

PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC935

Project Name	West Balkans Drina River Basin Management (P145048)
Region	EUROPE AND CENTRAL ASIA
Country	Bosnia-Herzegovina (BiH), Serbia, Montenegro
Sector(s)	General water, sanitation and flood protection sector (100%)
Theme(s)	Other environment and natural resources management (100%)
Project ID	P145048
Borrower(s)	Governments of BiH, Serbia, Montenegro
Implementing Agency	BiH - Federation BiH: Ministry of Agriculture, Forestry and Water Management; Republic of Srpska: Ministry of Agriculture, Water Management and Forestry Serbia: Ministry of Agriculture, Forestry and Water Management Montenegro: Ministry of Agriculture and Rural Development
Environmental Category	B-Partial Assessment
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I. Introduction and Context

Country Context

1. The Drina River, 346 km in length, is the largest tributary of the Sava River, which in turn is the largest tributary of the Danube. Originating in the snowy Dinaric Alps in Montenegro at an altitude of 2,500 meters, it drains a vast karst plateau which receives the highest annual rainfall in Europe (up to 3,000 mm), resulting in the highest specific runoff in Europe (up to 50 l/s/km²). The river is notorious for its extreme high as well as low flows, with part of the baseflow due to snowmelt. The extremes are exacerbated by non-harmonized operation of eight hydropower plants. The Drina basin is in addition considered the part of the Danube basin that is most sensitive to climate variability. Formed by the confluence of the Tara and Piva rivers, both of which rise in Montenegro and converge on the border with Bosnia-Herzegovina (BiH), the lower Drina forms the border between BiH and Serbia over a length of 220 km, before emptying into the Sava river in northeastern BiH. Upstream, the river is hemmed in by in deep valleys and steep banks; in its lower reaches, in the plains of the Sava River, it meanders and flows along several channels often changing course.

2. The Drina River Basin (DRB), about half the size of Switzerland, is home to almost one million people, with most settlements concentrated along the Drina River and its major tributaries Piva, Lim, Cehotina and Tara. The Basin is equally shared among the three riparian countries and they have strong social and economic interests in the basin. In Montenegro, it covers 45% of the country's territory and comprises 25% of the total population. In BiH, it covers 14% of the country's territory; however, it is of

much importance to the Entity Republika Srpska (RS) as it covers over 25% of the Entity's territory (and less in the Entity Federation of Bosnia-Herzegovina [FBiH]). In the case of Serbia, it covers 7.7% of the country's surface, but the country is heavily dependent on hydropower generated across the basin.

3. GDP per capita (2011) ranges from US\$4,372 in BiH to US\$6,927 in Montenegro, with Serbia at US\$5,759. However, these national averages are misleading, particularly in the case of Montenegro. The economy of many communities in the Drina Basin tends to be depressed due to difficult transportation links, comparatively long distances to markets, and the perilous state of many of the old local industries and infrastructure. The downstream municipality of Bijeljina (in RS) is the richer part of the DRB as it has a prospering agricultural, industrial and service-based economy, thanks to its proximity to Serbia and Croatia.

4. Yet, the DRB is rich in endowments of natural resources and in development potential, compared to other parts in the Balkans. It has significant hydropower generation potential: the DRB hosts eight medium to large hydropower generation dams, but an estimated 60 % of the potential for hydropower generation is still untapped. The DRB also has abundant tourism opportunities and biodiversity, characterized by several scarce and endemic species. Many forests in the upper Drina basin are home to animal species that are endangered in other parts of Europe. The river water, of generally good quality due to its high flow rate and low pollution, is still rich in fish—both farm-raised and wild. Angling and hunting for sport have become important commercial activities. A number of natural parks and protected areas are spread throughout the basin and the landscape is dotted with unique glacial lakes and canyons. The Tara Canyon, a UNESCO World Heritage site, is located in Montenegro. Being one of the last “untouched” river basins in Europe, its pristine landscape has considerable scenic value which could make tourism and recreation significant sources of income for the rural communities. The protected nature areas—mostly forests and meadows upstream, and some wetlands—also depend on adequate water provision at very local scale, and are now increasingly threatened by a dominating development desire as well as pollution and two decades of failing river maintenance.

