

# GEF SCCF West Balkans Drina River Basin Management Project



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ENVIRONMENTAL AND SOCIAL  
MANAGEMENT FRAMEWORK

GEF-SCCF grant, No. BA/RS/MN-DRINA-GEF/SCCF-IC-CS-15-05

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## **ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK**

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## ABBREVIATIONS AND ACRONYMS

|         |  |
|---------|--|
| BiH     | Bosnia and Herzegovina   |
| BP      | Bank Procedures  |
| CPS     | Country Partnership Strategy                                     |
| DfWM    | Directorate for Water of Montenegro                              |
| DRB     | Drina River Basin  |
| EIA     | Environmental Impact Assessment                                  |
| EMP     | Environmental Management Plan                                    |
| EPA     | Environmental Protection Agency                                  |
| ESMF    | Environmental Social Management Framework                        |
| EU      | European Union   |
| FBiH    | Federation of Bosnia and Herzegovina                             |
| FHMS    | Federal Hydro-Meteorological Service                             |
| FMoET   | Federal Ministry of Environment and Tourism                      |
| GEF     | Global Environment Facility                                      |
| HPP     | Hydro Power Plant  |
| IHMS    | Institute of Hydro-Meteorology and Seismology of Montenegro      |
| IPPC    | Integrated Prevention and Pollution Control                      |
| IWRM    | Integrated Water Resource Management                             |
| MAEP    | Ministry of Agriculture and Environmental Protection             |
| MAFWM   | Ministry of Agriculture, Forestry and Water Management           |
| MARD    | Ministry of Agriculture and Rural Development                    |
| MEC     | Monitoring and Evaluation Consultant                             |
| MNE     | Montenegro   |
| MOFTER  | Ministry of Foreign Trade and Economic Relations                 |
| MSDT    | Ministry of Sustainable Development and Tourism                  |
| NASA    | National Aeronautics and Space Administration                    |
| NGO     | Non-Governmental Organization                                    |
| OP      | Operational Policy   |
| OG      | Official Gazette   |
| PIU     | Project Implementation Unit                                      |
| RBMP    | River Basin Management Plan                                      |
| REC     | Regional Environmental Center                                    |
| RHMS    | Republic Hydro-Meteorological Service of the Republic of Serbia  |
| RS      | Republic of Srpska   |
| RSRB    | Republic of Serbia   |
| RWD     | Republic Water Directorate                                       |
| SAP     | Strategic Action Program   |
| SCCF    | Special Climate Change Fund                                      |
| SEA     | Strategic Environmental Assessment                               |
| SESA    | Strategic Environmental and Social Assessment                    |
| SRB     | Serbia   |
| TPP     | Thermo Power Plant   |
| UNECE   | United Nations Economic Commission for Europe                    |
| UNESCO  | United Nations Educational, Scientific and Cultural Organization |
| UNFCCC  | United Nations Framework Convention on Climate Change            |
| UNICEF  | United Nations Children's Rights and Emergency Relief            |
| WA      | Water Authorities  |
| WB      | World Bank   |
| WBDIWRM | Drina Integrated Water Resource Management – COWI led project    |
| WBDRBM  | West Balkans Drina River Basin Management                        |
| WFD     | Water Framework Directive  |
| WUA     | Water User Association   |

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## Executive summary

### The Project

The World Bank is supporting the project: GEF-SCCF West Balkans Drina River Basin Management (WBDRBM) Project, which will assist the countries of Bosnia and Herzegovina (BiH), Montenegro (MNE) and Serbia (SRB) in studies and investments to strengthen the capacity of their governments to plan and implement integrated, cooperative management of the trans-boundary Drina River Basin (DRB) and address climate change adaptation throughout the DRB – based on “global best practices” and within the framework of integrated water resource management (IWRM) involving extensive stakeholder consultations to ensure adequate public participation.

In addition, the WBDRBM Project will 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).

The responsible agencies for Project implementation would be in Bosnia and Herzegovina: the Ministry of Foreign Trade and Economic Relations (for the Federation of Bosnia and Herzegovina: the Ministry of Agriculture, Forestry and Water Management (MAFWM-FBiH)); for Republic of Srpska: the Ministry of Agriculture, Forestry and Water Management (MAFWM-RS); for Montenegro: Ministry of Agriculture and Rural Development (MARD), and for Serbia: the Ministry of Agriculture, Forestry and Water Management (MAFWM).

The two major expected outcomes of the WBDRBM Project are:

- Multi-state cooperation to balance conflicting water uses in trans-boundary Drina waters is enhanced, while climate adaptation measures in policy and planning frameworks is mainstreamed.  
This outcome would be supported through sub-component 1A: the development of an agreed Strategic Action Program (SAP) through ‘enhanced dialogue and coordination’ mainstreaming trans-boundary IWRM and climate change adaptation in national planning; and sub-component 1B: institutional development and capacity building for joint ecosystem-based management of the DRB and for adaptation to climate-induced economic losses.
- 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 would be the subject of the GEF Drina follow-up project (2<sup>nd</sup> phase).  
To achieve this outcome, sub-component 2A would provide capacity strengthening for climate resilience, and sub-component 2B the identification and design of pilot investments for basin-wide climate change resilience.

Project Beneficiaries are municipalities and settlements concentrated along the Drina River and its major tributaries Piva, Lim, Čehotina and Tara. Interests and raised voices of municipalities and local communities along DRB countries shall lay out an investment agenda that better responds to local needs and opportunities, and would foster re-development of the region and stabilisation of infrastructure for future developmental project bounded with sustainable development principles.

Institutional project beneficiaries are countries Hydro-meteorological services, Water directorate, Water agencies and Ministry responsible for water management. The project activities will improve hydro-meteorological infrastructure for collection of such data that will ensure assessment to long-term climate change impacts, improve forecasting, or take decisions on sustainable investments in DRB.

## **Drina River Basin (DRB)**

The Drina River Basin (DRB), with total surface area of 19,680 km<sup>2</sup>, covers the northern half of Montenegro (MNE, 31.6% out of total watershed), Bosnia and Herzegovina (BiH, 37.1%) and Serbia (SRB, 30.5%), while less than 1% of the basin belongs to Albania. With its high flow volume (about 12 billion m<sup>3</sup> annually) and good water quality, the Drina River Basin scores high on the list of areas with high endowments of natural resources and development opportunities in the region. It also has a significant hydropower generation potential (of which about 60% is reported to be still untapped) as well as tourist attractions (among others the UNESCO World Heritage Site of the Tara Canyon), and it is a source of abundant biodiversity. Mining, manufacturing, tourism and agriculture create other significant economic opportunities. Almost one million people live in the DRB, their settlements being concentrated along the Drina and its major tributaries.

In the 20<sup>th</sup> century, the utilization of hydropower potential has been a development priority in most of its sub-catchments. The hydropower use still plays a dominant role, both in terms of the operational impact of the existing reservoirs and hydropower plants, and by supporting national plans for further increase of renewable resources in countries' energy sector (e.g. small HPP/SHPPs), arising from the Energy Community obligation, to which all DRB countries are contracting parties<sup>1</sup>. However, equally important present water usages in the basin, besides the energy production, are: use of water as a social good (e.g. drinking water supply and recreation), use for fishery (both commercial and sports), tourism, industry and mining, and to a lesser extent for irrigation. The biodiversity of the basin is becoming increasingly recognized, as the basin hosts numerous endemic species, and provides the space and sustenance of large important habitats (some in protected nature parks), that in turn support tourism and "green agriculture" economies.

The basin is also known for both floods and droughts, which increasingly demand to be mitigated. The DRB has experienced major floods with the loss of lives in the past decade, and most lately in 2010 and 2014, in all three riparian countries due to inadequate flood protection and preparedness. In parallel with the emergency response, it has been decided to start putting in place more robust policies, capacity and infrastructure to help minimize flood damages in sustainable and cost-effective manner. The DRB is characterized by extreme variability in discharge rates due to the terrain and climatologic conditions, creating high vulnerability in many locations of the basin to both floods and droughts. Absence of cooperation between two dominant water using sectors in the basin, namely water management and energy generation, was found to be one of the weaknesses for implementation of flood protection and control activities. At the same time, many areas in the basin also experience recurrent seasonal droughts. This affects biodiversity and fisheries, water supply from groundwater (the groundwater levels being affected by the draw-down of hydropower reservoirs, especially in the summer) and agriculture. Climate variability and change are thought to be a critical and already on-going feature for the basin, as the river flow depends on snowmelt and rainfall. Both temperature and rainfall patterns are changing, which is likely to increase the likelihood of water shortages in the summer, and very high water discharges, and flooding, in the other seasons. In addition, the high run-off and geological conditions also cause high erosion degrees.

## **Integrated water management and the convergence with EU Water Directives**

While all water using sectors (municipalities, hydropower, nature parks, ...) have prepared their own development plans, much work is now required to integrate these sectorial plans, as well as the water management plans with the economic development and land use plans. This action should be done simultaneously at different levels:

- per sub-basin (tributary), because many interventions have only local impacts and serve only local interests,

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<sup>1</sup> [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/ENERGY\\_COMMUNITY/Legal/Treaty](https://www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/Treaty)



- for each country (and in BiH, for each entity), because each has sovereign rights and national/ entity development priorities, and because of the differences in the national/entity legal frameworks, and the need to harmonize, and
- at the aggregate level of the Drina Basin.

The water management, and its integration, will need to become increasingly consistent with the EU Water Directives and policies, such as the Water Framework Directive, the Flood Directive, the Nitrate Directive, etc. The three countries are in varying stages of partnership with the EU. However, the transposition of the EU *acquis* is a key objective and policy driver in each country.

## **Economy**

Natural conditions in Drina Basin create excellent opportunities for broad spectrum of economical uses like hydropower, agriculture, tourism and fishery. Moreover, there are great possibilities for protection against flood, for the supply of municipal and industrial water and recreation. The importance of water for hydropower plants on the Drina will gradually contribute (e.g. proper management of operations of multipurpose storage reservoirs) to other uses of water, such as water supply, irrigation, flood protection, etc. Regulated water management in the Drina River basin will allow access to water to majority of users and ensure flood protection under all conditions.

In DRB there are 10 major reservoirs (and many other smaller) and 9 associated hydropower plants. The water potential of the Drina River and its tributaries are mainly used for energy production. The total technically used hydro-potential is 1,838.6 MW, with estimated annual production in 2014 of 5,200 GWh. One of the most important economic revenue (SRB/BiH) is certainly the sediment exploitation that on the other hand causes the major dispute between the riparian countries (the determination of the border between Serbia and BiH).

The local economy in large part is dependent on the river Drina. This especially applies to agricultural production, which depends on weather and water conditions because it is mostly carried out in the open agricultural land, which is only partially irrigated. Agricultural production is organized in the form of small farms, with family members involved in the production. Improved management of the river Drina will positively affect the security of self-employment within households.

## **Main features and scope of the Project**

The WBDRBM Project will help meet objectives related to climate change adaptation 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).

The main 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.

To meet the objectives, the WBDRBM Project shall incorporate three major components:

### **COMPONENT 1: Multi-state Cooperation on International Drina Management with Sub-component 1A: Development of an agreed Strategic Action Program (SAP) mainstreaming transboundary IWRM and climate change adaptation in national planning and Sub-component 1B: Institutional Development and Capacity Building**

The objective of this subcomponent is to define and assure rational and equitable management of the Drina River Basin for sustainable socio-economic development. It will provide more effective planning tools to the

riparian countries for enhanced decision making in integrated DRB management (activities: Strategic Action Program (SAP); Water resources and basin study that encompass Regional Hydrological study; Localized minimum ecological/environmental/maintenance/duty flow study; Register of torrential flows; Initial sediment, river bed and banks study, and Initial surface and groundwater temperature study; Hydraulic and Hydrologic Model for the Drina River Basin and Study for analyses of Floating Waste in the Drina River Basin).

The institutional development scope of this component shall improve water resource management capacity in riparian countries, strengthen transboundary mechanisms (institutional, technical, and regulatory), develop tools for effective water resource management, develop climate change adaptive management frameworks, at bilateral, trilateral and International Sava River Commission levels.

**COMPONENT 2: Pilot investments for Integrated Basin Management and Climate Change Resilience and Flood and Drought Management with Sub-component 2A: Strengthening capacity for climate change resilience and Sub-component 2B: Pilot Investments for Basin Climate Change Resilience.**

The objective of this subcomponent is to strengthen Hydro-metrological Services and river basin authorities with equipment and refines the hydro and meteorological measuring system in riparian countries, which shall improve adaptation to climate change, primarily from flood and drought threats, while making optimal use of the environmental assets of the basin (activities: Strengthening the Hydro-meteorological Services of the riparian countries and complete the hydro- and meteorological measuring system; Development of protocols to improve data compatibility among the three countries; Public Awareness and Small Grants Program).

Through the countries pilot project investments, the component activities shall reduce the impact of climate change. The subcomponent that will support demonstration-scale investments, which could be easily replicated by countries, are of high priority to local rural economies in the basin, and would contribute to environmentally and socially-sound integrated development of the river system (activities: Flood and Drought Preparedness Strategy; capacity building for implementation of flood and drought resilience measures; Pilot projects investments per country – BiH, MNE and SRB).

**COMPONENT 3: Project Management and Monitoring and Evaluation**

This component will support the Regional Project Management Team which will be responsible for the overall coordination of the project, and Project Implementation Units in each of the three countries, which will be responsible for the day-to-day implementation of project activities at the national level.

More details about Project components and subcomponents are shown in Annex 9.5 of this Report.

**Environmental and Social Assessment**

The project is categorized as environmental category B in accordance with OP 4.01. The Environmental and Social Management Framework (ESMF) has been prepared by the Consultant to assess the possible environmental impacts of the proposed project, and to set up principles, rules, guidelines and procedures for preparation of site-specific plans to mitigate the possible negative environmental impacts of proposed investments. The document was approved by the Bank (insert date) and disclosed in BiH, SRB and MNE on (insert dates) respectively. ESMF was disclosed on the Bank's Infoshop on (insert date).

No major adverse environmental impacts are anticipated under the project. For Component 1, the Strategic Environmental and Social Assessment (SESA) will be prepared during the project implementation, with draft ToR prepared by the Consultant. The SESA would include an initial assessment of long-list of proposed investments, with the objective of highlighting any negative environmental and/or social impact.

The overall WBDRBM project impacts are considered generally highly positive as the project actions will strengthen on regional, national and local level the preparedness of countries of DRB for potential and possible climate change impacts on DRB water resource use and management, as well as mitigate or prevent risks posed by climate change to environment, humans and property. The project activities will result in

strengthened cooperation and coordination among relevant authorities in DRB, more efficient and integrated water resource management in the basin, enhanced hydro-meteorological data on surface and underground water resources, efficient waste and wastewater management in DRB and effective local stakeholder engagement and awareness raised on climate change impact to water and environmental resources.

