



# Project Information Document (PID)

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Appraisal Stage | Date Prepared/Updated: 16-Feb-2020 | Report No: PIDA27158



**BASIC INFORMATION**

**A. Basic Project Data**

Country Western Balkans	Project ID P168862	Project Name Sava and Drina Rivers Corridors Integrated Development Program	Parent Project ID (if any)
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date 24-Feb-2020	Estimated Board Date 30-Apr-2020	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Republic of Serbia, Bosnia and Herzegovina, Montenegro	Implementing Agency Republic of Serbia Ministry of Agriculture, Forestry and Water Management, Montenegro Ministry of Agriculture and Rural Development, Republika Srpska Ministry of Agriculture, Forestry and Water, International Sava River Basin Commission	

Proposed Development Objective(s)

The Objective of Project (Phase I of the Program) is to improve flood protection and enable transboundary water cooperation in the Sava and Drina Rivers Corridors.

Components

- Integrated Management and Development of the Sava River Corridor
- Integrated Management and Development of the Drina River Corridor
- Project Preparation and Management
- Regional Activities

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	155.60
<b>Total Financing</b>	137.67



of which IBRD/IDA	137.67
Financing Gap	17.93

**DETAILS**

**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	137.67
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Environmental and Social Risk Classification

High

Decision

The review did authorize the team to appraise and negotiate

**B. Introduction and Context**

Country Context

- The riparian countries of the Sava and Drina rivers—Slovenia, Croatia, Bosnia and Herzegovina (BiH), Serbia, and Montenegro—aspire to consolidate economic growth and enhance their prosperity.** After a protracted, six-year period of sluggish or negative economic growth linked to the 2009 global economic crisis, since 2015 regional economic growth has markedly improved and is now on a stronger footing. Between 2008 and 2014, the economies of the riparian countries collectively contracted at an annual weighted average rate of -0.9% in real terms, whereas in the 2014-2018 period the countries grew at an annual weighted average rate of 3.1%<sup>1</sup>. Regional economic recovery was accompanied by gains in employment. Whereas unemployment rates deteriorated in all riparian countries between 2009 and 2014, by the end of 2018 unemployment rates stood below their 2009 levels in all countries<sup>2</sup>. The economic outlook over the medium term is favorable for the subregion, with the riparian countries expected to grow at a weighted average annual rate of 2.9% between 2018 and 2024<sup>3</sup>. Slovenia joined the European Union (EU) nearly 15 years ago and Croatia in July 2013. The other riparians—BiH, Serbia, and Montenegro—are currently in various stages of EU accession. They seek convergence with EU living standards and its market- and rules-based systems and on a path to high-income status in the long term. The Berlin Process, an initiative led by several EU member states to foster collaboration and development in the Western Balkans towards integration with the EU, and the resulting Connectivity Agenda for the Western Balkans, illustrate that there is a wide international consensus on the importance of this

<sup>1</sup> IMF World Economic Outlook (October 2019). Country-specific compounded annual growth rates (CAGR) of GDP in real terms during the periods cited were weighted by the countries’ 2018 GDP in U.S. dollars at market rates.

<sup>2</sup> Ibid. Data exclude Montenegro due to unavailability.

<sup>3</sup> Ibid.



convergence. Economic and policy integration across the region are an important component of this effort.

2. **The Sava and Drina rivers form a natural connecting backbone for the region.** A pivotal feature of the Western Balkans region is the Sava River Basin, one of Europe's largest transboundary basins. It covers over one third of the Western Balkans in area and population, and physically connects the five riparian countries through inland waterways. The Sava river is the basin's mainstay. It is navigable between Serbia, BiH, and Croatia (from which it continues upstream into Slovenia) and is connected at its mouth to the Danube river (of which it is one of the largest tributaries), thus linking these countries to Danube riparian markets and to international markets via the Black Sea. The Drina river is the Sava's largest tributary, draining over a 20,000 km<sup>2</sup> mountainous area, half the size of Switzerland. Although non-navigable, the Drina has important hydropower potential and connects, through its own tributaries—most notably the Lim river—Serbia, BiH, and Montenegro. The Sava River Basin generates 20.5% of employment in Serbia, 35.3% in Croatia, 39.2% in BiH, and 54.4% in Slovenia. The economy and jobs in the region depend heavily on these shared water resources, whether to transport goods, generate energy, grow food and fibers, sustain biodiversity, or provide for leisure and eco-tourism activities.

3. **At the same time, the Sava and Drina have a proclivity for both dry spells and devastating floods—most recently occurring in 2010 and 2014<sup>4</sup>.** The 2014 Sava flood—the largest flood in a century—caused 79 casualties and damages totaling €1.5 billion in Serbia (4.7% of GDP), €2.0 billion in BiH (15% of

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<sup>4</sup> Average annual temperatures in the region are projected to rise by about 1.8°C by 2050 (with the highest increases in the southern parts of BiH, Serbia, and Montenegro). Overall annual mean precipitation is expected to decrease by 10–20%. Precipitation is expected to become more variable, resulting in a higher number of days with intense weather events, and dry spells becoming more severe and prolonged (by around five days). Available hydrological analyses estimate a decrease of 20–25% in runoff. Under these conditions, the frequency and severity of floods, droughts, and extreme weather are expected to increase.

[Source: UNDP. 2013. *Natural Disaster Risks and Risk Assessment in South East Europe*].