5. The Drina and its tributaries are historically known for recurrent floods, but studies show that the Balkans also have the greatest sensitivity to future climate and precipitation change in Europe. The December 2010 flood caused devastation in the middle reach (in and around the town of Gorazde in FBiH, and in Montenegrin towns) and in the lower reach (in Serbia, and in Bijeljina in RS). It represented a one-in-80-years flood that is argued to have been caused by high precipitation, early snowmelt and by non-synchronized operation of the large upstream Mratinje hydropower facility, in Montenegro. In February 2013 a flood of similar magnitude could narrowly be averted. The IPCC forecasts and World Bank and EU climatic change studies on the Balkans suggest that the Drina basin is particularly at risk of climate variation and change, with notably drier and warmer summers, more intensive precipitation events outside the summer, as well as more erratic snow formation and melting. Thus, it is likely that in the mid-term future (in 10-20 years) the occurrence of drought and flood conditions will increase, both in frequency and in extent. In short, the basin is not yet capable of capturing the opportunities for sustainable development while facing growing risks from local pollution, loss of habitat and fisheries, from intensive and conflicting uses of surface and groundwater, and, in general, weak readiness to adapt to climatic fluctuations.

6. While many development opportunities have obvious national and regional significance, such as for hydropower, the waters of the Drina and its tributaries also are strongly connected to local economies and livelihoods. Several locations in the DRB report insecure water supply due to fluctuating groundwater tables affected by reservoir operation, a highly unstable river morphology, and high incidence of local floods by the main rivers and by mountain torrents. Local pollution and eutrophication of mountain lakes and reservoirs used for water supply cause daily damage to water provision, agriculture, tourism and biodiversity. The strong river currents and torrents are reported in several places

to rapidly erode river beds and mountain slopes, and undercut embankments endangering housing, infrastructure and arable land. Municipalities and local communities have become more vocal in stressing the urgency to lay out an investment agenda that better responds to local needs and opportunities

Sectoral and Institutional Context

7. While the Basin holds major potential for economic development and enhanced environmental goals, this potential largely remains locked in. Although many development opportunities appeal to national interests and authority, such as for hydropower, their externalities and trade-offs at local and regional scales have been not yet quantified. The lack of confidence and operational grip on water management has been holding back the individual countries to take initiative to address key questions about prioritization of investments, and ensuring fair sharing of benefits and of risks. Similarly, the countries struggle with the operationalization of the concept of integrated water resources management (IWRM) in an environment of severe financial constraints, and are seeking advice from other partners. For hydropower, the partial deregulation of the energy sector has given rise to numerous private parties seeking investment concessions, however, this development is on hold pending broader agreement on a sustainable basin management concept that notably incorporates measures and plans to adapt to climate change. The three countries are facing difficulties in specifying more appropriate conditions for the hydropower operation concessions that will need to be renewed in 2014-2016. A regional, international water management arrangement would help open up better informed and more integrated decision-making, avoiding piece-meal or suboptimal decisions.

8. Critical hydrometeorological data is missing. Without a more robust and reliable network for collection of such data, it will remain impossible to assess longer-term climate change impacts, improve forecasting, or take decisions on sustainable investments. The Basin lied in the middle of the armed conflict zone in the Balkans in the 90s. Especially the hydromet infrastructure in BiH has suffered and needs rebuilding, while the equipment for hydromet observation is least developed in Montenegro. While on one hand any development plan for investment in infrastructure and climate resilience will need to be founded on reliable hydrological data for surface and groundwater, also the issuance and compliance monitoring of concessions, and the operational management are requiring much better flow measurement under drought and flood conditions. Moreover, with the basin being particularly sensitive to climate change and floods, more reliable forecasting and models are essential. The Republican Hydrometeorology Services of Serbia are arguably the best funded and equipped.

9. The 2002 and 2010 floods and recent prolonged droughts have highlighted the region's vulnerability and its lack of preparedness. With the Drina being one of the few rivers that depend heavily on snowmelt for its baseflow, temperature fluctuation matter. While the impact of climate change on the overall magnitude, duration and frequency of floods and droughts cannot be forecasted with precision, evidence exists that extreme wet and dry episodes have increased in recent years in frequency and in amplitude across the basin. Therefore, as the future economic and social policies of the countries will depend on sustainable water management, these policies will need to be calibrated against the best available forecasts for climate variability to ensure optimal climate change adaptation. At the same time, the likelihood that hydropower generation in the DRB will increase suggests that the basin can also play a much more important role in climate change mitigation. The hydropower would generate much-needed energy and supplement or replace generally old coal-fired power stations; it would help the region meet EU targets for CO₂-reduction. Policies in the future will need to address more properly the trade-off between the environmental interest in protecting terrestrial and aquatic biodiversity—which may argue against HP--and that in climate change mitigation—which would argue in favor of HP.