The ESMF identified environmental issues requiring attention during project implementation are direct consequence of human presence and assembly and construction/reconstruction works at location. Pollutions that occur in the phase of reconstruction, rehabilitation and/or repair are temporary in their scope and could be mitigated through application of standard safety measures and best practices in engineering, design, application of the code of good construction practice, and regular operation and maintenance.

The ESMF indicates the project's generally positive environmental impact, with localized negative impact of certain pilot project's activities that are presented in more detail in the section 3.2 of this Report. Identified environmental issues requiring attention during project implementation will arise as a direct consequence of human presence and assembly and construction/reconstruction works at specific locations. These are, for example drilling/excavation activities for flood protection measures, where the environmental impacts are expected to be local and occur during implementation/construction only. The implementation of the EMP measures would minimise and prevent identified negative impacts, through set of specific environmental mitigation and monitoring measures, such as:

- *Health and safety issues-mitigation measure(s)*: Workers' personnel protective equipment (PPE) will comply with international good practice; Appropriate fencing and signposting of the sites will inform workers of key rules and regulations to follow and emergency contact numbers;
- *Traffic safety-mitigation measure(s)*: Existence of site-specific traffic management plans; organization of construction vehicles' movement; temporary traffic re-routing; regular vehicle and equipment maintenance;
- *Gas/emission control-mitigation measure(s)*: compliance with emission standards as part of the annual vehicle registration process;
- *Dust control-mitigation measure(s)*: Wet areas of dust sources to minimize dust creation; control of vehicle speed;
- *Noise control-mitigation measure(s)*: Use of vehicle/equipment with noise certificate; Schedule equipment movement during non-peak hours only; compliance with national legislation in respect to allowable noise levels; use of noise suppressing screen and barriers;
- *Waste management-mitigation measure(s)*: Waste collection and disposal pathways and sites will be identified for all major waste types expected from construction activities; Mineral construction will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.

Pollution that can occur in various stages of construction, reconstruction, rehabilitation and/or repair is temporary in its scope and nature - and can be mitigated through the application of standard mitigation measures and good practices in engineering design, application of the code of good construction practice, and regular operation and maintenance.

In addition to the relevant WB polices, as outlined in the this Report, the national legislation of BiH, MNE and SRB will be observed and taken into consideration in preparation of site-specific EMPs. Where the national and WB requirements differ, the more stringent will apply.

Envisioned WBDRBM components' sub-projects include actions that comprise fostering and strengthening government and stakeholder cooperation in DRB countries, in the sphere of water management, hydrological data gathering, exchange and monitoring. These actions aim at understanding the climate change impact on DRB and to mitigate future adverse effects. Increasing and strengthening capacities of hydro-meteorological services in the basin, together with some rehabilitation, reconstruction and replacement activities during the realization of the project will result in better preparedness for potential negative occurrences (floods,

droughts, etc.) and thus sustaining and preserving livelihoods on one side and environment and resources on the other. Through envisioned synergised and harmonised regional and national activities on all levels (state and local) the overall project impact on environment and water management will be significant and positive, while minor negative impacts that will be a consequence of human presence and nature of construction works at specific locations will be mitigated at site using the set of specific mitigation measures.

General considerations of potential environmental impacts is presented for each already identified activity in the Chapter 3 of this Report, with additional details presented in Annex 9.5. The environmental impacts will be further refined and fully developed in site-specific EMPs for inclusion in the bidding documents, which will be developed during subsequent project implementation.

More thorough overview of chapters' subjects of this Report is provided in the document: "Technical support papers" of the Environmental and Social Management Framework ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

# 1. Introduction

## 1.1 Background and basic characteristics of the project

**Background.** The Drina River Basin (DRB), with total surface area of 19,680 km<sup>2</sup> and population of 750,000 citizens (new data from WBDIWRM project in Drina Basin. Previous estimates where 1 million citizens.), covers the northern half of Montenegro (MNE, 31.6% out of total watershed), Bosnia and Herzegovina (BiH, 37.1%) and Serbia (SRB, 30.5%), while less than 1% of the basin belongs to Albania. With its high flow volume (about 12 billion m<sup>3</sup> annually) and good water quality, the Drina River Basin scores high on the list of areas with high endowments of natural resources and development opportunities in the region. It also has a significant hydropower generation potential (of which about 60% is reported to be still untapped) as well as tourist attractions (among others the UNESCO World Heritage Site of the Tara Canyon), and it is a source of abundant biodiversity. Mining, manufacturing, tourism and agriculture create other significant economic opportunities.

**A variety of water uses.** In the 20<sup>th</sup> century, the utilization of hydropower potential has been a development priority in most of its sub-catchments. The hydropower usage still plays a dominant role, both in terms of the operational impact of the existing reservoirs and hydropower plants, and by supporting national plans for further increase of renewable resources in countries' energy sector (e.g. small HPP/SHPPs), arising from the Energy Community obligation, to which all DRB countries are contracting parties<sup>2</sup>. However, equally important present water usages in the basin, besides the energy production are: use of water as a social good (e.g. drinking water supply and recreation), use for fishery (both commercial and sports), tourism, industry and mining, and to a lesser extent for irrigation. The biodiversity of the basin is becoming increasingly recognized, as the basin hosts numerous endemic species, and provides the space and sustenance of large important habitats (some in protected nature parks), that in turn support tourism and "green agriculture" economies.

**Floods and droughts.** Still, more than for the above typical water "uses", the basin is also known for both floods and droughts, which increasingly demand to be mitigated. The DRB has experienced major floods with the loss of lives in the past decade, and most lately in 2010 and 2014, in all three riparian countries, due to inadequate flood protection and preparedness. The floods in May 2014 were one of the main reasons for the overall weak economic performance, especially in BiH and Serbia. In cumulative terms, these floods are estimated to have cost BiH around 15% of GDP and Serbia around 4.7% of GDP in lost output and damages. The hardest hit was at the economic sectors of energy, mining, and agriculture, but significant damages were also inflicted on transport infrastructure (roads, bridges and railways). Almost all sectors of these two economies were more or less harmed. Adverse weather also weakened growth in Montenegro by reducing tourism and electricity exports. The DRB is characterized by extreme variability in discharge rates due to the terrain and climate conditions, creating high vulnerability in many locations of the basin to both floods and droughts. At the same time, many areas in the basin also experience recurrent seasonal droughts. This affects biodiversity and fisheries, water supply from groundwater (the groundwater levels being affected by the draw-down of hydropower reservoirs, especially in the summer), and agriculture. Climate variability and change are thought to be a critical and already on-going feature for the basin, as the river flow depends on snowmelt and rainfall.

**Cooperation in the basin.** The cooperation is observed to be still weak among different users/sectors between the three countries, and with the different stakeholders, such as local governments, tourists and anglers. The absence of a workable cooperation framework between the riparian countries means that flood and drought conditions in the short-term are not well mitigated and managed, but it also forms a major impediment to the

<sup>2</sup> [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/ENERGY\\_COMMUNITY/Legal/Treaty](https://www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/Treaty)

formulation of longer-term development scenarios and medium-term investment plans that address the trade-offs between different water uses. This, in turn, affects other regional strategies such as those for (hydro) power, nature conservation, tourism, and “green growth”. Green growth strategies management and investment aim (in agriculture, energy, land use, etc.) is to reduce the carbon footprint of the region, enhance the resilience against climate variability through adaptation, and promote development that is environmentally sustainable. Such strategies are compatible with the longer-term objectives of EU policies.

***The need for integrated water management and the convergence with EU Water Directives.*** While all water-using sectors (municipalities, hydropower, nature parks, etc.) have prepared their own development plans, considerable work is now required to integrate these sectorial plans, as well as water management plans with the economic development and land use plans. This needs to be done simultaneously per sub-basin (tributary) level, because many interventions have only local impacts and serve only local interests; for each country (and in BiH, for each entity), because each has sovereign rights and national/entity development priorities, and because of the differences in the national/entity legal frameworks, and the need to harmonize, and at the aggregate level of the Drina Basin. Such integration would help prioritize investments, based on the identification of the inter-relationships between different proposals-at either local or regional scale-that can be of competitive or synergistic in nature.

The water management, and its integration, will need to become increasingly consistent with the EU Water Directives and policies, such as the Water Framework Directive, the Flood Directive, the Nitrate Directive, etc. Three DRB riparian countries are in varying stages of partnership with the EU. However, the transposition of the EU *acquis* is a key objective and policy driver in each Country.

## 1.2 GEF-SCCF West Balkans Drina River Basin Management (WBDRBM) Project

The WBDRBM Project will 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). The Project will also draw upon the international experiences under GEF IW: Learn and specifically the lessons acquired in the region from the recently completed GEF Neretva-Trebišnjica Water Resources Management Project in BiH and Croatia (2009-2014).

**The objective of the Project** is to assist the countries of Bosnia and Herzegovina (BiH), Montenegro and Serbia in studies and investments to strengthen the capacity of their governments to plan and implement integrated, cooperative management of the trans-boundary Drina River Basin (DRB) and address climate change adaptation throughout the DRB – based on “global best practices” and within the framework of integrated water resource management (IWRM) involving extensive stakeholder consultations to ensure adequate public participation. The technical assistance would further take into consideration the experiences from similar projects in the region (e.g. the Sava RBMP, currently in process of adoption, and the RBMP of Neretva and Trebišnjica, funded by GEF/WB,) and apply them during the entire project cycle.

The responsible agencies for Project implementation would be i) in Bosnia and Herzegovina: the Ministry of Foreign Trade and Economic Relations; for the Federation of Bosnia and Herzegovina: the Ministry of Agriculture, Forestry and Water Management (MAFWM-FBiH); for Republic of Srpska: the Ministry of Agriculture, Forestry and Water Management (MAFWM-RS); for Montenegro: Ministry of Agriculture and Rural Development (MARD); and for Serbia: the Ministry of Agriculture, Forestry and Water Management (MAFWM).



The two major expected outcomes of the WBDRBM Project are:

1. **Multi-state cooperation to balance conflicting water uses in trans-boundary Drina waters is enhanced**, while climate adaptation measures in policy and planning frameworks is mainstreamed.  
This outcome would be supported through sub-component 1A: the development of an agreed Strategic Action Program (SAP) through 'enhanced dialogue and coordination' mainstreaming trans-boundary IWRM and climate change adaptation in national planning; and sub-component 1B: institutional development and capacity building for joint ecosystem-based management of the DRB and for adaptation to climate-induced economic losses.
2. **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 would be the subject of the GEF Drina follow-up project (2<sup>nd</sup> phase).  
To achieve this outcome, sub-component 2A would provide capacity strengthening for climate resilience, and sub-component 2B the identification and design of pilot investments for basin-wide climate change resilience.

In **Bosnia-Herzegovina**, the project is in line with the key recommendations under the new World Bank Country Partnership Strategy (CPS) FY2012-FY2015, while in **Montenegro** it is in line with the CPS for FY2011-2014 and in **Serbia's** with CPS for FY2012-2015, which seeks among other things, to assist the Country with meeting its obligations as an EU candidate country.

To meet objectives and support DRB riparian countries (BiH, MNE and SRB) the WBDRBM Project has foreseen following main components, each encompassing sub projects/activities in following frame:

**COMPONENT 1:** Multi-state Cooperation on International Drina Management with Sub-component 1A: Development of an agreed Strategic Action Program (SAP) mainstreaming transboundary IWRM and climate change adaptation in national planning and Sub-component 1B: Institutional Development and Capacity Building

The objective of this subcomponent is to define and assure rational and equitable management of the Drina River Basin for sustainable socio-economic development and the protection of water and other natural resources, whilst ensuring no detrimental effects on the shared basin. In addition this component shall 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, through following activities:

- 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. The SAP would also include climate change impacts on groundwater as source for water supply.
- ii) Preparation of Water resources and basin study (including: Regional Hydrological study; Localized minimum ecological/environmental/maintenance/duty flow study; Register of torrential flows; Initial sediment, river bed and banks study, and Initial surface and groundwater temperature study. This will result in defining the basin and water resources parameters to inform regional strategies for water resources management, water resources development, energy and hydropower development and rationalization.
- iii) Developing/upgrading Hydraulic and Hydrologic Model for the Drina River Basin, that support forecast service requirements of governments and water and emergency managers; satisfy needs for forecast services at near-, mid-, and long-term time scales for a wide variety of water use situations nationwide; provide critical information on forecast reliability; improve hydrologic forecast sensitivity to weather and climatic forecasts; provide water resources forecasts to private sector intermediaries who in turn serve specific industries.

- iv) Preparation of Study for analyses of Floating Waste in the Drina River Basin, that would provide a long-term reduction of floating waste in the River Drina Basin, and sustainable water resources management and environmental protection and establish a cooperation between local communities on performing the solid waste management activities, as well as the establish cross-border cooperation on aforementioned activities. This way an integrated solid waste management in the basin of the river Drina will be provided.

The institutional development scope of this component shall improve water resource management capacity in riparian countries, strengthen the transboundary mechanisms (institutional, technical, and regulatory), develop tools for effective water resource management, develop climate change adaptive management frameworks, at bilateral, trilateral and International Sava River Commission levels. This will be achieved through following activities:

- i) *Establishment of a Project-based Drina Task Force*
- ii) *Capacity building and development inter- ministerial committees at national and regional level*
- iii) *Preparation of national and local policy and regulatory reforms to conform to the international Drina water management*

**COMPONENT 2:** Pilot investments for Integrated Basin Management and Climate Change Resilience and Flood and Drought Management with Sub-component 2A: Strengthening capacity for climate change resilience and Sub-component 2B: Pilot Investments for Basin Climate Change Resilience.

The objective of this subcomponent is to strengthen Hydro-metrological Services and river basin authorities with equipment and completes the hydro and meteorological measuring system in riparian countries, which shall improve adaptation to climate change, primarily from flood and drought threats, while making optimal use of the environmental assets of the basin, through following activities:

- i) Strengthening the Hydro-meteorological Services of the riparian countries and complete the hydro- and meteorological measuring system, that would result in equipping the services with hydro-technical infrastructure.
- ii) Development of protocols to improve data compatibility among the three countries
- iii) Public Awareness, encompassing 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. The public awareness activity will be undertaken by the Project Implementation Units (PIUs)
- iv) Small Grants Program, encompassing (co-) finance of small, local initiatives by community organizations, schools, academics, private companies and other entities that have meritorious proposals to support the objective of the project. These community-based demonstration projects will encompass practices that would conserve water resources, promote improved water quality, reduce pollutant loads, and maintain wetlands.

Through countries' pilot project investments, the component activities shall reduce the impact of climate change. The subcomponent's demonstration-scale investments that could be easily replicated by countries, are of high priority to local rural economies in the basin, and would contribute to environmentally and socially-sound integrated development of the river system (activities: Flood and Drought Preparedness Strategy; capacity building for implementation of flood and drought resilience measures; Pilot projects investments per country – BiH, MNE and SRB.