GDP), and €300 million in Croatia (0.5% of GDP). In 2010 the Drina Basin was flooded extensively—partly due to spilling hydropower reservoirs—and saw its highest water levels in 100 years. The trends and changes in mean values of precipitation, evapotranspiration, and discharges in this basin are well documented and indicate that climate change is expected to cause more intense flood and drought episodes, both in terms of scope and duration.<sup>5</sup> Specifically, current climate change projections for the Sava River Basin foresee a rise in flood peaks of up to 8 percent, and droughts occurring with increased frequency and intensity. While droughts are particularly unfavorable to navigation,<sup>6</sup> they also negatively affect agricultural production, biodiversity, fisheries, and energy generation,<sup>7</sup> and raise water demand. Floods and droughts thus create risks for livelihoods and impose constraints on trade, food security, and productive investment. These climate change related risks have led to increased receptivity for transboundary cooperation on flood protection and water resources management in the region, and thus have served as the main impetus for this project.

**4. The hydraulic infrastructure in the Sava and Drina rivers, while nominally extensive, has been poorly maintained and only partially modernized and expanded since the conflicts of the 1990s and the breakup of Yugoslavia, hampering regional economic integration and suppressing growth.** Prior to the conflicts, the

Sava river played an important role in the freight transport network of the former Yugoslavia, with an estimated 5.2 million tons of bulk cargo transported in 1990, when the river was navigable nearly 300 days per year. Since then, inland waterway traffic volumes along the Sava have plummeted. Years of neglect, a lack of avenues for lasting cross-border collaboration on waterway development projects—as the river is also the border between Croatia and BiH for much of its navigable fairway—and remnants from the war itself, in the form of land mines still present along the river’s right bank within BiH, have

**Box 1: Lessons from the 2010 and 2014 floods on the Sava and Drina Rivers**

In late November 2010, extreme rainfalls in Montenegro and East Herzegovina, with 100-200 mm of rainfall in 3 days, led to devastating flood waves which reservoirs along the Drina river could not retain. As a result, some 3,000 buildings were flooded across several towns in Serbia, from which more than 1,400 people were evacuated.

Between May 14 and 19, 2014, the rainfall amount on the Sava basin was more than three months’ worth. More than 160,000 people were displaced, and 70 people were killed. Overall economic damages in excess of US\$5 billion were registered.

In both cases, the Bank and other development partners responded rapidly to address emergency needs. In 2010, the Bank restructured one of its ongoing operations to provide emergency financing for flood protection restoration in BiH. In 2014, two IBRD emergency loans were processed within months of the disaster to cover the most urgent priorities in BiH and Serbia, and largely achieved their objective of emergency reconstruction.

However, a consensus is now emerging within authorities of the various countries that the country-level ad-hoc reconstruction efforts will not provide effective long-term flood protection to the basin’s people and economy. A more integrated flood management approach across sectors and countries is essential. For example, the Drina cascade of hydropower reservoirs located in Montenegro and BiH could be used to temporarily store the peak of the floods affecting BiH and Serbia. Similarly, the flood defense structures and approaches alongside the Sava main course must be harmonized between the Croatian and BiH sides to avoid a detrimental dyke height race. SDIP will offer an opportunity to plan flood management activities and investments along the entire basin and the various sectors in a more integrated manner.

<sup>5</sup> R. Milačić et al. (eds.) 2015. *The Sava River. The Handbook of Environmental Chemistry*. DOI 10.1007/978-3-662-44034-6\_2. Springer-Verlag Berlin Heidelberg.

<sup>6</sup> Schwarz, U. 2016. Sava White Book. *The River Sava: Threats and Restoration Potential*. Radolfzell/Wien: EuroNatur/Riverwatch.

<sup>7</sup> Thermal power plants need water for cooling purposes, while hydropower plants need water for electricity generation.



severely deteriorated navigation standards. Current water depths over much of the Sava's fairway, particularly upstream from Serbia, are below two meters, which is insufficient to allow for the safe navigation of vessels with at least 1,000 deadweight tons in cargo carrying capacity, a threshold broadly considered necessary to attain desirable levels of waterborne transport efficiency. Furthermore, navigability in the Sava is constrained to only 160 days per year at key bottleneck sections. Not surprisingly, by 2008, freight transport on the river Sava was estimated at 500,000 tons, or about 1/10<sup>th</sup> of the freight activity of 1990. While volumes have partially recovered since then, to an estimated 877,000 tons in 2018, boosted by the recent improvements in regional economic growth, they are still a fraction of the trade activity once supported by this waterway, and the commodities being moved continue to be dominated by bulk cargo, with no incidence to date of container transportation on this corridor, unlike what similar waterway corridors elsewhere in Europe—most notably in this case, the Danube—have achieved. Similarly, in the Drina, a sustained lack of maintenance and investments in upgrades to make infrastructure able to withstand climate change-related extreme weather events has reduced the capacity of the river's cascade of reservoirs to be resilient to service disruptions and to safeguard nearby communities from climate-related risks, such as major flooding events (the devastating floods of 2014 being the most recent example).

5. **As such, the Sava River Basin has considerable untapped potential as an enabler of economic growth, regional connectivity, resilience to climate change risks, social cohesion, and job creation.** Income per capita among the riparians ranges from US\$6,000-9,000 (Serbia, BiH, Montenegro) to US\$15,000 (Croatia) and US\$26,000 (Slovenia), signaling opportunities for income convergence. As the Sava flows from west to east across Slovenia, Croatia, and BiH, ultimately reaching the Danube in Serbia, and, via the Danube, connecting the region with other parts of Europe and the Black Sea, the river offers a tangible opportunity to address the need for re-establishing it as a core economic corridor and as a driver of low-carbon multimodal transportation. There is also an urgent need to pursue no-regret investments; for example, investments to help maintain the water flow at levels suitable for navigation (imperiled by recurring droughts), thereby reducing flood risk and strengthening the social and economic resilience of the communities within the Sava's catchment in the face of climate change. Similarly, the Drina corridor has significant potential for food production and tourism development, while the 2014 floods have shown the importance of improved management and protection of its existing reservoirs.