10. Hydropower (HP) is dominating Drina water management. Currently, eight HP plants are operating in the DRB, with a medium-sized ninth plant (Buk Bijela) and several mini- to medium-hydro plants in preparation. Almost all existing plants are operated by the Electric Power Enterprise of Serbia (EPS), as owner of six and with most of the remainder under concession (partly up to 2016). However, the hydropower facilities (their reservoirs and operational schedules) were not designed for concurrent flood mitigation, and the comparatively small volumes they can retain also limit such role. However, their operation rules are not constrained in the existing Concession conditions, and water releases do not take into account flood risks downstream. These facilities are still mostly operated on an individual basis, and much scope exists for increasing their overall utility for the basin by improving their operations and identify, and address, trade-offs. The DRB still holds the largest unutilized hydropower potential in Europe estimated to represent an additional 12,000 GWh per year.

11. The DRB is also impacted by other anthropogenic pressures of more local nature. Poor land management and zoning have resulted in significant soil erosion on slopes and along the river banks. This has compromised water retention capacity of the land and caused an increase in surface run off. In many locations, communities suffer from the large fluctuations in reservoir levels and dam water releases. The disposal of untreated sewage and nutrients into the rivers has resulted in hotspots of point and non-point pollution along the river. In particular, many natural lakes and reservoirs are sensitive to increasing temperatures that trigger algal blooms, threatening water supplies, fisheries and biodiversity and tourism. It is reported that the higher incidence of heavy rain episodes over the past decades has increased erosion rates and discharge of sediments into torrent and the main Dina river. The sediment tends to get deposited in slower moving sections of the river as well as in the eight reservoirs. These deposits are increasing the local flood risks, but also reduce the active storage capacity of the reservoirs, further reducing their capability to manage river flow fluctuations. The lower Drina that meanders in a broad floodplain (delta) is notoriously hard to control, and is nowadays causing almost annual floods.

12. The above demonstrates the prominent trade-offs between the different sectoral water uses and development options that need to be addressed in a basin strategy. It also demonstrates that only cooperative, international basin-wide management plans can capture economies of scale, synergies and win-win solutions, provided the countries will base their decision-making on IWRM principles and on sound forecasting. The riparian countries are very aware of the need to achieve better informed decision-making, driven by robust studies, more extensive and formalized cross-border coordination, and better institutional capacity for river basin management. Preparatory work (see further) has allowed to identify priority investments and capacity development that would lay the foundation for more robust work in the future and help develop more robust development and management plans that are of both local and basin-wide significance.

13. The Drina basin is exemplary for a basin with large stakes and risks, whose sustainable development strongly depends on regional cooperation. The cooperation on water management is improving, albeit slowly, and the proposed GEF project would add major value by further facilitating the cross-border dialogues, building institutional capacity, and demonstrating the value and feasibility of focused investments. The three countries are now members of the International Commission for the Protection of the Danube River (ICPDR) and participate in the International Sava River Commission. Both Commissions have prepared the EU-compliant “roof” River Basin Management Plans (RBMPs) for the Danube and the Sava in 2007 and 2013, respectively. However, these Plans are of a more general nature, and call for further detailed management planning for the Drina basin. In line with the EU WFD, they concentrate heavily on water quality management, the good status of water bodies, and wastewater treatment strategies, while under-reporting on investments and measures that relate to the river morphological changes, water quantity management and trade-offs—key challenges for the Drina basin. Still, the Sava and Danube plans would provide useful frameworks and parameters within which the basin

plan of the DRB is to be prepared.

14. In close partnership with the three countries and the International Sava River Commission, the World Bank supported a regional policy dialogue and strategic and sector analyses in 2011-2013. These studies analyzed the trade-offs between management scenarios of the basin (between the three countries, between the sectors, and between upstream and downstream interests), and assessed their strengths and weaknesses. The studies also assessed the basin's vulnerability to climate change and possible adaptation options. The studies inventoried and assessed existing preliminary proposals for investments, and for strategic policy decisions. This facilitated a first, general prioritization of feasible investments and capacity building interventions that are able to respond to urgent demands and that are financially realistic. In addition, these activities would help devise an adaptive programmatic approach to balance different interests, building confidence in cooperation, and preparing the ground for future, deeper cooperation on technically and politically more complex investments and decisions.

15. The Rapid Transboundary Diagnostic Scan and Analysis (TDA) includes a preliminary baseline assessment of the Basin, analyzes its key strengths and weaknesses and identifies areas and opportunities for investments for the three countries. It concludes that flood and drought risk management should not be approached in isolation from the other water management issues. It provides a quick diagnostic analysis of key issues, notably water use, hydropower management, flood management, protection of water resources, sediment management, bank erosion and climate change.

16. The TDA concludes that the following sets of interventions need to be prepared:

- a. capacity development and institutional strengthening for the international water management using IWRM principles, and to prepare climate change resilience;
- b. urgently required immediate investments, mostly to protect against frequent floods;
- c. regional studies, dialogue with stakeholders, and embedding of principles of IWRM and climate change adaptation to inform decision-makers of medium- and long-term strategic investments and management decisions; and, thereafter
- d. preparation for, and investment in these medium- and long-term investments.