Following pilot projects shall be implemented:

- **Bosnia and Herzegovina**
  - 1. **Feasibility study and preliminary design for waste water collector and treatment plant for Municipality of Goražde:** feasibility study will contain assessment of water demands for the wider area of Goražde wastewater projections, especially having in mind plans for wastewater network expansion. In addition, analysis of the options for treatment process, proposals for phased development (having in mind dynamic of network expansion) and cost-



benefit analysis. Preliminary design will be the part of the feasibility study, where key parameters of the WWTP will be done.

2. **Arrangement of degraded banks of Drina riverbed and its tributaries in urban city areas:** to provide a greater security of urban areas and city center zones, water intakes and water supply system of city water utilities, road infrastructure at the occurrence of large waters of the Drina River and its tributaries, preventive actions in the domain of degradation along the basic riverbeds which could cause significant reduction of the flowing profiles of minor riverbeds and disastrous consequences. Beneficiaries of this project are local communities of Foča, Novo Goražde, Višegrad, Bratunac and Bijeljina.
3. **Preparation of Feasibility study for identification of leachate at the area of the city of Bijeljina and upgrade of leachate treatment system at Regional sanitary landfill „Brijesnica“:** Preparation of feasibility study for solving the leachate problem in the City of Bijeljina, including identification leachate generation, leachate amount, measures for leachate collection and proposal of adequate technologies for water treatment prior to their disposition in the final recipients. In this way the integrated leachate management in the upper basin of the river Drina will be provided. Performing the construction works - upgrade of leachate treatment system at Regional Sanitary Landfill „Brijesnica“.
4. **Construction of the water source well for Municipality Sapna:** Objective is to meet the needs of inhabitants for the future period by construction of the new well. All necessary designs are prepared and partial financing provided. Measurable indicator will be the additional water quantities in the supply network and number of inhabitants connected to water supply. Identified beneficiaries are inhabitants that will be connected to water supply system, Municipality of Sapna and Tuzlanski Canton (TK).

- **Montenegro**

1. **Assessment of Climate change impacts on groundwater in Lim, Piva and Ćehotina river Basins:** The project needs to show if climate changes, which manifested in the past years in form of long dry periods with high temperatures and rainy seasons with extreme intensity of precipitation, affected change of the level of ground waters. For the purpose of project realization, hydrological explorations shall be conducted and based on these explorations, connection between surface and ground waters shall be determined, their level, capacity, water quality and map ground waters, and also, justifiability of their usage for water supplying of local population shall be determined.
2. **Assessment of climate changes impacts on floods and drought in Lim River basin and their prevention:** These activities will analyse climate parameters; determine if there has been deviation from the average; determine their possible impact on Lim River flow; determine the line of flood levels of typical and extreme waters; determine the most vulnerable sections, propose non-structural and structural measures for prevention of floods; prepare conceptual designs for the jeopardised sections. The works envisioned encompass biotechnical measures (planting vegetation on slopes and erosion-prone land), regulation works outside riverbeds (construction of embankments, gabion walls). This project needs to define irrigation options and needs for agricultural areas to increase crops yield; identify and propose optimal locations for new allocation and to prepare conceptual designs for the same.

- **Serbia**

1. **Construction of flood protection for water source in the Municipality Ljubovija, Serbia:** Design for the construction is prepared. Construction permit is issued. Flood protection of the water source will improve water quality and reliability of the water supply.
2. **Upgrade of existing flood protection from river Lim in Šarampov, Prijepolje:** Part of the city of Prijepolje - Šarampov, has flood protection structure which protects the properties and citizens from increase of water levels (50-100 return period). As waters with longer return period are more frequent, settlement experiences floods and damages caused by climate change impact. By instalment of mobile flood protection system (metal columns and plates) to the above existing structure in the periods of high waters, settlement could be protected from

the floods. Activities encompass the construction of the base for the instalment of the mobile protection and procurement of the mobile protection, made for this specific section and location. Costs 20% works + 80% equipment (removable metal panels put in special holes before the elevation of water levels, and removed after the extreme weather conditions). Implementation of this project would provide improvement of existing flood protection in Prijepolje, but could be replicable in other parts of river basin. This project is considered as introduction of the new practices and innovation in the river basin.

**3. Construction of wastewater treatment in the Municipality Mali Zvornik, Serbia:**

Wastewater from the city sewerage system and rain drainage is being discharged without treatment into reservoir and river Drina. Floods and draughts cause big variations in the water consumption and generated wastewater quantities. Devastation of the area with the outfalls increases. In the same area, some households have septic tanks, which are porous and pollute underground and surface water.

Within this project, following WWTPs are envisioned:

- **Construction of WWTP Sakar**

Settlement Sakar (500 citizens) is located upstream from the dam and wastewater is discharged into the reservoir Zvornik without any kind of treatment. Municipality Mali Zvornik prepared detailed design for the WWTP Sakar, capacity 2x200 PE (people equivalent), in 2012. Sequencing Batch Reactor (SRB) is the selected wastewater treatment process. Recipient is the small river Čečer (II category), in the vicinity of the beach and Zvornik reservoir (lake). WWTP is sized for 2x30m<sup>3</sup>/day, dry water flow 2 l/sec and wet water flow 3,32 l/sec in max hour. Entry water quality is BOD (biological oxygen demand) 2x12kg/day, suspended materials. 2x14 kg/day, N 2x2 kg/day, P 0,5x2 kg/day. WWTP will provide BOD <25 mg/l, Chpk <125 mg/l.

- **Construction of WWTP Novi most**

Municipality of Mali Zvornik prepared detailed design for the WWTP Novi most, capacity 2x500 PE (people equivalent), for the treatment of wastewater with BOD (biological oxygen demand) 190 mg/l, Chpk 430 mg/l, suspended materials 210 mg/l. Sequencing Batch Reactor (SRB) is the selected wastewater treatment process. Sludge, as the result of treatment process (in SBR), has to be transported to landfill in Loznica (like other waste from the whole municipal territory). WWTP is within the urban planning documents and land is municipal owned. Environmental impact assessment was prepared for WWTP Novi most in 2012. Design conditions and permits are provided from the relevant institutions, construction started in 2013 and floods stopped the works in the first half of 2014 at the early beginning stage.

**4. Conceptual design for flood protection of the Mačva plain, section Loznica- Badovinci, Serbia:**

Project documentation is missing - conceptual design, design for the construction permit and design for the construction of 24 km flood protection along Drina from Prnjavor to Loznica. Conceptual design will enable SRB to prepare remaining project documentation (worth approx. US\$330.000) and intensify completion of flood protection of the whole area (estimated approx. value of the construction US\$40 million).

**COMPONENT 3: Project Management and Monitoring and Evaluation**

This component will support the Regional Project Management Team, which shall be established and be responsible for overall coordination of the project at the regional level. The Project Implementation Units (PIUs) in each of the three countries will be responsible for the day-to-day implementation of project activities at the national level. Activities of implementation agencies include management of the project; monitoring of the project; and training for national and local government officials on project implementation, during the three-year period of the project implementation; office equipment; operating costs; and project management staff in Serbia and Montenegro (for procurement and financial management only).

The Annex 9.5 of the Report, provide details on project components' sub projects titles, short description and impact on environment.

### 1.3 Basic information about BiH, MNE and SRB

The DRB riparian countries (BiH, MNE and SRB) basic figures are presented below. More information is provided in the Annex 9.3 of this Report.

#### **BiH (FBiH and RS) in figures:**

Bosnia and Herzegovina, a former Yugoslav Republic, is located in southeast Europe, on the Balkan Peninsula, with the total area of 51,129 km<sup>2</sup>. Bosnia and Herzegovina shares boundaries with Croatia on the north, west, and south, Serbia and Montenegro on the east, and the Adriatic Sea on the south, with a total boundary length of 1,459 km. Bosnia and Herzegovina is a federal state divided into two entities, the Republic of Srpska and the Federation of Bosnia and Herzegovina, composed of municipalities (*opštine*) and cantons (*kantoni*). Local level: 63 municipalities in the Republic of Srpska and 80 in the Federation of Bosnia and Herzegovina. Regional level: 10 cantons (Kantoni).

Bosnia and Herzegovina's capital city is Sarajevo with the population of 318,000 (2015). The population is 3,867,055 (July 2015 est.) and is comprised from Bosniak 48.4%, Serb 32.7%, Croat 14.6%, and other 4.3%. In BiH (FBiH and RS) there are 3 official languages: Bosnian, Croatian and Serbian.

Economic summary: GDP/PPP: \$38.06 billion (2014 est.); per capita \$9,800. Real growth rate: 0.8%. Unemployment: 43.6% official rate. Arable land: 19.61%. Agriculture: wheat, corn, fruits, vegetables; livestock. Labor force: 1.281 million (2014); agriculture 19%, industry 30.0%, services 51% (2013). Industries: steel, coal, iron ore, lead, zinc, manganese, bauxite, vehicle assembly, textiles, tobacco products, wooden furniture, tank and aircraft assembly, domestic appliances, oil refining. Natural resources: coal, iron ore, bauxite, copper, lead, zinc, chromite, cobalt, manganese, nickel, clay, gypsum, salt, sand, forests, hydropower.

#### **Montenegro in figures:**

Montenegro is a former Yugoslav Republic located in south-eastern Europe on the Balkan Peninsula. Length of the land border is 614 km, of which 14k m with Croatia, with Bosnia and Herzegovina 225 km, with Serbia 203 km and with Albania 172 km, while the coastline is 293.5 km. Montenegro has an area of 13,812 km<sup>2</sup>, of which 6,219 km<sup>2</sup> or 45% is located in the Drina River Basin. According to the census of 2011, Montenegro has 620,029 inhabitants, of which in the Drina River Basin live 154,873 inhabitants, or around 25% of the Country population. Country has total area 13,812 km<sup>2</sup>, out of which land -13,452 km<sup>2</sup> and water - 360 km<sup>2</sup>.

The Country's GDP is \$9.36 billion (2014 est.), while GDP per capita reaches \$15,000 (2014 est.), compared to \$14,800 in 2013 est. The capital town is Podgorica (187 085 population), which is the main administration center. The country old historic capital is Cetinje (13 991, 2011 census), founded by ruler Ivan Crnojević in 1482. Today Cetinje is the residence of the President of Montenegro.

From a total of 23 municipalities in Montenegro, 13 are located in the Drina River Basin (municipalities of Andrijevica, Berane, Bijelo Polje, Kolašin, Mojkovac, Nikšić, Plav, Pljevlja, Plužine, Podgorica, Rožaje, Šavnik and Žabljak – according to the data from WBDIWRM project). In strictest terms there are actually 15 municipalities in the DRB with two newly established (2013)-Gusinje taking land from Plav, and Petnjica taking land from Berane.

#### **Serbia in figures:**

Serbia, a former Yugoslav Republic, is largely mountainous country. Its northeast section is part of the rich, fertile Danube Plain drained by the Danube, Tisa, Sava, and Morava river systems. It borders Croatia on the northwest, Hungary on the north, Romania on the northeast, Bulgaria on the east, Macedonia on the south, and Albania, Montenegro, and Bosnia and Herzegovina on the west. The total area is approximately 77,474 km<sup>2</sup>, and total land boundary length is 2,114.2 km. Serbia's capital is Belgrade, situated in north central Serbia. The population size is 7,176 794 mil. (note: does not include the population of Kosovo (July 2015 est.). The capital town Belgrade has the population of 1.182 million (2015).

The GDP \$95.49 billion (2014 est.) and GDP - per capita (PPP) is \$13,300 (2014 est.). The GDP consumption by use is as follows: household consumption: 73.7%, government consumption: 19.3%, investment in fixed capital: 20.2%, investment in inventories: -1.9%, exports of goods and services: 45.8%, imports of goods and services: -57.1%. The unemployment rate in 2014 was 19.7% (2014 est.).

## 2. Characteristics of the Drina Basin (physical and natural)

### 2.1 Physical and Natural Characteristics of the Drina Basin

The Drina River Basin (DRB) comprises the central part of the Dinaric Mountains, with a very small part in Albania and ending in the Pannonian plain. Drina River itself starts at the border of BiH and Montenegro (confluence of Piva and Tara rivers, both of which rise in Montenegro and converge on the border with Bosnia and Herzegovina in the village of Šćepan Polje). The basin is part of the larger Sava River Basin, therefore part of the Danube River System. The lower Drina forms the border between BiH and Serbia over a length of 220 km, before draining into the Sava River in north-eastern BiH. The Drina River Basin (DRB) is a home to almost one million people (new estimation from WBDIWRM Drina project is about 750,000), with most settlements concentrated along the Drina River and its major tributaries Piva, Lim, Čehotina and Tara). In BiH, some 520,000 (new estimation from WBDIWRM Drina project is 300,000) people lives in 26 municipalities, with 450,000 or 86.5% (new estimation from WBDIWRM Drina project is about 250,000) of them in 20 municipalities of the RS and 70,000 or 13.5% (new estimation from WBDIWRM Drina project is 50,000) in 6 municipalities of the FBiH. In Montenegro, an estimated population of 150,000 people is living within the basin, arranged into 13 municipalities (equivalent to 25% of Montenegro's total population). In Serbia, about 300,000 people live in 20 municipalities situated in the DRB. Data and new estimations are provided in the Table 2.1-1, below.

**THE BASIN IS SHARED EQUALLY AMONG THE THREE RIPARIAN COUNTRIES AND THEY HAVE STRONG SOCIAL AND ECONOMIC INTERESTS IN THE INTERESTS IN THE BASIN. TOTAL DRB SURFACE AREA IS 19,680 KM<sup>2</sup> (TABLE 2.1-1 AND**

Figure 2.1-1) and covers territory in Bosnia and Herzegovina (BiH) (37.1%), Montenegro (31.6%), Serbia (30.5%) and Albania (less than 1%). Originating in the 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 (about 3,000 mm), resulting also in the highest specific runoff in Europe (up to 50 l/s/km<sup>2</sup>). The average altitude is 945 m asl. (springs of the Piva and Tara source rivers of the Drina are in Montenegro, mouth into the Sava river at 74.4 m), the discharge at the mouth is 371 m<sup>3</sup>/sec (largest tributary of the Sava). The main right tributaries are Čehotina, Lim, Uvac, Ržav and Jadar, while the left tributaries are Sutjeska, Prača and Dranjača. Lim River is the major tributary of Drina, with a transboundary sub-catchment of 3,160 km<sup>2</sup>. It originates in eastern Montenegro (Prokletije Mountains at the Albanian border) and flows through towns of Andrijevica, Berane, Bijelo Polje in Montenegro and Priboj in Serbia.