## B. Sectoral and Institutional Context

6. **Since the mid-1990s, several regional and international treaties and associated protocols have been established to underpin transboundary collaboration in the Sava River Basin, most notably the Framework Agreement on the Sava River Basin (FASRB).** Signed in 2002 by the Sava riparians (at the time, the Republic of Slovenia, Republic of Croatia, BiH, and the former Federal Republic of Yugoslavia), the FASRB calls, inter alia, for cooperation among the signatory parties towards three main goals: (i) providing the necessary conditions to guarantee safe navigation on the Sava river and its tributaries; (ii) promoting sustainable water resources management across the basin; and (iii) championing measures to enhance the resilience of communities in the basin to adverse weather events, such as floods and droughts. The **International Sava River Basin Commission (ISRBC)** is a Zagreb-based regional institution established in 2005 to oversee implementation of the latter FASRB provisions on behalf of the signatory parties<sup>8</sup>. Since inception, ISRBC has served as a platform for multilateral

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<sup>8</sup> Montenegro gained sovereignty after the ISRBC was established and cooperates on a technical level with the signatory parties to the FASRB based on a Memorandum of Understanding on cooperation between ISRBC and



dialogue in the region, has supported basin development through planning (e.g., by coordinating the development of a River Basin Management Plan, a Flood Risk Management Plan, and past feasibility studies for infrastructure provision and navigation capacity expansion), and has coordinated the delivery of practical tools such as a Geographic Information System (GIS), River Information Services (RIS), and a Flood Forecasting and Early Warning System for the Sava River Basin. In delivering on its mandate, ISRBC has historically collaborated with other international institutions, including the European Commission and the World Bank, such as in the development of the 1<sup>st</sup> Sava River Basin Management Plan of 2014.

7. **In addition to being part of the EU Core Trans-European Transport Network (TEN-T), the Sava is subject to the 1996 European Agreement on Main Inland Waterways of International Importance (AGN).** This agreement designated the Sava river as an international waterway Class IV, a standard that mandates the provision of safe navigation conditions for vessels up to 1,500 tons in capacity and a draft of 2.5 meters, over a period of at least 240 days per year. Operationalizing this mandate requires the consistent provision of least available depth (LAD) levels of 2.7 meters. At present, however, these conditions are not met. Specifically, the Sava meets Class IV standard only through approximately the last 103 river km of its fairway—i.e., at its most downstream and busiest section, between Šabac and Belgrade, all within Serbia. Upstream from Šabac, while there are sections that remain at Class IV, the river is operationally considered Class III standard, as navigation conditions are ultimately dictated by the weakest links in a given portion of the corridor, and the presence of bottlenecks—shoals, obstacles to navigation, sharp bends, and the like—limits corridor navigability even if river sections elsewhere nominally comply with AGN provisions. The Class III standard is consistent with navigation of vessels up to 700 tons in capacity, and, as noted earlier, only for approximately 160 days per year in some sections. The as-yet unfulfilled goals of the AGN agreement offer, in effect, a roadmap for the Sava corridor to meet broader European standards for inland waterway connectivity.

8. **Despite tangible accomplishments by ISRBC and the FASRB signatories, the continued need for improvement in water management among Sava-Drina riparian countries demonstrates the challenge of deepening regional coordination on shared natural resources.** Both the Sava and Drina waterways have the particularity that critical portions of their length mark the border between riparian countries—for example, between Croatia and BiH in the case of the Sava, where the border splits the river down the middle of its navigable fairway. This renders most interventions in the Sava within the territories of Croatia and BiH transboundary by nature, making it necessary for infrastructure investments to be planned and executed in a coordinated manner on both sides of the border. In other words, transboundary collaboration is an essential condition for the development of this shared resource, and the lack of it has hampered regional integration and associated economic development to date. While failure to invest in infrastructure modernization and maintenance is the most visible cause of the reduced economic significance of the Sava and Drina waterways as regional resources, the lack of joint development initiatives and the regional collaboration this entails is the ultimate binding constraint. The region's recent and anticipated future exposure to climate change impacts, and the increasing need to both adapt to and mitigate climate change risks, further illustrate the urgency of regional collaboration—transboundary integrated approaches and activities—among the riparian countries.

9. **Partly in response to the above challenges, over the past 13 years the Bank has engaged the region extensively with policy advice, technical assistance, and investments.** At the national level, the Bank has supported water programs covering different sub-sectors. This includes water supply and wastewater programs (notably, in Croatia, BiH, and Montenegro); irrigation development programs (in Croatia, Serbia, and most

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Montenegro, signed in Belgrade on December 9, 2013.



recently, BiH); the Croatia Inland Waters Project; and the Serbia Flood Emergency Recovery Project. Past Bank activities at regional level include the development of the Climate Adaptation Plan for the Sava River Basin (2009-2016) and the Investment Priority Framework Project in the Drina Basin (2014-2017). Importantly, the Bank has also acquired experience with regional water resources projects in the Western Balkans outside the Sava basin, notably with the Global Environment Facility (GEF) funded Lake Skadar-Shkoder Integrated Ecosystem Management Project involving Montenegro and Albania (2008-2012), and the Neretva-Trebinjica River Basin Management Project involving Republika Srpska and Federation of BiH in BiH, and Croatia. Ongoing activities at the regional level include the Drina River Basin Management Project (Drina GEF) and the BiH Drina Floods Protection project (2014-2020). After years of engagement, the riparian countries are working with the Bank to develop a regional investment program that can turn the recommendations from previous technical assistance at the national and regional level into tangible outcomes on the ground.