17. The Drina Program has given rise to several initiatives in the basin. Urgently required immediate investments have been identified and are being prepared under the aegis of the regional Drina dialogue. The Priority Flood Protection Project for BiH (along the left-bank of the Lower Drina in Bijeljina [in RS], and in the Gorazde Canton [in FBiH]) is being prepared as a US\$27 million IDA investment to provide high-priority no-regret flood protection measures against nearly annual Lower Drina floods. In Serbia, the new proposed Irrigation and Drainage II Project, in preparation, will include the flood protection works along the Lower Drina right bank which will mirror the protection works on the other side in BiH. Both countries are cooperating closely on these works.

18. With the same programmatic objectives, European Union IPA funds will be used to generate basic data related to flood management in lower Drina parts of the basin (Serbia and BiH), by Digital Terrain Mapping, and preparation of Flood Risk Maps. Also, Montenegro, Serbia and BiH have requested assistance to develop pilots to increase climate change resilience in steeper terrains (Upper and Middle Drina), through better control of erosion and flooding, and groundwater recharge (drought mitigation), at local levels by managing the system of torrents, lakes and wetlands in a more integrated way. Preliminary designs have been prepared.

19. As part of the Drina program, the EU West Balkan Investment Facility (WBIF) has agreed to fund (€1.2 M) the joint study of the three countries on the regional technical study for a Drina Basin Investment Prioritization Framework (2014-2015). The Framework will focus on identifying, in broad

terms, the medium- and longer-term investment opportunities, with the aim to set the stage for preparing a sustainable development roadmap able to unlock the investment dialogue among the countries and seek feasible solutions that are fully based on IWRM. Given the likely complexity of the issues, and the need for intensive consultations, this study will require more specific follow-up after 2015, at the time when the proposed SCCF Project would become operational.

20. Finally, at the institutional level, the three countries are currently seeking to: (i) establish effective arrangements for developing inter-ministerial committees at the national level as well as bilateral and trilateral commissions (technical commissions to jointly identify key basin/ water resources issues and address these as well as political commission(s) for higher level support and regional policies), and (ii) continue to cooperate in the international Danube and Sava Commissions. The three countries have requested that the Bank partner with them and assist in this program.

21. Hence, one can consider that the GEF support at this stage of regional development and political concurrence would be particularly influential and add special value as the countries are politically stepping up to the challenge and have requested a partnership with the Bank to describe, analyze and address these complexities at policy and operational levels, help convene the interested parties, and leverage the funds. See Table 2 for co-financed/parallel activities related to the proposed project.

Relationship to CAS and GEF Strategy

22. In accordance with the Work Program approved by GEF Council in November 2013, the GEF committed US\$ 4.37 million in project funding, to be furnished from the GEF International Waters (IW) focal area. With this Work Program approval as well as the PCN review meeting held in August 2013 to review the GEF-funded project, the project activities to be financed with GEF IW funding were cleared for further preparation.

23. The SCCF subsequently expressed interest to furnish an additional US\$4.37 million in funding, in accordance with the criteria for SCCF eligibility, in order to further advance the objectives of the project.

24. Both the SCCF and the GEF IW support will be integrated into one project. Henceforth, the project will be referred to as the SCCF-GEF project. This Proposal identifies which parts will be financed by SCCF and by GEF, in line with the respective eligibility criteria of each fund.

25. The project would help meet objectives related to climate change adaptation (but also to climate change mitigation) and climate change resilience, through the financing of, and the building of capacity for, interventions to prevent and deal with climate change-related disasters notably floods and droughts, and, thus, meet the short- and long-term objectives of the GEF Strategy on Adaptation to Climate Change, Special Climate Change Fund (SCCF).

26. The Project is consistent with the strategic goal of the GEF5-International Waters Focal Area (IW), namely the promotion of collective management for transboundary water systems and subsequent implementation of the range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services (GEF International Waters Strategic Objective 3). The project will also draw upon the international experiences under GEF IW:Learn and specifically the lessons acquired in the region from the on-going GEF Neretva-Trebsinjica Management Project in BiH and Croatia (2009-2014).