**TABLE 2.1-1 DRINA BASIN PER COUNTRY**

| Riparian State                       | Surface Area in km <sup>2</sup> | Portion of DRB | Portion State (entity) | No of Municip. | Estimated Basin Popul.   |
|--------------------------------------|---------------------------------|----------------|------------------------|----------------|--------------------------|
| BiH                                  | 7,301                           | 37.1%          | 14.3%                  | 31 (26)        | 520,000 (300,000)        |
| Republic of Srpska                   | (6,242)                         | (31.7%)        | (25.7%)                | 19 (20)        | 450,000 (250,000)        |
| Federation of Bosnia and Herzegovina | (840)                           | (4.2%)         | (3.2%)                 | 12 (6)         | 70,000 (50,000)          |
| Montenegro                           | 6,219                           | 31.6%          | 45.0%                  | 12 (13)        | 150,000                  |
| Serbia                               | 6,002                           | 30.5%          | 7.7%                   | 15 (20)        | 300,000                  |
| Albania                              | 158                             | 0.8%           | 0.5%                   | NA             | NA                       |
| <b>TOTAL</b>                         | <b>19,680</b>                   | <b>100%</b>    |                        | <b>56</b>      | <b>970,000 (750,000)</b> |

Source: WBDIWRM Inception report and consultant

FIGURE 2.1-1 DRINA RIVER BASIN



Source: WBDIWRM Inception report

Drina has very torrential character in its upper catchment (the erosion and flood risks are limited by 771 km of dikes). Upstream, the river is hemmed in by in deep valleys and steep banks, while in its lower reaches, in the plains of the Sava River, it meanders and flows along several channels often changing course.

Geological characteristics of DRB has some differences in the upper, middle and lower Drina Basin. In the upper Drina River watershed is characterized by massive, thin bedding and bedding limestone, dolomitised and sandy limestone, rarely dolomites, and purely reef organic limestone; Marls and shales from Neogene, Cretaceous flysch diabase-chert formation and schists. In the middle Drina watershed, igneous rocks, serpentinites, sandstones, locally sandy and marl limestone are characteristic, while in lower Drina watershed: gravels, sandy gravels and gravelly sands, sporadic sands (more information on Geological and hydrogeological characteristics of DRB is presented in the document: “Technical support papers” of the Environmental and Social Management Plan/ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

The morphology of the terrain in DRB influenced on the river flow rates, resulting in extreme high and low flows, with part of the base-flow due to snowmelt. The extremes are exacerbated by un-harmonized operation of numerous hydropower plants. The river has generally good water quality characteristics, making it particularly suitable for hydropower potential-HPP. DRB hosts nine medium to large hydropower generation dams, but an estimated 60 % of the potential for hydropower generation remains untapped. The total technically used hydro-potential is 1,838.6 MW, with estimated annual production in 2014 of 5,200 GWh (according to web published annual production of HEs of Višegrad, Zvornik, Bajina Bašta, PSHPP Bajina Bašta,



Uvac, Kokin Brod, Bistrica and Potpeć<sup>3</sup>). All DRB countries are participating in the European Union's (EU) Emissions Trading System (ETS), having the goal of increasing their electricity production. About 326MW of capacity is currently in the planning stage with various concessionaires. However, as all three countries are on an accession path toward EU, their policies are predominately shaped by the EU *acquis* in the harmonization process, and among other topics on water management, climate change and energy. This harmonization process will lead in 2015 all three countries to deregulate their power sector under the Vienna Accord, which will drastically affect the hydropower concession system on the Drina.

The central DRB area crosses three national parks: the Durmitor National Park in Montenegro, Sutjeska National Park in Bosnia and the Tara National Park in Serbia (with Drina River tributaries, it extends to other national parks, nature reserves and regional parks in all three countries). The Drina River Basin is home to the second deepest canyon in the world, the Tara River Canyon. At nearly 100 km long and about 1800 m deep, the canyon is protected as a UNESCO World Heritage site and is a popular river rafting route. 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. 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, abounds in fish - both farm raised and wild. The protected nature areas - mostly forests and meadows upstream, and some wetlands - also depend on adequate water provision at local scale and are now increasingly threatened by a dominating development desire as well as pollution and two decades of failing river maintenance.

Plans for new protected areas are in progress and are being considered by the riparian state governments. In the DRB area 4 Emerald sites have been proposed for BiH, 14 sites have been proposed for Montenegro and it pushed governments to protect more effectively the species requiring specific protection measures according to the Bern Convention. In Serbian part of DRB, two areas of extraordinary environmental characteristics, Mokra Gora and Zaovine, are on the preliminary list of the Drina Cross-border Biosphere Reserve (MAB-UNESCO) together with parts on the territory of the Republic of Srpska (BiH). The table with the protected areas that are located within the DRB is provided in the document: "Technical support papers" of the Environmental and Social Management Plan/ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

Beside economic potential (HPP) and biodiversity richness, the tourism is important development potential of the basin. The Tara Canyon in Montenegro is a UNESCO World Heritage Site, and additionally national parks in the basin are of exceptional natural beauty. Alongside with hydropower and tourism, the DRB is important for water supply for human consumption, for recreation, fisheries (commercial and sporting) and irrigation.

The Basin has experienced major floods in recent years, especially in 2010 and in May 2014 that caused loss of life and major destruction, principally due to the inadequate flood preparedness and flood protection measures. Notwithstanding, seasonal droughts have also occurred which affect biodiversity, fisheries, groundwater supply and agriculture.

Transboundary impacts exist in form of altered flow rates due to reservoir operation, intensive forestry (including wood and paper industry) and accidental pollution (petrochemical and metallurgy industry) as well as from intensive agriculture in the lowest section. While the majority of related risks are the culmination of years of substandard extraction and waste management activities, problems at these sites have been worsen

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<sup>3</sup> <http://www.henadrini.com/?lang=en>; <http://www.dlhe.rs/latinica/hidroelektrana-zvornik>; <http://www.dlhe.rs/latinica/he-bajina-basta>; <http://www.dlhe.rs/latinica/he-kokin-brod>; <http://www.dlhe.rs/latinica/he-potpec>; <http://www.dlhe.rs/latinica/he-uvac>;

by dramatic changes in economic and political conditions, conflict and socio-economic adversity during the 1990s, and resulting in suspension of industrial activities without appropriate closure measures. There are numerous abandoned or “temporarily abandoned” sites in the region that are gradually (or sometimes rapidly) deteriorating, accompanied with many unregulated dumps of untreated or inadequately treated waste, and wastewaters are discharged into the river and its tributaries. Towns downstream do not have regulated dumping sites and approximately 30% of all floating waste ends up in the riverbed (Table 2.1-2). These sites pose risks to local communities, the environment and international relations. With the recent devastating flood occurrences in DRB, the importance of the existence of the trans-boundary early-warning mechanisms has been evident.

TABLE 2.1-2: ANNUAL PRODUCTION OF MUNICIPAL WASTE IN DRB

|                        | Bosnia and Herzegovina | Montenegro | Serbia  |
|------------------------|------------------------|------------|---------|
| <b>Number of towns</b> |                        |            |         |
| <b>in basin</b>        | 10                     | 7          | 8       |
| <b>Inhabitants</b>     | 310,000                | 146,000    | 210,000 |
| <b>Produced waste*</b> | 90,000                 | 35,000     | 60,000  |
| <b>Treated waste*</b>  | 0                      | 0          | 0       |

\* in tons per year

Source: ICPDR, <http://www.icpdr.org/main/publications/drina-rivers-floating-problem>

DRB and its tributaries are closely connected to local economies, through insecure water supply resulting from fluctuating groundwater tables affected by reservoir operation, to a highly unstable river morphology and high incidence of local floods by the main rivers and by mountain torrents. In addition to insecure water supply, DRB local communities are facing the local pollution and lake eutrophication challenges, which cause daily damage to water supply, agriculture, tourism and biodiversity. Strong currents, amplified by daily discharges from reservoirs and rapidly erode riverbeds and undercut embankments are endangering housing, infrastructure and arable land, all elevating the importance of municipalities and local communities needs and opportunities for development, becoming increasingly politically sensitive factor for developing future investment plans in the region/basin.

The basin is facing decrease of the population size, which is slowly declining, as there is lack of job opportunities and people are migrating to larger cities or abroad looking for work. In 2011, the DRB faced the unemployment ranging from around 19.7% for Montenegro, 22% in SRB to 27.6% for BiH. This is an additional reason why the local necessities need to be carefully studied and taken into account in the future development plans for DRB.

Drina River Basin is also prone to droughts and has suffered prolonged periods of below average rainfall especially during summer months. Whilst 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 intensity across the DRB. The drought in 2012 was a substantial challenge for hydropower generation in Serbia, as well as agricultural production. Info on land use in DRB is provided in the document: “Technical support papers” of the Environmental and Social Management Plan/ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

All above physical and natural characteristics of DRB, as well as economic and developmental potential strive for more efficient and closer cooperation between basin countries, especially of the water management and energy sectors, which has been a major weakness for implementation of flood protection and flood control activities. In addition, the natural uniqueness of DRB provide abundant source for cross-border cooperation, thus providing solid ground for further tourism and eco-tourism development, contributing and leading to economy revival of the region.



DRB countries pursue similar economic development objectives, share common heritage trends and development concepts, which all requires practical cooperation in the sphere of their interests, briefly presented above. The cooperation among countries should continue cooperation which is occurring on the local level, among municipalities in DRB, where thirteen municipalities from the three countries have founded a joint platform as a Drina EuRegion.

## 2.2 Socio Economic Characteristics of the Drina Basin

DRB flows through three countries (BiH, Montenegro and Serbia), which during the past two decades survived the internal structural and political changes. According to economic criteria, DRB riparian countries belong to the upper middle-income countries, whose slow economic development was further affected by the global economic crisis and the floods in 2014.

Local economy in Montenegro is mostly based on the wood processing industry (Pljevlja - 47%), followed by agriculture (Bijelo Polje-largest amount of cultivable land but only 19% is irrigated). Fisheries sector in DRB municipalities in Montenegro is organized through small fish farms (family or small companies owned), with production of 5-20 tons per year, and two large privately owned fish farms, with the production of 5-20 tons per year. Tourism is developed in the Durmitor and the Tara River National Park through promotion of eco-tourism, sport and adventure as well as sport fishing.

In Serbia, the wood processing industry is one of the most important industries in DRB area. Public Enterprise "Serbian Forests" manages state-owned forest assets, while furniture companies and sawmills are mostly privately owned. Agricultural production in SRB is mainly focused on small agricultural farms and family farms that produce crop and livestock for their own needs. Fish sector is developed in the municipality of Mali Zvornik, mainly breeding carp and trout. The significance of the Drina River is reflected in its hydro potential, which is only partially used for "Bajina Bašta" hydro power plant. The Tara National Park in Serbia contributes to the development of tourism, as well as adventure tourism, e.g. rafting and sport fishing on the Drina.

In the northern part of the DRB in BiH, local economy is based on trade, manufacturing and agriculture. In this part of the DRB there are significant areas of farming land where cultivation of cereals and vegetables is mostly represented. As far as other municipalities are concerned, it can be concluded that the local economy is based on the electric power industry (Ugljevik), mining (Milići), energy industry, forestry and agricultural production within the small farms. The income source from tourism has been significant to Municipality of Foča, due to the NP Sutjeska. The only significant fish farm in RS is on river Krupica, near Foča. There are some natural fish farm and reservoirs, "Višegrad" (area of 890 ha), "Bajina Bašta" (1,030 ha) and "Zvornik" (1,380 ha), with 25-35 kg/ha of fish estimated to be available.

Labour market has not recovered from economic crises in 2014. The unemployment rate is significantly high in all three countries (BiH-27.5%, MNE-19.4%, SRB-20.8%), which is a clear indicator of the biggest problems for all three economies. The rate of unemployment in the DRB is 22.56%. The negative impacts of floods affected a large part of the population and land mass, especially in BiH. The assessment of flood damage in BiH in 2014 amounts to about 15% of GDP, damage (9.3% of GDP) and losses (5.6%), in SRB about 4.7% of GDP, 2.7% of GDP referring to damage and 2% of GDP to losses in 2014, respectively.

One of the most important economic revenues is certainly the sediment exploitation, which, on the other hand, causes the major dispute between the riparian countries (e.g. the determination of the border between Serbia and BiH).

More information on Socio-economic characteristics of DRB is provide in Annex 9.2 of this Report, while details of Natural and Physical characteristics (e.g. water quality, hydropower, flood hazards risk, climate change, monitoring) of the DRB is provided in the document: “Technical support papers” of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

## 3. Environmental Assessment of WBDRBM project and investments

### 3.1 Environmental assessment

The GEF-SCCF West Balkans Drina River Basin Management (WBDRBM) Project is classified as the Category 'B' pursuant to the Environmental Assessment OP 4.01. Taking into consideration project characteristics and the geographical scope, it is necessary to carry out the environmental assessment and prepare Environmental and Social Framework document for the overall project. The WBDRBM project activities envisions cross-border/trilateral-joint projects that covers DRB countries, BiH (FBiH and RS), Montenegro and Serbia, as well as pilot investments that will be carried out on national level in each country, which defined scope of activities that might trigger national regulations and requirements in the sphere of environmental protection, along with WB requirements.

Analysis of the necessity for environmental assessment of sub-projects/activities defined within WBDRBM implementation components - was based on the positive regulations in the field of environmental protection and impact assessments in DRB countries. Taking into account that the WBDRBM Project did not undergo the full environmental impact assessment prior to ESMF preparation, the Environmental Assessment is given on a general ("generic") level and based on the level of sub-project information known at the time of preparation of this document – mid-November 2015.

The overall WBDRBM project impacts are considered positive as the project actions will strengthen the preparedness of countries of DRB for potential and possible climate change impacts on DRB water resource use and management, as well as mitigate or prevent risks pose by climate change to environment, humans and property. The project activities will have positive impact on three levels: (a) cross-border/regional, (b) national and (c) local.

- (a) On cross-border/regional level the project impacts will be through: strengthening cooperation and coordination among relevant authorities in DRB countries, thus leading to more efficient and integrated water resource management in DRB; strengthening data gathering relevant hydro-meteorological data in DRB, which shall lead to more efficient monitoring of trends and provide base for effective resource management, preparedness for climate impacts, prevention and impact mitigation.
- (b) On national level, the project will finance activities that will support the national preparedness for more effective water resource management and environmental protection from potential and actual climate change impacts. The pilot projects will increase and strengthen the level of surface water data gathering, underground data monitoring, efficient waste and waste water management in DRB.
- (c) On local level - grant schemes will contribute to effective local stakeholder engagement and rising awareness on climate change impact to water and environmental resources, and the actions that could minimize negative impact and/or foster resilience to it.

Pollution that can occur in various stages of construction, reconstruction, rehabilitation and/or repair is temporary in its scope and nature - and can be mitigated through the application of standard mitigation measures and good practices in engineering design, application of the code of good construction practice, and regular operation and maintenance.

In addition to the relevant WB polices, as outlined in the this Report, the national legislation of BiH, MNE and SRB will be observed and taken into consideration in preparation of site-specific EMPs. Where the national and WB requirements differ, the more stringent will apply.

For the purpose of the assessment, at the beginning an overview of common contents of environmental impact assessment documents for the planned subprojects in the DRB is presented in the Table 3.1-1.

