Hrvatska Kostajnica town - Construction of a protecting wall and riverbank protection structure on the left bank of the River Una in Hrvatska Kostajnica – phase 1
 22. Construction of flood protection system for Hrvatska Kostajnica town - Construction of a protecting wall and riverbank protection structure on the left bank of the River Una in Hrvatska Kostajnica – phase 2
 23. Construction works - Dyke on west bank of Sana River, across the centre of Prijedor
 24. Reconstruction of protection system on River Drina right bank
 25. Protection of Mačva-Drina and tributaries area: „Mačva, Lozničko Polje and Loznica - Banja Koviljača: Drina“ - Construction and reconstruction of dykes on the right bank of Drina, from Pavlovića bridge to Banja Koviljača
 26. Protection of Mačva-Drina and tributaries area: „Kozjak - Jelav - Straža - Gornji Dobrić: Jadar and Korenita“ - Flood protection system in the area of the Loznica town – river regulation
 27. River flow regulation and construction of dykes of River Tara within area of Mojkovac municipality
 28. Regulation of River Cehotina on section Ševari-Židovici
 29. River flow regulation and construction of dykes of River Lim on Zaton section
 30. Construction of drainage infrastructure Bidj-Bosutsko polje - Reconstruction of channel S-II (Marikovo I) and other ones along the international road border crossing point Bajakovo
 31. Protection of Kolubara River area – lower part of the basin
 - Protected area of „Koceljeva“: Construction of the Tamnava Borina system for the protection of the Koceljeva settlement,
 - Protected area of „Ub“: Construction of the Ub-Gračica-Tamnava system for the protection of the settlement of Ub)
 32. Protection of Kolubara River area (Construction of the Ljig-Kačer-Dragobiljin system for the protection of the settlements of Ljig and Lajkovac and Toplica-Kolubara-Ribnica for the protection of the settlements of Lajkovac and Mionica against floods)
 33. Protection of Valjevo area (Kolubara River and tributaries) - Improving the system for defence of the City of Valjevo – construction of the flood protection system on tributaries of the Kolubara River in the settlement and on the Obnica River upstream from the confluence (vulnerable area of suburbs and PIPCF Valjevo)
 34. Protection of Obrenovac town - Reconstruction of Obrenovac protection dyke

Protection (M32) - Water flow regulation

35. Protection of the City of Belgrade – regulation of Topčiderska reka basin with construction of small dams, reservoirs and retentions in the basin
36. Flood protection Vonarje - Modernization and upgrade of Vonarje dam
37. Flood protection of Čabar town - Kupa – multi-purpose reservoir
38. Regulation of Kolubara basin – construction of 20 small retention dams in the basin

Coordination mechanisms

Having in mind disastrous floods in the recent years, especially those in May 2014, as well as the increasing effects of climate change causing increased frequency and intensity of flood events, it is necessary to act co-ordinated, wherever possible, to plan and intensify joint implementation of measures of mutual interest for several countries, meaning for the entire Sava River basin. Sava FRMP provides a number of recommendations for improving the mutual cooperation in the Sava River basin.

Flood risk reduction in emergency situations is the common objective of all countries, and the level to which the developing countries can effectively implement their national policies and measures in the context of their circumstances and capacities, can be additionally improved through sustainable international cooperation. Effective partnership and further strengthening of international cooperation, including fulfilling certain obligations of developed countries in providing assistance, are of key importance for the flood management in emergency situations.

Sava FRMP elaborates the list of competent authorities and institutions for protection against harmful effects of water in the Sava River basin responsible for flood risk management planning and partly for prevention and reduce of risk in flood defence emergency situations.

Public information and consultation

Public information and consultations process was an integral part of Sava FRMP preparation. Through this process stakeholders actively participated in the development of the Sava FRMP. Also information were adequately provided to the public along with a reasonable time period for submission of comments and proposals for amending the draft document.

As part of the process of public participation in preparation of the Sava FRMP, on 14th and 15th November 2018 a stakeholder forum workshop was held in Belgrade. Some 50 participants representing government and public institutions of Sava River basin countries, international organizations, non-governmental sector, ISRBC, WBIF and the World Bank expressed their view about the Sava FRMP. In addition, comments received within the web-based consultation process were taken in consideration, are of key importance for the flood management in emergency situations.



Acknowledgements

The Flood Risk Management Plan in the Sava River Basin represents a true collective effort that reflects cooperation in flood risk management in the Sava River basin and beyond. Acknowledgments should be given to many institutions and individuals, in different ways, contributed to the preparation of the Sava FRMP which was backed up through technical assistance provided by the Western Balkan Investment Framework through the project "Improvement of joint Flood Management Actions in the Sava River Basin" administrated by World Bank.

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International Sava River Basin Commission

Kneza Branimira 29

10000 Zagreb, Republic of Croatia

tel: +385 1 4886960

e-mail: isrbc@savacommission.org