27. BiH's Second National Communication (SNC) on Climate Change (October 2013) identified

seven priority sectors for the Adaptation Strategy; of these, water resources (and hydropower) and agriculture are regarded as the major priorities, as they are impacting to a greater or lesser extent upon all other sectors. Other priorities are tourism, and biodiversity and sensitive ecosystems. The main measures proposed in the SNC comprise capacity building and the strengthening of the institutional and regulatory frameworks. The Initial National Communication of Montenegro to UNFCCC (May 2010) states that climate change will strongly affect the national water resources of Montenegro because the overall reduction of annual precipitation would result in the reduction of reliability of their exploitation. The report recognizes the weak water management in Montenegro, and therefore the vulnerability of the environment, economy and societal interests. The 2012 EC progress report for Montenegro concludes that “Monitoring networks and water management plans are at an early stage of development...” Serbia’s Initial National Communication (November 2010) on Climate Change reports that on average the local runoff will be reduced significantly, suggesting the country will be facing more flood risks along the main Drina river (with “imported” water), as well as more drought events along the Serbian tributaries. The Communication does not yet identify adaptation measures, citing the lack of available data and information about vulnerability and adaptation; a National Adaptation Plan is considered a priority. The Project will also seek connection with similar work on the Sava river undertaken under the UN Economic Commission for Europe (UNECE), that aims to address primarily the institutional transboundary management of floods under different scenarios.

28. In Bosnia-Herzegovina, the project is in line with the key recommendations under the new World Bank Country Partnership Strategy (CPS) FY2012-FY2015. The objectives are to promote: (i) competitiveness; (ii) social inclusion; and (iii) environmental sustainability to help ensure the sustainable use of natural resources, such as water, within the framework of climate change impacts. One of the CPS outcomes is “...better flood preparedness and management along the Drina river basin” which the government recognizes as critical not only to protect the lives and livelihoods of people in the basin but also to protect the overall health of this unique ecosystem.

29. In Montenegro, the CPS for FY2011-2014 calls for “Improving Environmental Management and Reducing the Cost of Environmental Problems”. It specifically identifies the occurrence of floods as a significant natural disaster in the country and underscores the need for flood management and protection, especially with more frequent and widespread floods expected under conditions of predicted climatic shifts. The proposed project will also contribute to the CPS outcome of enhanced cross-border energy trade and more regular energy supply within Montenegro.

30. The project is in line with Serbia’s CPS for FY2012-2015 which seeks, among other things, to assist the country with meeting its obligations as an EU candidate country. While not a pillar of the CPS, the strategy emphasizes environmental sustainability as critical for Serbia’s development and seeks to support projects that would help to advance Serbia’s environmental agenda. One of the outcomes in the results matrix of the CPS is “improved water resources management and strengthened water resources management institutions and policies. It calls for investments in flood defense infrastructure and drought resilient interventions.

II. Proposed Development Objective(s)

Proposed Global Environmental Objective(s) (From PCN)

31. The objective of the project is to support capacity building, studies and investments to strengthen the capacity of the governments of BiH, Serbia and Montenegro to plan and implement integrated, cooperative international management of the river basin and address climate change adaptation in the Drina river basin.

Key Results

32. The proposed PDO-level results indicators are (i) enhanced multi-state cooperation to balance conflicting water uses in transboundary Drina waters; while mainstreaming climate adaptation measures in policy and planning frameworks; (ii) a shared vision and technical cooperation frameworks agreed with sustainable financing identified, including a strategic action plan for more sustainable and balanced investments, including identified investments that will be the subject of the GEF Drina follow-up project (2nd phase); and (iii) enhanced capacity for joint ecosystem-based management of Drina River Basin and for adaptation to climate-induced economic losses.

III. Preliminary Description

Concept Description

33. The following activities would be implemented under the project subject to confirmation and amendment during project preparation. The total Project cost is estimated at approximately US\$11 million, of which US\$ 4.37 million would be funded by the SCCF, US\$ 4.37 million by GEF and US\$2.0 million by the project countries. (Table 1 describes the distribution of activities over the funding sources: SCCF, GEF IW, and counterpart contribution).

Component 1: Multi-state Cooperation on International Drina Management (SCCF \$0.45 million; GEF IW: US\$2.60 million).

34. *Sub-component 1A: Development of an agreed Strategic Action Program (SAP) mainstreaming transboundary IWRM and climate change adaptation in national planning. [Funded jointly by SCCF and GEF]* This component would provide more effective planning tools to the riparian countries for enhanced decision making in integrated DRB management, to identify trade-offs, and to put in place appropriate policies and reforms, applying IWRM principles and developing climate-change adaptation. Towards this, the project will support:

(i) Preparation of a Drina Basin Strategic Action Program (SAP)—comprising three “national” chapters and a “roof” report—as part of, and complement to a Drina River Basin Management Plan, that would identify a prioritized list of short-, medium- and long-term measures and a pipeline of investments for integrated, sustainable management of DRB which would also help leverage additional donor support for the implementation of the investments. This SAP will build on the output from the WBIF-funded Priority Investment Study (2014-2015). The SAP will be compatible with the Sava and Danube River Basin Management Plans. (BiH, Serbia, Montenegro, Regional)