**TABLE 3.1-1 COMMON CONTENTS OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT DOCUMENTS FOR THE PLANNED SUBPROJECTS IN THE DRB**

| <b>Content of EIA in line with the Annex of OP4.01 of WB</b>   | <b>EIA contents in line with the BiH (FBiH and RS), MNE and SRB requirements</b>  | <b>Common contents that corresponds to the requirements of the WB and BiH (FBiH and RS), MNE and SRB requirements</b>   |
|--|---|---|
| 1.Introduction<br>2.Project description<br>3.Description of environment and social milieu<br>4. Possible impacts on social milieu related to the proposed project activities<br>5. Environment management plan<br>4.1. Environmental impact prevention/mitigation measures plan (table)<br>4.2. Environment monitoring plan (table)<br>4.3. Environment management plan implementation responsibility<br>4.4. Capacity building and training | <ul style="list-style-type: none"> <li>description of the project, including information about its location, purpose and size,</li> <li>description of potential environmental impacts of the project during its construction or execution, during its operation, or exploitation,</li> <li>description of measures envisaged to prevent, reduce or eliminate adverse environmental impacts of the concerned project,</li> <li>a brief overview of the options considered by the project owner and the list of reasons for the chosen solution, considering the impacts on the environment,</li> <li>excerpt from the planning act,</li> <li>information about possible difficulties the project owner encountered during the data collection,</li> <li>non-technical summary of the information from previous points</li> <li>attachment: Waste Management Plan as per Law on Waste</li> </ul> | 1.Introduction<br>2.Project description<br>3.Description of environment and social milieu<br>4. Possible impacts on social milieu related to the proposed project activities<br>5. Environment management plan<br>4.1. Environmental impact prevention/mitigation measures plan (table)<br>4.2. Environment monitoring plan (table)<br>4.3. Environment management plan implementation responsibility (4.4. Capacity building and training)<br><ul style="list-style-type: none"> <li>brief overview of the options considered by the project owner and the list of reasons for the chosen solution, considering the impacts on the environment,</li> <li>excerpt from the planning act,</li> <li>information about possible difficulties the project owner encountered during the data collection,</li> <li>non-technical summary of the information from previous points</li> <li>attachment: Waste Management Plan as per Law on Waste.</li> </ul> |

Source: WBDRBM Consultant review

## 3.2 Overview of the environmental impacts of the project investments

The proposed WBDRBM components' sub-projects contain actions which involve: fostering and strengthening government and stakeholder cooperation in DRB countries in the sphere of water management, hydrological data gathering, exchange and monitoring all aiming at understanding the climate change impact on DRB, strengthening hydro-meteorological services in the basin with equipment, together with some rehabilitation and reconstruction activities. The overall project impact on environment and water management will be significant and positive, while minor negative impacts that will be a consequence of human presence and

nature of construction works at specific locations will be limited to the location of works or its surrounding vicinity and mitigated by application of specific mitigation measures.

### **Impacts in the project preparation phase**

The preparation phase of WBDRBM components' sub-projects is not expected to have negative impacts on environment, since this phase contain preparation of the studies, concepts or main design of works to be implemented afterward, upon the availability of additional funding. Impacts on land and acquisition during this phase of the project are also not expected. As stated previously, the overall project impacts are considered very positive because the objective of the project is to prevent risks to environment, humans and property from the climate change impacts on water resource management in DRB.

One of the joint activities for all DRB countries will be strengthening of Hydro-meteorological Services that will results in equipping the services with hydro-technical infrastructure, which do not have negative impact on environment. The "houses" that store such hydrological stations are made from metal and are as such brought to the location to be put on the pipes, to which the "house" is anchored for stability reasons. There is no radiation linked with the hydro-technical infrastructure, or special electricity needed as it uses solar panels for power supply. Slight amounts of soil resulting from pipe positioning excavation could be use locally for planting. Small amounts of waste, if generated from unpacking of equipment, shall be disposed at the local landfill or directly into the waste containers at or nearby location.

Overview of initial environmental assessment of each component sub-project, encompassing categorization according to WB OP 4.01, followed by the impacts and potential environmental management issues is presented in the Annex 9.5 of this Report.

### **Impacts in the pilot projects' implementation phase**

Impacts on environment which will occur during the project implementation are a direct consequence of human presence and assembly and construction/reconstruction works at location. Pollutions that occur in the phase of reconstruction, rehabilitation and/or repair are temporary in their scope and limited in intensity although they can cause consequences if breakdowns occurs. However, a significant negative impact on environment and local population is not expected. Similarly, it is unlikely that any breach of nationally allowed concentration of pollutants into the air, soil or water as the works can occur if national legislation is followed in respect to legislation requirements and defined mitigation measures including preparation of EMP/EIA to be developed for each sub-project prior to its implementation.

During the project implementation phase impacts on land use is not expected since the construction activities are planned on state or municipal owned land. Based on available data, the project activities will be carried out on land that is not used for living and does not represent a source of livelihoods.

Minor social impact is possible due to restriction of access to assets or resettlement. If this would be the case due to the common (public) interest, the statutory requirements have to be fulfilled - the right to ownership, or the property may be restricted or fully acquired through the prescribed process. In that case it is the obligation of both, the state and the acquisition beneficiary to provide appropriate compensation for the pertaining property, and, in addition, to protect the person whose property is subject to acquisition in another proper way, or preserve its accomplished living standard and, generally its living, social, socio-economic, cultural, and similar circumstances.

Some of basic types of pollution that can occur during the works execution, linked to sub-project actions are:

- **Pollution of soil and agricultural land**
  - Soil degradation.
  - Contamination of surrounding soil with emission of gases, dust or heavy metals from transportation vehicles /construction machines.

- Contamination caused by temporary construction sites, temporary roads or disposing of waste.
- Contamination from discharging used waters from the construction site into soil.
- **Water pollution**
  - Discharging diverse waste products from construction site process and construction site complex (liquids, particles and solid waste) on banks or directly into river beds leads to spread of pollution along the watercourse.
  - Discharging used waters from the construction site (technological and hygienic) into watercourses.
  - Excavations in the field can cause the cutting – opening of aquifers, i.e. disruption of groundwater (water cycle).
  - Fine fractions can be washed away during the execution of construction works under influence of material falls from temporary landfills. This will make surface courses turbid.
  - Waste material, mechanical oil, fuel etc. can be disseminated by malfunctioning construction machines and vehicles or negligent personnel.
  - Location of machines, temporary construction material depots near rivers or surface watercourses.
- **Air**
  - Construction works might result with increased concentration of polluting substances, primarily dust and exhaust gases from vehicles (machines engaged in the works execution).
  - Suspended particles (dust) that will rise from transport roads when used for machinery transportation or trucks passing.
- **Noise levels**
  - Human presence and execution of works at the location, and movement of vehicles and construction mechanization.
- **Flora and fauna**
  - Increased noise levels might cause temporary disturbance of wildlife.
  - Emissions from trucks and construction machines might have negative impacts on vegetation around the construction site.
- **Impacts on habitats and biodiversity**
  - With envisioned reconstruction and/or rehabilitation actions on current infrastructure, facilities and equipment, loss of habitat, fragmentation of habitat and thereby a significant negative impact on biodiversity is not envisioned. With potentially new infrastructure/equipment envisioned, which could lead to the occupation of new land or best available location, the loss and/or fragmentation of habitat might have potentially negative impact on biodiversity, which are envisioned to be of a local significance if the works are taken place in the protected areas.
- **Impacts on settlements and population**
  - No significant impact on local population quality of life is envisioned as no major construction is envisioned. Temporary impact during the reconstruction/construction works through increased noise, vibrations, dust could be experienced.
- **Impacts on cultural and historic heritage**
  - No cultural and historic values are located in the zone of works. However, if they are found by chance, the obligation is to stop the works and notify relevant national institutions responsible for protection of cultural and historic heritage (in all DRB countries mainly the Institutes for Protection of Cultural and Historic Heritage are responsible for these activities and undertake measures to prevent damage of the findings).
- **Impacts on climate**
  - Sub-projects implementation will have no negative impact on climate.

Impacts on environment which will occur during the project implementation relates to Component 1: *Multi-state Cooperation on International Drina Management* and Component 2: *Pilot investments for Integrated Basin Management and Climate Change Resilience*, with sub components 2A- *Strengthening capacity for climate change resilience* and 2B - *Pilot Investments for Basin Climate Change Resilience and flood management* as direct consequence of human presence and assembly and construction/reconstruction works at locations, such as drilling works for setting piezometers for monitoring of underground water at locations on rivers Lim, Piva and Čehotina in Montenegro, or putting embankments and gabions as flood prevention measures at critical locations on river Lim in Montenegro or in Municipality Ljubovija in Serbia. Further, the works will take place for construction of wastewater treatment plant in the Municipality Mali Zvornik in Serbia (Construction of WWTP Sakar and WWTP Novi most) and water source well in Sapna. Pollutions that occur in the phase of reconstruction, rehabilitation and/or repair are temporary in their scope and limited in intensity, although they can cause consequences if breakdowns occurs. However, a significant impact on environment and local population is not expected. The breach of nationally allowed concentration of pollutants into the air, soil or water as are also not expected as the works will be implemented with best praxes and in accordance with legislation requirements, adjoined with defined mitigation measures prescribed (where needed) by the EMP/EIA to be developed for each sub-project prior to its implementation.

Civil and research works under the above stated WVDRBM components and sub-components, including construction of WWTP, drilling or flood protection measures might result in some adverse environmental impacts, unless appropriate design, construction, and operational practices are followed. Potential environmental impacts are expected to be local and occur during implementation/construction only. The implementation of the EMP would minimise and prevent identified negative impacts, through set of specific environmental mitigation and monitoring requirements to be taken by the contractor and/or responsible parties (for example, municipalities, Water association, etc.) during implementation and operation.

In order to ensure the sustainability of environmental protection through mitigation measures set in the EMP, monitoring is prescribed ensuring the compliance with national legislation standards on pollution ceilings and relevant permits (construction permit, wastewater discharges, air quality, appropriate assessment, water permit, etc.). The EMP's mitigation measures encompass actions that will reduce hazards, which could impact health and safety of the construction workers, and the public; measures related to soil and water pollution from oil and fuel, noise, air quality (dust), excavation of materials and disposal of surplus soil/earth and other materials; degradation of historical and cultural sites, etc. As identified, the attention shall be paid to chance findings of objects of archaeological or cultural value, during construction or research works. As stated in the relevant regulations on Cultural Heritage in DRB riparian countries, works will be suspended immediately if cultural/archaeology objects are found, and the contractor will inform the relevant authorities of these find(s).

The Small grant scheme under the Component 2A - *Strengthening capacity for climate change resilience* will support community-based demonstration projects in all DRB countries. These projects actions shall build ownership of project results, involve various stakeholder groups and strengthen on local level adaptation to climate change, reduce pollution, preserve natural values of sensitive habitats, foster ecosystem services and improvement of water quality. The projects will be administered according to an Operations Manual, which would include guidelines for environmental analysis and monitoring of small grants. Identified small grants project, within the implementation of the WVDRBM will have modest financial support (10-20,000 USD), thus would not include extensive activities and the impact would, if at all, be minor. However, the positive aspects of all various community based stakeholder engagement and use of NGO network, as well as schools or similar will significantly contribute to awareness rising and promotion of the value and need for integrated water resource management and its adaptation and or mitigation of climate change impacts.

Generic EMP has been prepared for the purpose of this Report and it is provided in the Annex 9.4 of this Report. The generic EMP provides mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation. In addition, legislative requirements on the need for environmental impact assessment of project encompassing works and/or analyses in environment shall be



respected (relevant opinion on the need for undertaking the EIA shall be sought, where applicable and needed), as well as relevant permits obtained.

Following is the overview of safeguard policies triggered by the WBDRB projects and brief reasoning:

| Safeguard Policies Triggered by the Project                             | Yes | No |
|---|-----|----|
| • Environmental Assessment ( <u>OP/BP/GP</u> 4.01)                      | √   |    |
| • Natural Habitats ( <u>OP/BP</u> 4.04)                                 | √   |    |
| • Pest Management ( <u>OP</u> 4.09)                                     |     | √  |
| • Cultural Property ( <u>OP</u> 4.11)                                   | √   |    |
| • Involuntary Resettlement ( <u>OP/BP</u> 4.12)                         | √   |    |
| • Indigenous Peoples ( <u>OD</u> 4.20, being revised as <u>OP</u> 4.10) |     | √  |
| • Forests ( <u>OP/BP</u> 4.36)  | √   |    |
| • Safety of Dams ( <u>OP/BP</u> 4.37)                                   |     | √  |
| • Projects in Disputed Areas ( <u>OP/BP/GP</u> 7.60)*                   |     | √  |
| • Projects on International Waterways ( <u>OP/BP/GP</u> 7.50)           | √   |    |

**Natural Habitats.** The OP/BP 4.04 is triggered since planned activities will finance studies encompassing research works and analyses which location is not known at the level of current projects' scope. However, taking account that DRB includes several national parks, nature reserves and areas under UNESCO protection, the existence of these areas should be taken into account while project desk research and decision making in order to avoid, minimise and/or mitigate potentially negative impacts of the activity. One of the instruments in that respect is the Appropriate Assessment or Permit to work in protected areas, if the project/activity shall take place, as identified in the Environmental Assessment. At the moment of this analyses none of the sub-projects envisioned activities in protected areas, or valuable natural habitats.

**Forest.** The OP/BP 4.36 has been triggered since planned activities will finance studies encompassing research works and analyses which location is not known at the level of current projects' scope. Taking into account that DRB is bounded and abundant in this resource, this notion should be taken into account while project desk research and decision making in order to avoid, minimise and/or mitigate potentially negative impacts of the activity.

**Cultural Property** OP/BP 4.11. The sub-projects scope of work do not directly affect the cultural and historic properties. If the activities within the projects: *Arrangement of degraded banks of Drina riverbed and its tributaries in urban city areas* or *Assessment of Climate change impacts on groundwater in Lim, Piva and Čehotina river Basins* (drilling for the purpose of setting the piezometers for underground water analyses), by chance encounter such objects or prescribed actions' location are to be near culturally sensitive areas and/or cultural sites, the EMP for the respective site should identify procedures in accordance with the national regulations in that respect. The EMP for the respective site will note that archaeological chance-finds should be covered by a chance-finds procedures clause incorporated in the contractors' agreements.



**Project on International Waterways, OP 7.50.** The proposed project will provide a number of investments that will target improved water resource management in the Drina River Basin which is part of the wider Sava River Basin, therefore triggering the World Bank OP 7.50 – Projects on International Waterways. In addition, Drina River being a border river (part of the border between BiH and SRB) also trigger this WB OP. This OP requires notification procedure, which involves sharing all relevant project related information to riparian countries. The project details attached to the notification letter usually relies on EIA and/or environmental assessment, to make determination that the Bank financed Project will not cause damage to riparian countries.