10. The proposed **Sava and Drina Rivers Corridors Integrated Development Program (SDIP)** supports integrated water cooperation, by investing in infrastructure improvements and complementary measures that take into account the current and expected impact of climate change. Specifically, the project intends to address the climate change-exacerbated risk of floods and droughts, thus increasing the resilience of the targeted areas' economic activities and residents to these threats. Given the basin's transboundary nature, this will be achieved by supporting coordinated development and management of shared water resources across countries in the basin. Broadly, SDIP will invest in the following areas:

- Inland waterway transport: Upgrading of the navigability of the Sava waterway, including—as a pre-requisite—the removal of mines from the Sava's right bank within BiH, and modernization of ports along this corridor to improve market access, reduce transport and logistics costs to/from lagging and leading regions—including supporting climate change mitigation by reducing GHG emissions and local pollutants associated with the transportation of freight—and, in the long run, facilitate improved regional trade across countries;
- Environmental asset management and development: Simultaneously, the engineering design of the underlying navigation infrastructure interventions, such as dredging, river bank protection, and river training works, would be adapted to also protect floodplains and revitalize wetlands. Such multi-purpose interventions would boost sustainable tourism (including eco-tourism), a sector with a large potential for job creation, and enable investments in other sectors such as irrigated agriculture and manufacturing.
- Flood protection: Investments to increase protection against floods as well as social and economic resilience to extreme weather events linked to climate change.

11. Similarly, the coordinated development and management of shared water resources along the Drina corridor will integrate improved reservoir operation, flood and drought management, (eco-)tourism development, agriculture, hydropower, and climate change adaptation. Three ongoing or recently closed complementary operations have supported the preparation of SDIP: (i) the GEF-SCCF<sup>9</sup> financed West Balkans Drina River Basin Management project, launched in 2017, which is developing a Drina strategic action plan, conducting studies (including engineering designs), and financing pilot investments for climate change adaptation that will generate multi-purpose benefits and build resilience; (ii) the Flood Emergency Response Project in Serbia (closed in October 2019); and (iii) an Energy Sector Management Assistance Program (ESMAP)-financed technical assistance project launched in 2018, which will explore investment options for existing and new hydropower development. In addition, lessons and results from these interventions are informing the preparation of some

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<sup>9</sup> Global Environment Facility, Special Climate Change Fund.

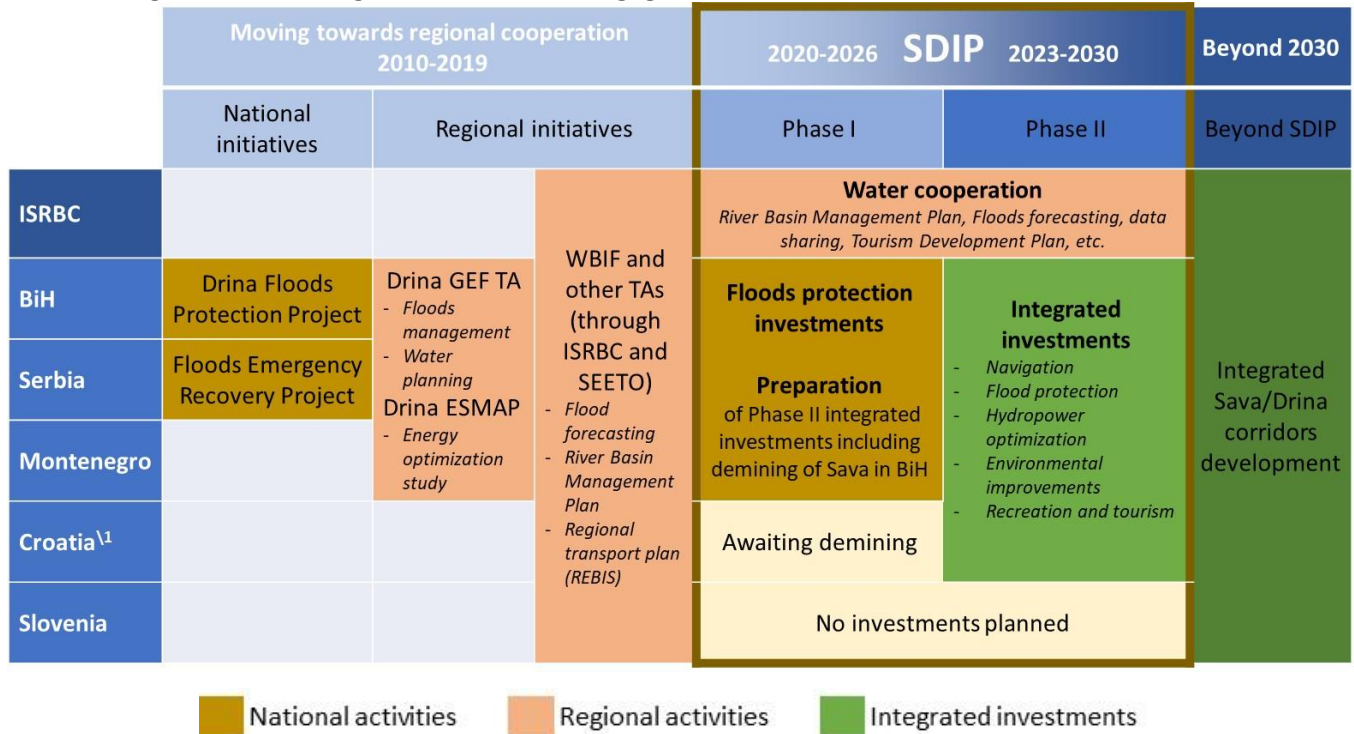




sub-projects under this program. 1 illustrates the positioning of SDIP as a bridge towards a more integrated development approach for the Sava and Drina corridors.

12. The integrated management and development approach envisaged in this program is one that will promote the coordinated and multisectoral planning and utilization of the water and related resources of the Sava and Drina Rivers Corridors in order to maximize economic and social benefits, without compromising the sustainability of these vital natural resources. This will be achieved progressively throughout the program as presented in Figure 1 below.