(ii) Establishment and operation of a suitable, jointly endorsed hydrological real-time and simulation model combined with a climate change impact module. The model would notably support capacity for modeling various hydropower development, flood and drought, and land use scenarios. The hydraulic model would include reservoir operation optimization, environmental flow, and sediment transport control. The hydraulic model would provide knowledge about the present as well as future water uses, considering not only the nexus between hydropower generation and environmental protection but also the potential for flood mitigation measures along the Drina and its main tributaries. The model would require purchase of incremental equipment (automated flow /level gauges) for low- and high-flow conditions, flow rate – level rating curve determination, and calibration. The model would be a commercially available and updatable one-dimensional package which would be compatible with similar models applied in the region and by the International Sava River Commission. The three countries and the International Sava River Commission would receive facilities and training to operate the model;

protocols for standardization, and for regular updating and maintenance will be agreed. (BiH, Serbia, Montenegro, Regional)

(iii) Extension of the hydraulic simulation facility to include development of modern data-base systems compatible with EU and WMO protocols to allow forecasting and estimate climate change impact; and to include localized assessment of sediment transport along the tributaries and main stem of the Drina, with capacity to assist planning of sediment management and erosion control infrastructure and management.

(iv) Support for a water resources and basin study to define the basin and water resources parameters to inform regional strategies for energy and hydropower development and rationalization. The study will propose measures and constraints that will allow to determine the levels of sustainability and realism of various hydropower proposals, including compensatory measures and design adaptations to address trade-offs and negative externalities. The study will specifically take into account the need for IWRM-based decision-making, and the need to define operational guidance for climate change adaptation. (BiH, Serbia, Montenegro, Regional)

(v) Analysis of the water resources and basin system, to allow specification of parameters and protocols to inform the design and concession arrangements for reservoirs and hydropower facilities across the basin. (BiH, Serbia, Montenegro, Regional)

35. *Sub-component 1B: Institutional Development and Capacity Building.* This component will support the establishment of regional- and national-level institutions for joint management of the DRB and for enhanced capacity for action on transboundary concerns and to develop climate change adaptive management frameworks, at bilateral, trilateral and International Sava River Commission levels. [Funded jointly by SCCF and GEF]

(i) Establishment of a Project-based Drina Task Force responsible for daily management of regional activities leading towards the preparation of an integrated Drina River Basin Management Plan and prioritization of investment projects under the SAP (see Sub-Component 1A) in close cooperation with the International Sava River Commission. (BiH, Serbia, Montenegro, Regional)

(ii) At national level, inter-ministerial committees would be set up, and capacity developed, to facilitate the development of better integrated sectoral plans to balance conflicting water uses and that would feed into the regional-level strategy. (BiH, Serbia, Montenegro)

(iii) Help prepare appropriate national and local policy and regulatory reforms to conform to the international Drina water management. (BiH, Serbia, Montenegro)

Component 2: Pilot investments for Integrated Basin Management and Climate Change Resilience and Flood and Drought Management (SCCF US\$3.70 million; GEF IW: US\$1.55 million).

36. *Sub-component 2A: Strengthening capacity for climate change resilience.* For the Drina, climate change adaptation primarily implies preparing better for the threats from flood and drought, while making optimal use of the environmental assets of the basin. In addition, reliable and long-term time series of observations are essential for climate change analysis and forecasts, determination of minimum environmental flows, compliance monitoring of HPP concessions, etc. The project will support the following activities:

(i) Strengthening the FBIH and RS (in BiH), and the Montenegro, Hydrometeorological Services with equipment, i.a., to rehabilitate, modernize and complete the hydro- and meteorological measuring system in the BiH and Montenegro parts of the basin (in BiH, stations that have been damaged by the war), with the aims to (a) ensure reliable and continuous time series of observations under low-and high-flow regimes in the Drina and main tributaries; (b) apply mathematical statistical models to reconstitute missing data (of the 90s and 2000s); (c) upgrade existing equipment and protocols to meet ISO 9001 as well as the recent EU-mandated Inspire Meta-data requirements with catalogue of geo-referenced data, and the World Meteorological Organization's V1.2 protocol; and (d) strengthen capacity to forecast snowmelt and glacier behavior. For BiH this would encompass reconstruction, on the Drina and 8 sub-rivers, of 8 Automatic Meteorological Stations and 12 Automatic Hydrological Gauges with remote communication and data transmission, and 4 mobile Doppler systems. (BiH, Montenegro)[activity funded solely by SCCF]

(ii) Develop protocols to improve data compatibility among the three countries, within the seat of the Hydrometeorological Standing Committee of the International Sava River Commission (Regional). [activity funded solely by GEF IW]