**Involuntary Resettlement, OP 4.12** The Project triggers OP/BP 4.12 on Involuntary Resettlement due to activities foreseen under Project sub-component 2B (support for pilot project investments in all three riparian countries that affect the reduction of the impact of climate change issues). The locations of these pilot projects and the extent of resettlement required have not yet been defined, as the detailed designs are not available at appraisal stage. Based on the conducted initial due diligence and screening of likely land acquisition and resettlement impacts, the potential for such impacts has been estimated to be acceptably low to moderate, given that the subprojects within sub-component 2B will be implemented mainly on land owned by municipalities or other public bodies. Based on the current available data, no physical displacement of occupants (legal or illegal) or restriction of access to resources or income streams is expected as a result of the Project, and the Project is not expected to entail permanent acquisition of residential or commercial structures.

As a guiding resettlement instrument, three separate Resettlement Policy Frameworks (RPFs) are developed, one for each country, to mitigate potential resettlement impacts. When specific social impacts become known, the RPF will serve as a guide for development of Resettlement Action Plan (RAP) for specific locations, in accordance with the policies and procedures of the WB.

For the future implementation of the sub-projects, following steps concerning environmental and social assessment process should be undertaken in all three countries<sup>4</sup>:

Step 1. Prepare Environmental Management Plan and Request for Environmental Permit (where required) for priority schemes with the following content:

- full project description (water needs, level of existing data, need for intervention/construction/reconstruction, proposal for the operation and management of the facility/equipment/systems);
- description of the environmental and social settings (physical environment, biological, environment, socio-cultural characteristics);
- environmental impact assessment;
- social impact assessment;
- environmental and social management plan;
- environmental and social impact mitigation plan;
- environmental and social monitoring plan.

Step 2. Organize consultation with stakeholders on national and local level. If the sub-projects requires development of the nationally required and regulated EIA, such process require the public involvement, public hearings and publicly disclosed study in the manner prescribed by legislation of each DRB country (comments on public document recorded and the reply provided by the institution/organization responsible for preparing the EIA). For certain sub-projects a decision on the necessity decide on necessity to undertake EIA procedure shall be asked for by the relevant national authority.

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<sup>4</sup> National pilot investments shall trigger (if found relevant) different environmental and/or social requirements: EMPs - valid for all three countries; construction/operational/use permit-valid for all three countries; Appropriate Assessment – (if needed)-valid for MNE /SRB.

In the Republic of Srpska the E(I)A process is based on EP, which in turn is a request for other necessary permits (such as town planning consent in the FBiH or a construction permit in the RS). Steps necessary to acquire EP are contained in both the categorization and screening.

Step 3. (If needed and where applicable) Obtain Various Permits and approval:

- *Water Approval: in FBiH* - Engage expert institution registered for project design and licensed by the Federal ministry responsible for water management to prepare investment-technical documents (detailed reconstruction design). The documentation should be prepared in accordance with requirements set in the Law on Physical Planning and Land Use.
- *Construction Approval (where applicable)*: Submit the Request for Construction Approval to responsible national or municipal authority.
- *Obtain Water Permit (where applicable)*: Prepare Project Final Design and submit it together with the Request for Water Permit.
- *Obtain Use Permit*: Submit the Request for Use Permit to the responsible national or municipal authority.
- *Obtain Permit for works in protected areas*: Submit the Request to the responsible national or municipal authority.
- *Obtain Appropriate Assessment (Ocjena prihvatljivosti)*: Submit the Request to the responsible national/management of protected areas authority.

### 3.3 Ecological and social check-up form

The ESMF serves as environmental and social management guidance during project preparation and implementation until project documents, including the Environmental and Social Management Plan, will be developed for individual subprojects or types of works. Taking this into account, together with the notion that the WBDRBM project has not undergone through full environmental impact assessment, the ESMF instrument known as simplified ESMP (the so called “checklist”) will be elaborated further in this chapter, and proposed for further implementation assessment of sub-projects. Based on this information, a site-specific ESMPs will be prepared for each specific sub-project, to be included in respective bidding and contract documents, as relevant.

The WBDRBM Screening Checklist, serve as a simple tool for identification of potential environmental and social impacts related to reconstruction/construction activities envisioned by pilot investments sub-projects. Additionally, the checklist will also support decision-making process for the need of the preparation of the detailed EMPs or RAPs. The WBDRBM screening checklist provides a set of associated environmental and social mitigation measures as well as monitoring measures that will help assess the implementation of the selected mitigation measures. The checklist-type format has been developed to provide “example good practices” and designed to be user friendly and compatible with the World Bank safeguard requirements.

The term reconstruction is understood to cover rebuilding of infrastructure after being damaged or destroyed to a previous state without change in its original purpose or increase of capacities.

The checklist-type format attempts to cover typical core mitigation approaches to civil and other reconstruction works with small, localized impacts on environment and human health. It is assumed that this format provides the key elements of an Environmental and Social Management Plan (ESMP) or Environmental Management Framework (ESMF), Resettlement Policy Framework (RPF) and Resettlement Actions Plan (RAP) to meet World Bank Environmental Assessment requirements under OP 4.01 and OP 4.12. The intention of this checklist is that it would be applicable as guidelines for the rehabilitation works contractors and constitute an integral part of

bidding documents and contracts for contractors carrying out said works under Bank-financed infrastructure rehabilitation subprojects.

It consists of following major sections:

1. Administrative and institutional data: includes a descriptive part that characterizes the project, including administrative and institutional data and short description of project's technical content and location of works execution. This section could be up to two pages long. Attachments for additional information can be supplemented when needed.
2. Project exclusion criteria: includes set of four question that should help the evaluator to understand whether the project is suitable for financing under this financing scheme.
3. Environmental and social screening: includes set of question about possible environmental and social impact of a project where identified environmental and social issues can be checked in a simple Yes/No format. If any given issue is triggered by checking "yes", the corresponding mitigation and monitoring measures are to be implemented.
4. Summary of features of project and of its location indicating the need for specific ESMP development: includes a descriptive part that summarizes important conclusions about the identified environmental and social impacts, conclusion about possibility to mitigate impacts with available measures and indicating the need to develop a more specific ESMP for a specific subproject.
5. Recording of decision: includes several options related to the final decision on a specific subproject.

The Environmental and Social Screening section should be completed in four steps:

- ✓ Step 1 – user should identify present or potential impacts of the project on environment among those listed in the column *Possible Environmental Impacts*. The appropriate Yes/No boxes adjacent to each impact identified should be checked.
- ✓ Step 2 – for each impact identified, appropriate mitigation measures are listed in the column *Mitigation Measures*. One environmental or social impact can trigger one or several of the mitigation measures stated in the table. An attempt is to be made to implement all mitigation measures proposed. Following completion of monitoring activities, those measures that are actually implemented should be circled.
- ✓ Step 3 – the monitoring parameters appropriate to mitigation measures among are listed in the column *Monitoring parameters*. The proposed monitoring parameters will be checked accordingly, as suitable. Decision on which of the monitoring parameters is optimal to monitor is based on the possibility of occurrence of the impact and its severity, cost of monitoring, etc. Following completion of monitoring activities, those parameters that are actually monitored should be circled.
- ✓ Step 4 –the Bodies (Proponent, Design Engineer, Contractor, etc.) listed in the column *Responsible body* are identified as responsible for implementing mitigation measure and/or conduct the monitoring. They should be notified of their obligations.

Leaving the box unchecked means that particular impact is not present or identified. For each impact box that is checked, at least one box in the columns for mitigation measures needs to be checked. The proposed monitoring measures will be checked accordingly, as suitable.

A form of the Checklist questionnaire and generic Environmental and Social Management and Monitoring Plan is provided in the Annex 9.3 and 9.4 of this Report.

### 3.4 Responsibility for implementation

It is the responsibility of the Contractor to ensure the proper execution of works, according to prescribed measures and in line with national and international standards. Therefore, the Contractor should appoint a person responsible for environment protection (B.Sc. environmental engineering) with adequate experience to be responsible for the implementation of all demands of environment protection and the Environment and

Social Monitoring Plan implementation. The appointed person shall ensure the compliance with environmental standards and is responsible for environment protection according to the Environment Monitoring Plan (to be prepared for site-specific activities/projects), in line with the clearly defined tasks and responsibilities, which encompass among others: works are executed in line with good construction practice, waste is adequately managed at the construction site, environment protection issues be communicated with supervising body, environment protection issues be communicated with local community. The works are supervised by nominated supervising body, which controls the activities that are taken in line with the environment management plan.

### 3.5 Capacity building and need for training

Implementation of Environment Monitoring Plan (to be prepared for site-specific activities/projects) does not require special training. In order to respect the prescribed measures and monitoring of works, thus achieving the environment protection to the best extent possible, the Contractor should enhance the proficiency of all employees through training and mobilization of all persons involved in the project. As a result, all employees at the construction site should be familiarized with: Environment Monitoring Plan requirements, Guidelines for the implementation of good construction practice, their tasks and responsibilities for achieving the prescribed actions in the Environment Monitoring Plan requirements, Potential consequences in the case of nonconformity of established procedures.

In addition to the contractor's employee's relevant qualification, the supervising body that supervises the works execution should have adequate qualifications and experience, i.e. to have a diploma of a civil engineer with at least 5 years of experience in the supervising body activities execution, in order to assure efficient and satisfactory conformity with procedures and requirements.

## 4. Legal FRAMEWORK

### 4.1 Water Management Legal Framework in Drina Basin Countries

Under the scope of the project *GEF SCCF West Balkans Drina River Basin Management (WBDRBM)*, the review of legislation in water management and flood risk management field is conducted at the level of Drina River Basin countries, Bosnia and Herzegovina/Republic of Srpska, Montenegro and Serbia. This chapter provides brief overview of the main water resource management legal framework. The more in-depth analyses of water management legal framework in DRB riparian countries is provided in the document: “Technical support papers” of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

#### **BiH (FBiH and RS)**

Field of integrated water resources management in BiH is regulated through a legal framework at the level of Entities (Federation of Bosnia and Herzegovina and Republic of Srpska). Specific jurisdictions are assigned to BiH Ministry of Foreign Trade and Economic Relations (MOFTER) over protection of the environment under the Law on Ministries and other administrative bodies of BiH (Article 9: ...relate to defining policy, basic principles, coordinating activities and harmonizing plans of the Entity authorities and bodies at the international level in the fields of agriculture, energy, protection of the environment, development and use of natural resources”.

In the Republic of Srpska, water resource management is the jurisdiction of the Ministry of Agriculture, Forestry and Water Management as an institution that implements the Law on Waters (“OG of RS”, No. 50/06, 92/09, 121/12) and bylaws. The basic Law has undergone several amendments in order to be harmonized with the EU regulations. In addition to integrated water management, the purpose of this Law is achievement of good status of water and prevention of its degradation, achievement of sustainable water use and ensuring equal access to water (Article 2). The Law prescribes the identification of locations and boundaries of structures and bodies of surface water and groundwater for the purpose of water management, as well as their initial characterization according to the methodology set out in the Water Framework Directive.

Water management framework in the FBiH is set by the Law on Waters (“OG of FBiH”, No. 70/06). This Law strived to transpose the Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000), which has been assessed as 93% compliant. The Law on Waters regulates water management within the territory of the FBiH, which includes: water protection, water use, protection from the harmful effects of water and arrangement of watercourses and other waters. The aim of the Law is to ensure water management in order to: reduce water pollution, achieve good water status and prevent degradation of water; achieve sustainable water use; ensure equitable access to water; encourage social and economic development; protect ecosystems; reduce the risk of flooding and other adverse impacts of water; ensure public participation in decision-making related to water; prevent and resolve conflicts related to protection and use of water; meet obligations under international agreements that are binding for BiH.

Both entities’ Water laws (Federation of Bosnia and Herzegovina and Republic of Srpska) prescribe the adoption of planning documents for water management. The Framework Plan for Water Management in Republic of Srpska<sup>5</sup> has been developed and it this document defines the strategic objectives of developing in the water sector in Republic of Srpska. It describes the current situation of water management infrastructure

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<sup>5</sup>Source: The Framework Plan for Water Management in Republic of Srpska

and the necessary conditions and criteria including restrictions for further development of water management and the entire water sector. Water Management Strategy of FBiH is the key document with the planning horizon being 2022.

The major goals defined in these documents are: need to adopt to new social circumstances, along with the EU alignment in the water management sector, increase in coverage and improvement of public water supply systems, ensuring conditions for sustainable use of water in the areas whose development depends on market interest and reducing the risk at extreme hydrological phenomena“.

## **MONTENEGRO**

Main legal act regulating water management is the Law on Waters (“OG of MNE”, No. 27/07, 32/11, 47/11, 48/15 from 2015). The Law on Waters regulates the legal status and the method of IWRM, water and coastal land and water facilities, conditions and method of exercising water activity and other issues of significance for water. In addition, the Law on Waters positions the monitoring of water quality and quantity to be under the auspices of the Ministry of Agriculture and Rural Development. Furthermore, a separate law regulates financing of water management activities. The Law on Waters prescribes development of the strategic environmental assessment (SEA), cooperation with public and compulsory harmonization with spatial planning documents.

The Law has recognized four categories of water acts: 1) water requirements; 2) water approval; 3) water permit and 4) water order. For ensuring a unified water regime, IWRM and a fair approach to waters, water acts set the requirements and the method of realization of water rights.

Water Management Master Plan (WMMP) of Montenegro represents the long-term national program of water management, and sets the elements of water management in the water area of the river basin. If the WMMP implementation cannot be ensured thorough water management plans, the Government, upon the Ministry's proposal, adopts a special water management plan for individual waterway categories or for individual water management issues.

Harmonization of regulations with EU regulations in the field of water management is partial<sup>6</sup>. The newly adopted Law on Waters has been aligned with WFD. However, the full harmonization will be achieved by the adoption of bylaw on water quality standards and criteria for determining the status of water (deadline: end of 2016), as well as by adoption of water management plans, and improvement of the monitoring system (2021), etc.

## **SERBIA**

The central legal act that regulates water management in the Republic of Serbia is the Law on Water (“OG OF RSRB”, no 30/10 and 93/12). Various regulations have been passed in accordance with this Law. Other regulations encompasses different aspects of water management and integrated river basin management, and among them the most important are in the field of environmental protection (e.g. pollution, waste management), energy sector (particularly renewable sources of energy, i.e. hydro energy) and water transport.

The Law on Water regulates the legal status of water resources, IWRM, water facilities and river basin land management, sources and means of financing water resources management, supervision over the

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<sup>6</sup> See: Report on analytical overview of Montenegro legislation compliance, Chapter 27 – Environment, Explanatory meeting: February 4-8, 2013, bilateral meeting: March 18-22, 2013.

implementation of the Law, as well as other issues, which are significant for water management (Article 1). Furthermore, the Law on Waters prescribes several types of planning documents, including: 1) Water Management Strategy for the Territory of the Republic of Serbia; 2) Water Management Plan; 3) Annual Water Management Program; 4) Plans for protection against adverse effects of water, consisting of: Flood Risk Management Plan, General and Operational Plan for protection against flood, as well as plans regulating water protection (Plan for protection of water against pollution and monitoring program) (Article 29).