**Figure 1. Positioning of the SDIP Program in the Bank’s engagement in the Sava and Drina Rivers Corridors**



<sup>1</sup> Demining of the right bank of the Sava river in BiH is expected to take place during Phase I. Since this is a pre-requisite to civil works in the Sava fairway within Croatian and BiH territory on both sides of the border, any such investments in both countries effectively await demining. Croatia’s participation in SDIP as a borrowing beneficiary in support of Croatia-specific activities is subject to confirmation during Phase II preparation.

**C. Proposed Development Objective(s)**

13. The objective of the Project (phase I of the Program) is to **improve flood protection and enable transboundary water cooperation in the Sava and Drina Rivers Corridors.**

**PDO Level Indicators**

14. The impact of project interventions will be tracked through the following key results indicators:



- People protected from 1 in 100-year flood event in the Sava and Drina River Basin under the project (of which female) (Number)
- Areas protected by flood risk mitigation measures under the project (hectares)
- River basin management plan reflecting integrated measures updated and endorsed by countries (Yes/No)
- Integrated decision support system strengthened and operational (Yes/No)

#### D. Project Description

15. Phase I activities have been identified and prepared through ongoing Bank support in the region as well as other initiatives financed by national resources and other financiers. This phase will allow trust-building and learning while financing activities of limited complexity and interdependency. Sub-projects will be implemented at national level and will have cumulative regional benefits. Phase I will also finance the preparation of additional transformational, multi-purpose regional investments to be financed under Phase II.

#### **Component 1: Integrated Management and Development of the Sava River Corridor (USD 98.8 million, of which IBRD is USD 89.9 million and grant financing USD 8.9 million<sup>10</sup>)**

16. This component will finance investments in renovation and upgrading of flood protection infrastructures to address the increasing risk of flooding due to climate change. These activities will reduce the risk and impact of floods, thereby increasing the resilience of the riparian countries to these climate change-related threats. The component will also finance activities needed to enable improved navigation. Requested GEF funding will support the prioritization and preparation of some activities.

17. Sub-component 1.1: **Flood protection and environmental management.** This sub-component will finance construction and rehabilitation of embankments at selected priority areas along the Sava River Corridor as well as nature-based solutions to re-vitalize selected protected areas of ecological significance to the Western Balkans. For example, this sub-component will finance reconstruction of Kolubara dykes that will protect Obrenovac City in Serbia, dykes in Novi Beograd that will protect Belgrade City from flood hazards, and reforestation in Vrbanja, Vrbas and the Sava River basin in BiH, which will mitigate the threat of droughts. Upgraded flood protection capacity (at or above 1 in 100-year event) also enhance climate adaptation capacity of protected areas.

18. Sub-component 1.2<sup>11</sup>: **Waterway Improvements.** Under this sub-component, grant financing will be mobilized to support demining activities along the Sava's right bank within BiH, as a pre-requisite to the execution of civil works—planned for Phase II of the program—to increase the navigational capacity of the Sava river. The preparatory documentation for these Phase II works (engineering designs,

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<sup>10</sup> The program is seeking a Western Balkans Investment Framework (WBIF) investment grant to cover the costs of demining. An application was presented by the Government of Bosnia and Herzegovina in November 2019 and is expected to be confirmed by year-end calendar 2020, but in the current absence of formal commitment this amount is registered as a financing gap.

<sup>11</sup> Sub-component 1.3 Enhancement of port facilities is omitted here as implementation of this sub-component is in Phase II. Preparation of activities within this sub-component will be included under sub-component 3.1 Project Preparation.



environmental and social (ESF) documents, expected climate change impacts on navigability, bidding documents) will also be finalized during the project. The project-supported demining efforts are also an operational pre-requisite to the planned improvements to Sava river ports under Phase II. Demining activities are proposed as a no-regret investment that will help unlock the river's economic potential for generations to come.

19. Demining of the right bank of the Sava river in BiH will be conducted following the Standard Operating Procedures (SOP) for humanitarian demining developed and adopted by the Bosnia and Herzegovina Mine Action Center (BHMIC). These country-specific procedures are based on the principles of the International Mine Action Standards (IMAS) endorsed by the UN Inter-Agency Coordination Group on Mine Action and reflect more than 20 years of demining experience in BiH. They comprise, inter alia, the actions of general surveying, technical surveying, equipment pre-testing and testing, professional supervision of demining operations, systematic surveying, and integrated planning. The BiH State Ministry of Communications and Transport will be the lead implementing agency for demining, with BHMIC participating as technical lead, with the collaboration of the respective Entity level Ministries of Transport and Brčko District Government. The detailed engineering designs for the demining activities and related Environmental and Social Management Plan (ESMP) will be prepared once the grant financing is approved and after the specific demining sites have been identified. The demining civil works will be conducted by one or more experienced contractors to be competitively selected during implementation, in accordance with the World Bank Procurement Framework, with prior Bank approval of the corresponding bidding documents and supporting ESMP. In addition, expert supervision services will be provided for the duration of the works, to ensure SOP and IMAS compliance. Completion of demining of the right bank of the Sava is consistent with the goals of the BiH Council of Ministers Mine Action Strategy 2018-2025, and it will contribute to the attainment of international obligations (including commitment to not laying any new mines) to which BiH is a signatory, most notably the Mine Ban Convention, which BiH ratified in September 1998.