(iii) Public Awareness. The project will support a broad public awareness program to inform the population in the basin of the objectives and activities under the proposed project and its rationale and potential benefits, and to engage the basin communities into more active partnership. The Sub-component will finance (i) information activities by the respective governments as well as under the leadership of the International Sava River Commission; (ii) a sixth-monthly publication "Our Drina"; and will provide incremental fund for school and community initiatives in this regard (see further).. The public awareness activity will be undertaken by the Project Implementation Teams (PITs) described below. [activity jointly by SCCF and GEF IW]

(iv) Small Grants Program. Replicating the excellent experience in the GEF Neretva-Trebinjica Management Project, the Project will set up a Small Grants Program to (co-) finance small, local initiatives by community organizations, schools, academics, private companies and other entities that have meritorious proposals to support the objective of the project. Grants are US\$10,000-20,000 large, must be completed within 1 year, and will be called three times in the Project duration. The Manual of the Neretva-Trebinjica Management Project will be adopted for this. [activity funded jointly by SCCF and GEF IW]

37. *Sub-component 2B Pilot Investments for Basin Climate Change Resilience:* The project will support demonstration-scale investments that can be easily replicated, are of high priority to local rural economies in the basin, and would contribute too environmentally and socially-sound integrated development of the river system. The project would support:

(i) Enhanced Flood Forecasting and Early Warning System at regional scale to complement the existing ones in the riparian countries; this would include (a) preparation of a Flood and Drought Preparedness Strategy; and (b) capacity building for implementation of flood and drought resilience measures. (BiH, Serbia, Montenegro, Regional) [activity funded solely by GEF IW]

(ii) Works/ infrastructure and equipment to pilot climate change resilience approaches and designs based on more integrated local water regulation of about 3 steep tributary, lake and wetland systems to the Drina, Lim, Cehotina, Piva and Tara rivers, to control floods, erosion and bank stability from critical torrents, and retain and absorb water. Activities include bathymetric

analyses and rehabilitation and protective works in the Natural Parks of Sutjeska (BiH), in Montenegro and Serbian lakes/reservoirs to combat eutrophication and deterioration of lakes and water supply reservoirs; identification and preparation of flood retention areas associated with wetlands and lakes (“room for the river”) along the Drina and Lim tributaries in 2 areas; management of sediment generation and transport along relevant river sections; the financial sustainability will be piloted by improving local environmental quality and eco-tourism, trekking, fishing and biodiversity facilities. (BiH, Serbia, Montenegro). (Montenegro, BiH, Regional) [Funded solely by SCCF]

38. **Component 3: Project Management and Monitoring and Evaluation (SCCF US\$0.22 million; GEF IW: US\$0.22 million)** A Regional Project Management Team (PMT) would be established for overall coordination of the project at the regional level. The PMT will be accountable to a high-level Inter-state Task Force, in which the International Sava River Commission will be Observer. The project will support Project Implementation Teams (PITs) in each of the three countries who will be responsible for the day-to-day implementation of project activities at the national level. The PITs will develop and maintain a project website and participate in relevant SCCF and GEF IW: Learn events.

IV. Safeguard Policies that Might Apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04	X		
Forests OP/BP 4.36	X		
Pest Management OP 4.09		X	
Physical Cultural Resources OP/BP 4.11			TBD
Indigenous Peoples OP/BP 4.10		X	
Involuntary Resettlement OP/BP 4.12		X	
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50			TBD
Projects in Disputed Areas OP/BP 7.60		X	

V. Financing (in USD Million)

Total Project Cost:	108.44	Total Bank Financing:	58.0
Total Co-financing:	99.7	Financing Gap:	0.00
Financing Source			Amount
BORROWER/RECIPIENT			2.00
Global Environment Facility (GEF) (IW: 4.37 + SCCF: 4.37)			8.74
Others (Bank, EU, etc.)			97.70
Total			108.44

VI. Contact point

World Bank

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Implementing Agencies

Bosnia-Herzegovina: FBiH

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Bosnia-Herzegovina: Republic of Srpska

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Republic of Serbia

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Attachment A– Description of Co-financed /Parallel Activities and Their Implementation and Coordination Arrangements