The Law adopted in 2012 aimed at harmonization with the EU Water Framework Directive and other EU legislation. Approximately 76% of the EU WFD is transposed in regulations of the Republic of Serbia, and full harmonization is expected by 2018. Certain challenges expected with the implementation of WFD in Republic of Serbia are due to lack of necessary data on monitoring as well as capacity in institutions that directly implement the EU WFD.

Regulation on Water Classification ("OG of RSRB", No. 5/68) and the Regulation on Waterway Categorization ("OG of RSRB", No. 5/68) sets the water classification and waterway categorization.

## 4.2 Environmental Legal Framework

Under the scope of the project *Technical Assistance for the Preparation of the GEF SCCF West Balkans Drina River Basin Management (WBDRBM)*, the review of environmental legislation field is conducted at the level of Drina River Basin countries, Bosnia and Herzegovina/Republic of Srpska, Montenegro and Serbia. This chapter provides brief overview of the main environmental legal framework. The more in-depth analyses of environment legal framework in DRB riparian countries is provided in the document: "Technical support papers" of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

### BiH (FBiH and RS)

The main principles serving as a basis for environmental legislation in Bosnia and Herzegovina are defined in the are as follows: a) Sustainable development principle, b) Principles of precaution and prevention, c) Substitution principle, d) Principle of integration, e) Principle of cooperation and division of responsibilities, f) Public participation and access to information g) "Polluter pays" principle. There is no framework law on environmental protection at the state level, but there is the Law on Ministries and Other Bodies of Administration of Bosnia and Herzegovina ("OG of BiH", No. 5/03, 42/03, 26/04, 42/04, 45/06, 88/07, 35/09, 59/09 and 103/09), where:

- The Article 8 stipulates jurisdiction of the BiH Ministry of Foreign Affairs to implement the established BiH policies, to work on the development of international relations in accordance with positions and guidelines of the BiH Presidency and to propose positions on issues relevant to the foreign policy activities and the international position of BiH;
- The Article 9 provides for responsibilities of the BiH Ministry of Foreign Trade and Economic Relations to define policy, basic principles, coordination of activities and harmonisation of plans of the Entity authorities and bodies, including international institutions in the fields of agriculture, environmental protection, development and use of natural resources and tourism. Within this Ministry, there is the Veterinary Office of BiH, as an administrative organization and the Administration for Plant Health Protection of BiH.

The Law on Environmental Protection of the Republic of Srpska ("OG of RS", No. 71/12 and 79/15) is the key law in this field in the Country, and serves as the basis for adoption of other regulations governing the environmental protection. The law was passed for the first time in 2002 (and was subject to several amendments), the latest being in 2015. This Law governs the protection of the environment for the purpose of



its preservation, decrease of risks for human life and health, as well as ensuring and improving the quality of life, protection of all environmental elements, informing and access to information in the field of environmental protection, environment planning and protection, strategic environmental impact assessment, procedures for issuing environmental permits and prevention of large-scale disasters, ecosystem labelling and environmental protection management, financing of activities related to the environment, issues related to damage caused to the environment, including rights and obligations of natural and legal persons performing activities under this Law.

The Law on Environmental Protection of the **Republic of Srpska** is the general act related to the environment, including other system laws such as the Law on Administration of RS, provide legislative framework for adoption of special laws and bylaws, which also govern protection of environment and natural resources, including issues relevant for environmental protection and environment management system, such as:

- The Law on Nature Protection ("OG of RS", No. 50/02, 34/08 and 20/14) governing renovation, protection, preservation and sustainable development of landscapes, natural areas, plants, animals and their habitats, soil, minerals, fossils and other components of the nature which make part of the environment. In addition Republic of Srpska adopted Strategy for Nature protection in 2011 ("OG of RS", No. 65/11).

Relevant by laws are following:

- Regulation on the red list of endangered species of flora and fauna of the RS ("OG of RS", No. 124/12).
- Ordinance on the monitoring system of deliberate keeping and killing of protected animals ("OG of RS", No. 75/05).
- Ordinance on the manner of establishing and managing an information system for nature protection and tracking system ("Official Gazette of the Republic of Serbian", No. 85/05).
- Ordinance on the contents, identification and manner of implementation of the measures of management of protected areas "OG of RS", No. 56/09).
- Ordinance on the register of protected natural resources "OG of RS", No. 55/15).
- Ordinance on the internal order in national parks "OG of RS", No. 83/11).
- Ordinance on the official uniform, identity card and the use of official arms control services in the national park ("OG of RS", No. 83/11).

## MONTENEGRO

Legal system in the field of environment is confined by the constitutional declaration of Montenegro as Ecological State (since 1992).<sup>7</sup> In that respect the water management is also part of the environment issues, on which the environmental legal framework has an impact or is related to. Basic, umbrella, act in the sphere of environment is the Law on Environment ("OG of MNE", No. 48/08, 40/10, 40/11, 27/14) regulating: principles of environmental protection and sustainable development, subjects and instruments of environmental protection, the documents of sustainable development and environmental protection, environmental monitoring, information system, public participation on environmental issues and other issues of importance for environment. Environmental protection ensures integrated preservation of environmental quality, conservation of biological and landscape diversity, rational use of natural resources and energy in the best way for the environment as a basic condition for a healthy and sustainable development. In order to be fully aligned with EU regulations, a new Draft Law on Environment has been prepared. Recently, the new Law on Liability for Environmental Damage ("OG of MNE", No. 27/14) has been adopted, setting the framework and conditions/principles of liability for environmental damage and damage inflicted to among other, water resources.

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<sup>7</sup> Article 1 of the Constitution defines Montenegro as a "civic, democratic and ecological state based on the respect of social justice and rule of law"



The basic act governing the nature protection is the Law on Nature Protection ("OG of MNE", No. 51/08, 21/09, 40/11, 62/13 and 6/14). The Law on Nature Protection regulates the protection and conservation of nature, ecological network (Natura 2000), protected areas, categorization and protection regimes in protected areas, procedure for a declaration of protected natural resources, management and use of protected natural resources, as well as measures of protection and conservation nature. The law also reflects to water resource management in following provisions: protection of wet and water habitats (Articles 19 and 20), use of speleological structures (Article 29), protection of the natural monuments (Article 41), conditions of use of natural resources (Article 67), prohibitions have been also prescribed regarding water (Article 82), as well as penal provisions (Article 119, Item 5). The role of the ministry in charge of areas of agriculture, forestry and water management has been defined for declaration of protected natural resources (Article 55), setting the use of protected wild species of plants, animals and fungi (Article 84).

The Law on National Parks ("OG of MNE", No. 56/09, 40/11 from od 08.08.2011, 28/14). Governs the protection and management of the protected areas/national parks in the Country.

## SERBIA

The National Environmental Protection Program ("OG OF RSRB", No. 12/10) provides the general policy framework in the field of environment, while basic law and "umbrella act" in the field of environmental protection is the Law on Environmental Protection ("OG OF RSRB", No. 135/04, 36/09, 36/09, 72/09 and 43/11). The act regulates systemic issues, thus having effect on certain aspects of water management, and furthermore contains general provisions (including the Article 23) that directly regulate water management. The on-going process of amending the law will provide several new aspects, such as: approval to use surface and ground waters as natural resources (Article 15), base for establishment of "*Green Fund of the Republic of Serbia*", determining deadline for their gradual breakdown, limit values reaching by legal entities and entrepreneurs who discharge wastewaters into the recipients or public sewage system, as well as treatment, disposal and usage of sludge, that is processing of sludge which is residue from waste water treatment plants. Protection and conservation of nature, biological, geological and landscape diversity are regulated by the Law on Nature Protection ("OG of RSRB", No. 36/2009, 88/2010 and 91/2010) and also by other regulations, including the Law on National Parks ("OG of RSRB", no 9/93, 44/93, 53/93, 67/93, 48/94, 101/05, 36/09, 84/15), Law on Wildlife and Hunting ("OG of RSRB", No. 18/10) and others. The Law on Nature Protection contains several provisions that directly refer to water resources management (e.g. Article 18 of the LNP - in wetlands and aquatic ecosystems with coastal areas, all actions and activities which endanger hydrological phenomena and preservation of biological diversity shall be prohibited (paragraph 3); in speleological objects (e.g. caves) and their surrounding area, it is forbidden to conduct construction works that may cause major unfavourable and permanent alterations of geomorphological and hydrological nature (Article 25, paragraph 4).

## 4.3 Social Legal framework

### BiH (FBiH and RS)

The current state in the area of legislation relevant for the water management in BiH has exceptionally specific characteristics in comparison with neighbouring countries in Drina watershed. These specifics arise, primarily, from the constitutional character of the state of BiH, consisting of two entities: the Federation of Bosnia and Herzegovina (FBiH) and the Republic of Srpska (RS). Issues related to the expropriation are primarily regulated by following laws:

- The current Expropriation Law of FBiH ("OG of FBiH", No. 70/07, 36/10 and 25/12) law prescribed conditions and procedure on expropriation of real estate for the purpose construction of public interest. Expropriation is exclusion or restriction regarding rights on property with compensation

according to the market value of the real estate. In cases of expropriation in the area affected by the natural disaster of a bigger intensity (earthquake, floods, fires, etc.) due to the construction of objects and conducting works to remove the consequences caused by these disaster, the special regulation of the law are applied and the area and the time of application is determined by the Government. In this case determining public interest is done by municipal assembly by a decision for which a complaint cannot be submitted. The land can temporary be taken and when it is necessary and appropriate for placing and constructing temporary objects (business objects, objects for housing of population, property, etc.). The decision on the need and appropriateness of temporary taking the land is made by municipal assemble and on the suggestion of the expropriation user the municipal administrative service makes a decision about temporary taking over of the land. The complaint against that decision does not postpone its execution and the decision is terminated immediately when there is no need any more. (Article 39 – 44).

- The current Expropriation Law of the Republic of Srpska (RS) has been in force since 2006 (“OG of RS”, No. 112/06, published on 23rd of November, 2006), with amendments in 2007 and 2008 („OG of RS“, No. 37/07 and 110/08) prescribes that expropriation means requisition or restriction of ownership rights over real property with certain compensation (Article 1). It defines expropriation as full (real property acquisition) or limited (restriction of ownership rights - for example by means of creating an easement). The Law defines compensations in the case of expropriation as an equitable compensation that may be below the market value. The owner is entitled a compensation for the expropriated property in form of a replacement property, and if the expropriation beneficiary is unable to provide a replacement property, the compensation (equitable or based on market value) is defined in cash. If the owner lives in an expropriated residential structure or an apartment as a special part of the residential structure, the expropriation beneficiary is obliged to provide use another corresponding apartment prior to demolition. The same policies are applied also to expropriation of commercial premises in which the owner performed his business activities (Article 12).

## **MONTENEGRO**

The national legislation considers the issue of land acquisition under the Expropriation Law (“OG of MNE”, No. 55/00 and 12/02). The present law states that state institutions could acquire private property for projects of national and/or local importance, and at the same time the interests of all persons affected by the project who are holders of rights and whose property is expropriated, are to be protected. Moreover, this Law guarantees the principle of fair compensation for all persons affected by the process of expropriation who are holders of rights of the property and whose property is expropriated. It aims to provide a simple, efficient process, to the extent possible, to reduce the need for lengthy court proceedings and thus to implement the necessary expropriation. The fair value of the land that is the subject to an infrastructure project, is going to be determined by the Commission for the assessment of value, appointed by the relevant national institutions (e.g. Real Estate Directorate of Montenegro/Ministry of Finance). Appropriate private land value is determined based on estimates made by authorized specialized experts. Public land value is also determined by an authorized expert. Those estimates are based on the market price and on other relevant comparative values such as prices of land in other expropriation process, type of land, level of infrastructure on the land, etc. In the event of a dispute regarding the determination of appropriate values of the expropriated land, the municipal court has the jurisdiction over that issue, and is the first instance for complaints about the estimated value of the land. If, as mentioned above, no agreement is reached, the person whose property is affected by the process of expropriation has the right to initiate legal proceedings in front of the municipal court, according to which decision regarding the appropriate land, the payment of the assessed fair compensation will be made.

## **SERBIA**

The Republic of Serbia Expropriation Law (passed in 1995 and enacted on January 1, 1996, amended in March 2001, amended again on March 19, 2009), does not use the term “involuntary resettlement”, which is used in the relevant IFI policy documents, but instead uses the term expropriation. This law enables government institutions to acquire private property for projects that are considered to be of national and/or local interest, while protecting the interests of all project-affected persons with legal title, whose assets are to be expropriated. The law also enshrines the principle of fair compensation. Expropriation can only be undertaken for public interest, which must be documented in the proposal for an expropriation decision. The Government agency responsible for property and legal affairs confirms public interest, based on a proposal by the investor. The agency that authorizes public interest can permit the investor to conduct preliminary studies on the lands to be expropriated after consultation with the owner(s). The investor submits an expropriation proposal to the local organ in charge of property and legal rights in the municipality in which the land is located. The proposal is based on a preliminary design and includes documentation confirming the investment in spatial plans and establishing public interest. Identification of the location and ownership of affected plots, with cadastre extract. Estimated cost of expropriation, based on standard evaluation principles. Proof that the estimated cost is deposited in an expropriation account. Plot owners are consulted before the expropriation decision is adopted. Compensation is based on the market value of the land and assets (or market rental value, if expropriation is temporary), transition expenses and damages. Compensation can be in cash or in kind-including substituting land or structures and replacing or moving structures. After public interests have been established, the investor can negotiate the amounts and condition of purchase with owners without resorting to expropriation. After the expropriation decision is adopted, owners are notified in writing of the decision of their right to request expropriation of a whole plot, proposed compensation method and amounts and the timetable for processing; and are invited to negotiate. If negotiations are not successful, the local property and legal affairs office forwards documentation to the local court to determine compensation. The owner can also appeal to the court for a decision on compensation and the amount of land to be expropriate.

There are other laws relevant to social issues in all three DRB riparian countries, which are elaborated in the document: “Technical support papers” of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

## 5. Legal framework of environmental impacts

### 5.1 Environmental Impact Assessment (EIA)

The EIA shall identify, describe and assess, in each individual case and in the in the sphere of industry, water, energy, mining, transportation, tourism, agriculture, forestry and utility services, for projects planned within protected natural resources and in protected environment of immovable cultural assets, the potential direct or indirect impact of an intended project on the following: human life and health, flora and fauna; land, water, air, climate and landscape; material assets and cultural heritage and mutual relations of mentioned elements. The brief overview of legal framework of environmental impacts in DRB riparian countries is presented in this chapter. More details are provided in the Annex 9.6 of this Report.