## **Component 2: Integrated Management and Development of the Drina River Corridor (USD 30.7 million all IBRD)**

20. This component will support multipurpose investments along the Drina to reduce the risk and potential impact of floods. It may also support preparatory interventions that will optimize reservoir operation and protect environmental assets of global value to be implemented in Phase II. This component will facilitate the implementation of actions, management measures and investments identified by the Drina Strategic Action Plan being prepared under the ongoing Western Balkans GEF-SCCF Drina River Basin Management Project and investments identified through the ESMAP Integrated Water and Hydropower Development Project. The above measures will contribute to increased resilience of the riparian countries to floods and droughts. Requested GEF funding will support the prioritization and preparation of these activities.

21. Sub-component 2.1: **Flood protection and environmental management.** This sub-component will finance infrastructure works (for example, flood protection in Marcva, Serbia), studies, surveys, consultations and preparation of detailed design of interventions related to the management of environmental assets (the protection of local ecosystems that act as carbon sinks) along the Drina Corridor. The on-going GEF-SCCF-financed Drina River Basin Management project as well as the ESMAP technical assistance, are conducting studies that will identify the additional actions needed for flood protection, bank stabilization, drainage and river training works, and reservoir management in the Drina



Corridor. Upgraded flood protection capacity (at or above 1 in 100-year event) also enhance climate adaptation capacity of protected areas.

**Box 2: Integrated water investment and management:  
the example of the Viennese Danube**

As it flows through the city of Vienna, the Danube River is used for multiple purposes, including cargo navigation, recreation and energy generation. The former floodplain (Donauauen national park) represents a significant environmental asset, though the river also exposes the city to regular flood threats. Over the past 30 years, the institutions engaged in those various activities have developed a unique set of integrated investments to improve navigability while restoring some of the former floodplains; and strengthen flood protection while providing public recreation spaces. The construction of the “Donau Island”, a 21km long island that helps controlling floods, created an enormous green space in the heart of the city, quickly leading to multiple small business and cultural developments and an economic development boost for the left bank of the river.

Similarly, the on-going integrated river reengineering project combines riverbank restoration with side-arm reconnection, and targeted river dredging and riverbed corrections to maximize environmental and navigation benefits. The program of measures is the result of an integrative planning process and is based on the findings of an optimized waterway and traffic management as well as the multi-year conception and pilot project phase of the Integrated River Engineering Project. In order to realize socially and environmentally compatible solutions, the involvement of stakeholders plays an important role alongside the scientific support of the measures. Continuous learning and improvements are core to the success of the project.

Reference: [www.wien.gv.at/umwelt/gewaesser/pdf/donau-hochwasserschutz-2017.pdf](http://www.wien.gv.at/umwelt/gewaesser/pdf/donau-hochwasserschutz-2017.pdf) & [www.viaddonau.org/fileadmin/content/viaddonau/06Unternehmen/Dokumente/FGP\\_Masznahmenkatalog\\_EN\\_small.pdf](http://www.viaddonau.org/fileadmin/content/viaddonau/06Unternehmen/Dokumente/FGP_Masznahmenkatalog_EN_small.pdf)

22. Sub-component 2.2: **Integrated development of Drina watershed.** This sub-component will finance improved watershed management in the Lim and Grncar River basins of Montenegro, as well as works related to flood protection, drainage and irrigation measures within the Lim River Basin (a tributary of the Drina River) to mitigate flood risks and promote sustainable use of natural resources. These measures include: river bank stabilization; river training works; flood protection embankments and dykes. The detailed designs of these investments are under preparation through the ongoing GEF-SCCF project. This sub-component will further finance the preparation of selected priority investments in line with the project development objective.

**Component 3: Project preparation and management (USD 21.2 million, of which IBRD USD 18.4 million, and national budget support USD 2.8 million)**

23. This component will support: 1) preparation of Phase II regional activities; and 2) operational costs, consultancies, non-consultancy services, and goods required for the establishment and operation of the national PIUs.

24. Sub-component 3.1: **Project preparation.** This sub-component will either finance or provide technical support for the preparation of project documentation for Phase II of the program, including environmental and social safeguard assessments.

25. Sub-component 3.2: **Institutional strengthening and project management.** This sub-component will finance activities to increase institutional capacity and inter-sectoral coordination in the participating countries to ensure more efficient decision making and program management.



**Component 4: Regional activities (USD 9.0 million, all grant financing <sup>12</sup>)**

This component will support policy dialogue, consultations, preparation of plans and studies, and investments to strengthen the nexus between water services and connectivity with the regional development and economic cooperation objectives of the Sava and Drina Corridor. This component will promote joint action and decision making in river basin management and flood risk management among riparian countries, thus enhance the climate adaptation capacity of the region. Examples include the Sava River Basin Management Plan and Hydrological assessments, Climate Change Adaptation Strategy for the Sava River Basin, planning and development of tourism in the Sava and Drina Rivers corridors including the designing of Master Plans for Nautical tourism and Ecotourism. River Basin Management Plans and Hydrological assessments will ultimately support integrated water resources management, thereby indirectly increasing the resilience of riparian countries to climate change; requested GEF funding will co-finance measures related to river basin planning and management, flood monitoring network, institutional capacity building, and studies that inform or prepare future investments. This component will also finance the setup and operations of the regional implementation unit.