Activity	Funding	Bosnia and Herzegovina	Montenegro	Serbia	International Sava River Commission
<p>GEF West Balkans Drina River Basin Management Project 2015-2018: <i>-Basin management plan -Strategic Action Plan</i> <i>-Simulation model</i> <i>-Small Grants & Awareness</i> <i>- Cross-region institutional strengthening and dialogue</i></p>	GEF	<p>MOFTER, RS Min of Agric., For. and Water Mgmt, and Water Agency FBiH Min of Agric, For. and Water Mgmt,. and Water Agency <i>Will create coordination platform through Plan and committees.</i> Other stakeholders</p>	<p>Water Directorate (Min Agric. and Rural Dev.) Min. Environment <i>Will create coordination platform through Plan and committees.</i> Other stakeholders</p>	<p>Water Directorate (Min. Agric. For. and Water Mgmt.) <i>Will create coordination platform through Plan and committees.</i> Other stakeholders</p>	<p>Formally associated at Steering level, and in selected technical activities. Possibly may implement or coordinate.</p>
<p>TA Support for Drina Basin Investment 2014-2015: -Baseline studies -Updating of FS of existing investment options -Investment ranking as ‘no-regret’ or ‘need deep review in basin plan’</p>	WBIF	<p>MOFTER, RS Min of Agric., For. and Water Mgmt, and Water Agency FBiH Min of Agric, Forest and Water Mgmt, and Water Agency. <i>Will inform GEF Drina River Basin Plan.</i> Other stakeholders</p>	<p>Water Directorate (Min Agric. and Rural Dev.) Min. Environment <i>Will inform GEF Drina River Basin Plan.</i> Other stakeholders</p>	<p>Water Directorate (Min. Agric. For Water Mgmt.) <i>Will inform GEF Drina River Basin Plan.</i> Other stakeholders</p>	<p>Formally associated at Steering level, and in selected technical activities. May implement or coordinate.</p>
<p>TA Balkan/ South Europe Energy Strategy 2014 (TBC) - Will assess i.a. hydropower generation potential in Drina basin</p>	WB	<p>Mins. Energy, Mining and Industry of RS and FBiH, Power Enterprises, MOFTER Will need to coordinate at policy and technical levels with Ministries of Agriculture, For. and Water Mgmt and Water Agencies in RS and FBiH. <i>To be coordinated with GEF Drina Water Strategy/ Basin Plan</i></p>	<p>Min Economy, Power Enterprises. Will need to coordinate at policy and technical levels with Water Directorate. <i>To be coordinated with GEF Drina Water Strategy/ Basin Plan</i></p>	<p>Min. Energy and Environment. Power Enterprises. Will need to coordinate at policy and technical levels with Water Directorate. <i>To be coordinated with GEF Drina Water Strategy/ Basin Plan</i></p>	<p>On information and data exchange basis</p>
<p>Digital Terrain Mapping & Flood Risk Mapping 2014-2015 - Surveying of selected parts of the Drina river valley</p>	IPA	<p>MOFTER, RS Min of Agric., For. and Water Mgmt, and Water Agency FBiH Min of Agric, For. and Water Mgmt,. and Water Agency.</p>		<p>Water Directorate (Min. Agric. For. and Water Mgmt.). <i>GEF Drina Basin Plan will use these data</i></p>	

		<i>GEF Drina Basin Plan will use these data</i>			
TA International Sava River Basin Commission 2012-2014 - River Basin Mgmt Plan - diverse studies and training	Sava River Comm, EU IPA	Collaborative	Collaborative	Collaborative	RBMP developed in compliance with EU WFD (mostly WQ focus and ecological objectives). Need to be complemented with water quantity mgmt. under GEF Drina Basin Plan
Investment: Drina BiH Flood Project 2015-2018 - High priority, no-regret protective dikes and bank rehab, in Gorazde and Bijeljina on L bank of Drina (across from Serbia Flood project sites)	IDA	RS Min of Agric., For. and Water Mgmt, and Water Agency FBiH Min of Agric, For. and Water Mgmt, and Water Agency. <i>Designed based on Drina Basin Concept.</i> Local stakeholders			General information and data sharing
Investment: Drina Serbia Irrigation and Drainage II Project 2016-2020 - High priority, no-regret protective dikes and bank rehab, d/s of Zvornik on R bank of Drina (across from BiH Flood project sites)	IDA			Water Directorate (Min. Agric. For. and Water Mgmt.). <i>Designed based on Drina Basin Concept.</i> Local stakeholders	General information and data sharing
Investment: Bosnia Agriculture and Rural Development Project (flood component) 2010-2016 - High priority small protective dikes and bank rehab, along Drina River	IDA	RS Min of Agric., For. and Water Mgmt, and Water Agency FBiH Min of Agric, For. and Water Mgmt, and Water Agency. <i>Consistent with Drina Basin Concept.</i> Local stakeholders			
Investment: Sava Flood Project 2013-2020 - High priority dikes, pumps and bank rehab, along Sava and junction of Drina and Sava in Bijeljina area	EIB	RS Min of Agric., For. and Water Mgmt, and Water Agency FBiH Min of Agric, For. and Water Mgmt, and Water Agency.			General information and data sharing

		<i>To be coordinated with GEF Drina Water Strategy/ Basin Plan.</i> Local stakeholders			
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