26. An advocacy and communication plan will be prepared and implemented to promote regional cooperation. Regional studies (i.e., hydrological, sediment, climate changes adaptation, etc.) in the Sava and Drina Rivers Corridors will improve the understanding of the Basin’s unique characteristics and opportunities to boost regional cooperation and integrated management.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

**OP 7.50 Projects on International Waterways**

27. The policy is triggered since some of the proposed activities encompass international waters including the Sava and Drina Rivers. In accordance with OP 7.50, on October 28th, 2019, the International Commission for the Protection of the Danube River (ICPDR) notified riparian states on behalf of the Governments of Bosnia and Herzegovina, Montenegro, and Serbia (Phase I countries) and requested comments no later than November 28th, 2019. By the stated deadline, no comments nor objections were received from any of the riparian states. To conclude this process, a memorandum to the Regional Vice President summarizing the results of the Riparian Notification has been submitted by the World Bank task team prior to negotiations. The Project is not expected to cause appreciable harm to any of the riparian

<sup>12</sup> The program is seeking grant funding from the Global Environmental Facility (GEF) to cover the costs for the regional activities. An application is being prepared in consultation with GEF Secretariat and the countries, to be submitted early 2020 and confirmation from the GEF Council expected by June 2020, but in the current absence of commitment this amount is registered as a financing gap.



states through water deprivation, pollution or otherwise. Neither is it anticipated that the implementation of the Project activities will adversely change the overall quantity or quality of water flowing to or from any of the riparian states of the concerned international waterways.

28. The Project is rated with an overall High Risk for both Environment and Social. The World Bank ESF and all Environmental and Social Standards (ESS) will be applied.

### **Environment**

29. Although there are no high-risk activities identified for the first phase, considering the geographic and sectoral width of the project, as well as the associated Borrower capacity and number of institutions involved across the countries, the environmental risk remains high. The specific activities including civil works related to water training works, dredging and flood protection, may contain significant environmental risks and impacts including impacts to the watercourse, management of excavated and dredged materials and solid waste generated, generation of dust, noise and air pollution and possible impacts on the flora and fauna of the waterway and adjacent areas; the planning and strategic documents including River Basin Management Plans need to be coupled with SESAs and sectoral ESIA's in order to adequately identify all of the underlying environmental and social risks. All of the documentation, plans, programs and studies developed to feed into the future phases will consider all of the relevant environmental and social issues not only from impact perspective but from a project design perspective as well.

30. Based on the Bank's Environmental and Social Framework, the Borrower has developed an Environment and Social Management Framework (ESMF) for each participating country (Serbia, Bosnia and Herzegovina and Montenegro for the first phase), which will serve to screen every sub-project for potential social and environmental impacts and then develop specific mitigation plans as needed. All of the subsequent ESIA's or ESMPs will be developed fully in accordance with the provisions of the World Bank ESF and all of the Environmental and Social Standards (ESS). The plans will be site and sub-project specific and will cover the most likely impacts described above. Along with the ESMF, site specific Environmental and Social Management Plans have been prepared, disclosed and consulted for two locations: riverbank training in Popova Bara and construction of a flood protection warehouse in Surcin (Serbia). Overall, all three ESMFs provide guidance for high risk activities based on the World Bank ESF, while for activities of substantial and moderate risk the due diligence is to be prepared following the legislation of relevant country and expanded to include the requirements of the World Bank ESF.

31. The proposed demining activities to be carried out on the river Sava right bank in BiH will be conducted in close alignment with the country's well-established framework and long experience, as described in section B Project Components. Under the project's ESMF, Terms of Reference for a specific ESMP covering the demining activities were prepared as part of the due diligence package that includes the World Bank ESF requirements, BHMAC's Standard Operating Procedures for Humanitarian Demining (SOP), and the principles of the UN-endorsed International Mine Action Standards (IMAS). The ESMP will be prepared and approved prior to the commencement of demining activities.

### **Social**

32. **Involuntary Resettlement.** Given that many sub projects are not fully prepared, Resettlement Policy Frameworks have been developed for each country. Since the WB has substantial experience working across these countries on regional programs, the instrument builds on existing frameworks and where feasible, will continue to be implemented by the agencies who have this experience. Where specific investments have been



identified and prepared, Resettlement Plans have been developed. The institutional arrangements for approvals and implementation have been laid out in the Frameworks, along with identified capacity and policy gaps, entitlement matrix and M & E arrangements.

33. Out of the sub-projects already identified for Phase I, only two in Serbia will have land acquisition impacts, and for these two Resettlement Action Plans (RAP) have been developed. The RAP for the small village of Popovo Bara, located on the river, is linked to the rehabilitation of the left bank of the Sava River. This sub-project entails only minor land acquisition, with relocation of structures and loss of perennial or annual crops, but no physical relocation. There is a total of 20 land parcels and Project Affected Persons (PAPs), all of whom are partially affected.

34. The sub-project “Jarak” is for construction works for the rehabilitation of the left bank of the Sava River to prevent further erosion of the left bank. There is a total of 8 land parcels in Jarak (all publicly owned) and 4 in Hrtkovi (3 of which are publicly owned). Only one private land parcel, of 3,099 m<sup>2</sup>, will be permanently acquired while another of 167 m<sup>2</sup> will be temporarily required; both parcels are owned by the same owner and are not used for agriculture. Overall there will be minor land acquisition impacts and no physical relocation.

35. The demining component of the SDIP will follow not only the requirements of the ESF but will also integrate the BHM Standard Operating Procedures for Humanitarian Demining (SOP) and the principles of the UN-endorsed International Mine Action Standards (IMAS). This set of broad standards addresses all issues related to mining, including worker safety, community safety and OHS.

36. Project activities such as rehabilitation of the existing ports, reconstruction of embankments and dykes; river bed and reservoir dredging; various forms of river training etc. will impact both direct and contracted workers and, in some cases, primary supply workers who will be expected to comply with ESS2 requirements. Community flood protection may involve some community labor. Labor Management Procedures have been developed for Serbia, BiH and Montenegro which details how compliance will be done, by whom and under what laws in each country. It details requirements for contractors and others as well as any gaps between ESS2 and national law. While small-scale works, like small embankments, the locally based and/or community labor may be used, the large-scale civil works may involve an influx of labor and construction of labor camps. These will adhere to the standards of the framework: wage, protective gear, working hours, benefits etc. These countries also have a lot of in migration and refugees, so the rights of such persons are clarified in terms of job opportunities and benefits. Occupational Health and Safety (OHS)/ Community Health and Safety (CHS) aspects and contractor Grievance Redress mechanism (GRM) will be included in relevant contracts in all activities. The labor management plans (LMPs) also establish a separate grievance system, including provision for GBV mitigation as relevant.



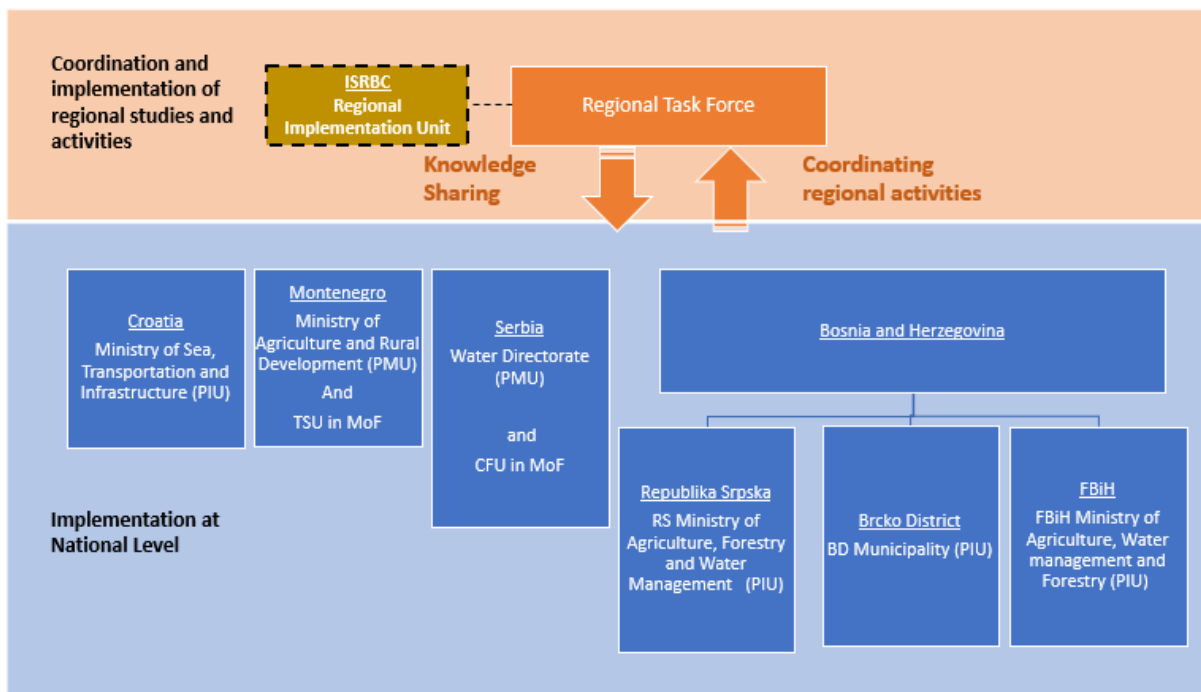
### E. Implementation

#### Institutional and Implementation Arrangements

37. SDIP will be implemented by participating countries in a coordinated manner through two levels of coordination at regional and national levels. At the regional level, a regional task force consisting of the members of the existing ISRBC bodies and senior officials from key sectors such as water, transport, energy, and tourism will facilitate dialogue and cooperation in the region<sup>13</sup>. This task force will also provide strategic oversight and guidance for the implementation of regional activities in addition to national subprojects, ensuring stronger dialogue, integration and knowledge sharing. During implementation, other sectors will be engaged as and when the need arises.

38. A new regional implementation unit will be housed within ISRBC to implement regional technical assistance under component 4. Regional activities will be financed exclusively from grant funds to be mobilized from different sources, including WBIF and GEF. A Memorandum of Understanding (MoU) will be signed between the countries and the ISRBC to specify the respective commitments to implement the project in a coordinated fashion.

Figure 2. Institutional and Implementation Arrangements<sup>14</sup>



39. At the national level, implementation will be undertaken by project implementation units within line ministries of each country. PIUs/PMUs comprising of the required technical and managerial expertise to support project implementation will be established or strengthened. In Bosnia and Herzegovina, BiH Ministry of Foreign Trade and Economic Relations and BiH Ministry of Transport and Communication as ISRBC bodies will be engaged and informed on the implementation of regional activities. In Republika Srpska, the existing PIU within RS Ministry of Agriculture, Forestry and Water Management will implement the project, and technical support will be provided from Ministry of Transport and Communications, Ministry of Spatial Planning, Construction and Ecology, Water Agency and other





relevant institutions. In Serbia, a new PMU will be established within the Directorate for Water Management of the Ministry of Agriculture, Forestry and Water Management. In Montenegro, a new PMU will be established within the Ministry of Agriculture and Rural Development.

40. Each PIU/PMU will be responsible for the implementation of the assigned national project activities under components 1 and 2, carry out procurement and supervision/monitoring of contracts, maintain effective internal control procedures, account for expenditures in their existing budgetary accounting systems, receive funds, make payments and provide the documentation and information related to use of the loan/grant proceeds, statement of expenditures (SOE) documentation of the eligible expenditures, project reporting and monitoring. The new PMUs in Serbia and Montenegro will have the overall responsibility for implementing the project while the fiduciary responsibilities, including financial management and procurement, will be being undertaken by the CFU and TSU in the respective Ministries of Finance.

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<sup>13</sup> The existing bodies, formed under the framework of or coordinated by ISRBC, will help facilitate/coordinate regional activities that are already under ISRBC's regional coordination mandate.

<sup>14</sup> This figure illustrates the implementation arrangements for the MPA program. Some of the PIUs/PMUs may not be present during phase I of the program.



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