#### BiH (FBiH and RS)

Environmental Impact Assessment process in the Federation BiH is regulated by the Law on Environmental Protection ("OG of FBiH", No. 33/03 and 38/09). Additionally, this matter is regulated in the Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit ("OG of FBiH", No. 19/04). Cantons in FBiH have the authority to regulate environmental issues, EIA process is additionally regulated with Cantonal laws and bylaws: For example:

- Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of Canton 10 (Official Gazette of Canton 10, No. 7/05 and 12/08),
- Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of Herzegovina-Neretva Canton (Official Gazette of Herzegovina-Neretva Canton, No. 1/05), and
- Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of West Herzegovina Canton (Official Gazette of West Herzegovina Canton, No. 2/06).

Basic provisions related to EIA in the entity Republic of Srpska is the Law on Environmental Protection ("OG of RS", No. 53/2002-basic, and the latest amendments from 2012 -71/12). Several undertaken amendments relate mainly to the provisions for EIA procedure, to achieve harmonization with those in the Law of the Federation of Bosnia and Herzegovina.

Specific provisions related to EIA are set out in the Regulations and Governmental Decrees issued by both entity ministries. These regulations determine the following:

- Projects and installations for which EIA is mandatory, and the criteria for determining the obligation and extent of EIA ("OG of RS", No. 7/06, 124/12)
- Installations and facilities whose operation may be commenced only if the environmental permit has been granted ("OG of RS", No. 7/06, 124/12; "OG of FBiH", No.19/04)
- Specific requirements for submitting an environmental permit application for installations and sections for which environmental permits were issued prior to enacting the Laws on Environmental Protection ("OG of RS", No. 24/06, 124/12, "OG of FBiH", No. 68/05)
- Timeframe for applying for an environmental permit for installations issued with an environmental permit before the Law on Environmental Protection entered into force ("OG of RS", No. 24/06, 124/12; "OG of FBiH", No. 68/05).

The procedure for prior EIA is commenced at the request of the holder of the project by submission to the ministry responsible for environment protection.

More info on EIA process in Republic of Srpska could be found in the **Error! Reference source not found.**, which is published on the web site of the Government of Republic of Srpska<sup>8</sup>.

## MONTENEGRO

The Law on Environmental Impact Assessment ("OG of MNE", No. 80/05, 40/10, 73/10, 40/11, 27/13, the last amendments in compliance with ESPOO and EIA Directive) and a set of govern the EIA in Montenegro. Laws stipulate the implementation on the central and local level. The Law is accompanied with the set of bylaws:

- Decree on project subject to environmental impact assessment ("OG of MNE", No. 20/07, 27/13 and 53/14),
- Rulebook on the content of documentation to be submitted together with request for determination on the need for environmental impact assessment ("OG of MNE", No. 14/07),
- Rulebook on the content and extent of documentation to be submitted together with request for determination on the scope and content of environmental impact assessment ("OG of MNE", No. 14/07),
- Rulebook on the content of environmental impact assessment ("OG of MNE", No. 14/07)

Within the Montenegro regulation on EIA, projects are classified in two groups (lists): projects listed in List 1 are all subject to compulsory EIA while for projects in List 2, the assessment contains an element of discretion, noting that an EIA procedure will, in any event, be required for projects with potentially significant environmental impacts. The public and other parties are to be consulted on the EIA.

Stages in EIA Procedure encompass: I. Decision on the need for conducting EIA; II. Defining the scope and contents of the EIA Study (Environmental Report); III. Decision on granting the approval of the EIA Study.

Procedure of notification about project cross-border impact is regulated by a separate provision.

The competent authorities for the implementation of the EIA and SEA legislation are: the Ministry of Sustainable Development and Tourism (MSDT), the Environmental Protection Agency - EPA and the municipalities (employees responsible for the EIA and SEA for the municipal programmes and projects).

## SERBIA

An Environmental Impact Assessment (EIA) in Republic of Serbia is regulated by the Law on Environmental Impact Assessment ("OG of RSRB"; No. 135/04 and 36/09) and complementary by-laws. The law and by-laws set out the requirements for undertaking environmental assessments of the potential environmental impacts of public and private projects which are likely to have a significant impact on the environment (anticipate potential environmental harm and to avoid or mitigate such harm while balancing environmental, social and economic objectives ) before development consent / construction permit is granted in the form of an approval for project implementation.

The Serbian Ministry of Agriculture and Environmental Protection is the competent administrative authority for the EIA process for projects for which project development consent (e.g. construction permit) is issued by a State (national) authority, as it the Ministry responsible for environmental matters.

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<sup>8</sup> [http://www.vladars.net/eng/vlada/ministries/MSPCEE/Documents/Information%20leaflet%20-%20EIA\\_415223766.pdf](http://www.vladars.net/eng/vlada/ministries/MSPCEE/Documents/Information%20leaflet%20-%20EIA_415223766.pdf)

The types of projects that may require an EIA are determined in the “Decree determining a list of projects for which an environmental impact assessment shall be carried out and a list of projects for which an environmental impact assessment may be required” - EIA Decree (“OG of RSRB”, No. 84/05 and 114/08). Under the EIA Decree, projects are classified in two groups (lists): projects listed in List 1 are all subject to compulsory EIA while for projects in List 2, the assessment contains an element of discretion, noting that an EIA procedure will, in any event, be required for projects with potentially significant environmental impacts. The public and other parties are to be consulted on the EIA.

## 5.2 Strategic environmental impact assessment (SEA)

The Strategic Environmental Assessments (SEA) creates a framework for future project development, subject to EIA, as well as for plans and programs, where the area of implementation may have an impact on protected areas, natural habitats and preservation of wild flora and fauna. SEA legislative framework objectives encompass: 1) to ensure that environmental and public health issues are fully taken into consideration in the development of plans or programs; 2) to set clear, transparent and efficient procedures for SEA; 3) to provide for public participation; 4) to provide for sustainable development; 5) to enhance the level of protection of human health and the environment.

### BiH (FBiH and RS)

Legal framework for SEA is differently defined in each entity of Bosnia and Herzegovina. These framework obligations for SEA are not yet operational due to the lack of implementing secondary legislation.

- Federation of Bosnia and Herzegovina: the provisions of the SEA are generally defined in Art. 51-52 of the Law on Environmental Protection (“OG of FBiH”, No. 33/03, and by the new Law from 2009- and “OG of FBiH”, No. 38/09).
- Republic of Srpska: SEA generally defined in Art. 60-61 of the Law on Environmental Protection (basic from 2002, and amendments on that Law, with the latest from 2012 –“OG of RS”, No. 71/12).

Nevertheless, the Law on Environmental Protection (in both entities: Federation of Bosnia & Herzegovina; and Republic of Srpska) - includes the main provisions from the Espoo Convention: Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 1991.

Bosnia and Herzegovina has not ratified the Kiev Protocol on SEA<sup>9</sup>.

### MONTENEGRO

The main transposing instrument is the Law on Strategic Environmental Assessment (“OG of MNE”, No. 80/05, 73/10, 40/11 and 59/11), which defines the SEA procedure for plans or programs in different sectors and sectorial policies, including water management. Stages in the SEA Procedure encompass: I. Decision on the need to prepare the SEA for the plans and programs; II. Defining the scope and contents of SEA Report; III. Decision on granting the approval for the SEA Report.

Further to the water management actions and SEA, the Article 29 of the LW defines that WMMP and other water sector plans require SEA. In addition, Article 31 of the Law on Spatial Development and Construction (“OG of MNE”, No. 51/08, 40/10, 34/11, 47/11, 35/13, 39/13, 33/14) has defined that if the planning document is subject to SEA, a decision must be made simultaneously with a decision on development and the SEA report is subject to a public hearing, in parallel with the hearing for the draft planning document. Montenegro has not ratified the Kiev Protocol on SEA in 2009.

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<sup>9</sup> [http://www.unece.org/env/eia/sea\\_protocol.html](http://www.unece.org/env/eia/sea_protocol.html)



## SERBIA

In order to regulate and minimize the adverse effects of development in the field of environment, nature protection, water and other sectors, the Republic of Serbia imposes the Strategic Environmental Impact Assessment (SEA) process and Environmental Impact Assessment (EIA) principles. Republic of Serbia SEA is governed by the Law on SEA ("OG of RSRB", No. 135/04, 88/10). The divergence between EIA and SEA, provides that EIA deals with minimizing adverse effects of concrete activities and action that would be implemented in the environment, while SEA provide the same framework on a higher and strategic level that includes plans/master plans, programs, sectorial policies, etc. The SEA ultimately establishes framework for the approval of future development projects determined by provisions regulating EIA (Article 5 of the Law on SEA, "OG of RSRB", No. 135/04, 88/10). It is important to note that SEA could be required for plans and programs that could possibly have significant impact on the environment, even though the Law does not list their areas and scope.

Serbia is a member state of the Kiev Protocol on SEA ("OG of RSRB – *International Agreements*", No. 1/10). Serbia, being a member state of the Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 1991 ("OG of RSRB – *International Agreements*", No. 102/07), also refers to the obligation of EIA procedure in a transboundary context.

### 5.3 Public participation in EIA of investments

In order to fully integrate environmental protection into plans, programs and activities, the importance of access to information and public participation has been taken as one of preventive measures for minimizing potential negative impact of developmental actions, as well as to take into account the opinions and needs of the wider public. Public participation in environmental and water management matters, on national and local level, is enabled by transposition of Aarhus and Espoo convention, but also Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) EU directives, into national regulations. Relevant national EIA and SEA regulations encompass provisions for public participation through public hearings and right to raise opinion and concerns regarding the activity/work to be implemented.

#### BIH (FBiH and RS)

Basic laws which provides right of citizens to information is the BiH and RS Law on Freedom of Access to Information (initially adopted in 2000 – BiH and in 2001 – RS), which defines goals and basic concepts related to access to information. In addition, the Law prescribes in detail the procedures for requesting the information, complaint procedures and obligations of public authorities to publish information. The Law on amendments to the freedom of Access to information act for Bosnia and Herzegovina ("OG of BiH", No. 102/09) has been adopted in 2009. The procedures in regard to environment issues were further elaborated in the Law on Environmental Protection in BiH and the Law on Environmental Protection of RS.

In the Republic of Srpska in 2008 the Government issued guidelines for republic administration bodies on participation of the public and consultations in legal drafting ("OG of RS", No. 123/08), which defines the obligation of the institution proposing and drafting certain regulation to establish a "significant impact on the public" of that regulation which would be adopted.

Bosnia and Herzegovina ratified the UNECE Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (AC) in September 2008 ("OG BiH"-MU 8/08). BiH has ratified the Espoo Convention on Environmental Impact Assessment in a Trans-boundary Context ("OG of BiH"-MU 8/09) in March 2010.



Network of Aarhus Centers has been established in November 2013 to maintain the implementation of the Aarhus Convention in Bosnia and Herzegovina. The network of Aarhus Centers constitute the Aarhus Centers in Banja Luka, Sarajevo and Tuzla<sup>10</sup>.

## **MONTENEGRO**

The basic public participation in Montenegro is regulated by the Procedure and Method of Conducting Public Participation in Preparation of Law ("OG of MNE", No.12/12), defining, among other, when a public hearing is compulsory (Article 4). The other law governing this topic is Law on Free Access to Information ("OG", No. 44/12). In relation to fostering the public participation in decision-making the cooperation with NGOs has been regulated by a special act (Regulation on the Method and Procedure of Cooperation between the Public Administration and NGOs, ("OG of MNE", No. 7/12). From the water management aspect, the Law on Water ("OG of MNE", br. 27/2007 and "OG of MNE", br. 32/2011, 47/2011 and 48/2015) stipulates (Article 19, paragraph 9) and regulates cooperation with the public in preparation of plans (Article 30), i.e. public participation, and several other articles are also related to the "public".

The Law on the Environment ("OG of MNE", No. 48/08, 40/10, 40/11, 27/14) of Montenegro stipulates governing principles of environmental protection, stating the principle of access to information and public participation (Article 5, paragraph 12): Everyone has the right to be informed about the state of the environment and to participate in decision-making, which implementation could affect the environment. Environmental data are public. Following that principle, the Environmental Protection Agency each year publishes the State of Environment Report for Montenegro (for the previous reporting year).

Montenegro has ratified the Convention on the Access to Information, the Public Participation in Decision Making and the Access to Justice in Environmental Matters (the Aarhus Convention) in 2009.

The dissemination of the information pertaining to the environment is also done through the 3 Aarhus Centers: Podgorica (2011), Nikšić (2011) and Berane (2012).

## **SERBIA**

In Republic of Serbia the access to information and public participation is regulated by several acts related to environmental protection, water management and other act, among which the Law on Free Access to Public Information ("OG of RSRB", No.120/04, 54/07, 104/09, 36/10) as a general framework law, the Law on Waters ("OG of RSRB", No. 30/10 and 93/12) and the Law on Environmental Protection. Serbia is a member state of the Convention on access to information, public participation in decision-making and access to justice relating to environmental issues (Aarhus Convention) ("OG of RSRB – International Agreements", No. 38/09). Apart of legislation framework, Serbia since 2011 has an Strategy for Implementing the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters ("OG of RSRB", No. 103/11), accompanied by an action plan. Both documents aim is to improve the dialogue between the public and decision makers on environmental matters. In that respect Serbia also has four Aarhus centers (Kragujevac, Niš, Novi Sad and Subotica). NGOs establishment has been regulated by the Law on Associations ("OG of RSRB", No. 51/09). The acts that have most developed procedure and rules for public participation in decision-making, are the ones regulating public participation in carrying out the EIA procedure, and in SEA.

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<sup>10</sup> <http://www.aarhus.ba/mreza-ac-bih.html>

## 6. World Bank requirements – procedures

All projects funded by the WB are subject to safeguard policy of the WB and procedures, especially OP/BP 4.01 EA and documentation relating to the public consultations and requests of public publications that describe instruments and procedures for the elimination of negative economic, social and environmental issues that can occur. EA in the proposed project is a process whose width, depth and type of analysis depend on the nature, size and potential impacts on environment. It evaluates potential environmental risks and impacts of the project; studies alternatives of the project; identifies manners for the improvement of project selection, aspect, planning, design and implementation preventing, minimizing, mitigating or compensating for negative impacts on environment; and improving positive impacts.

World Bank's policy on environmental and social measures of protection is a backbone of its support to sustainable poverty reduction. The objective of these measures of protection is to prevent and mitigate inappropriate damage to humans and their environment in the project elaboration process. These measures provide guidelines for the Bank and loan users in the identification, preparation and implementation of programs and projects. The conditions – OPs have been explained and presented in details at the World Bank web site<sup>11</sup>.

Relevant World Bank's policy is in brief presented below. More details is provided in the Annex 9.7 of this Report.

### 6.1 OP / BP 4.01 Environmental Assessment

The objective of this policy is to add the assurance of ecological and social integrity and sustainability of investment projects, as well as to support the integration of environmental and social aspects of the project in the decision-making process. Environment assessment (EA) evaluates potential surroundings risks of the project and impacts in its area of activity, tests alternatives of the project and identifies manners for the project selection improvement, planning, design, and implementation by prevention, minimization, mitigation and compensation for adverse impacts on environment. Proposed projects are classified into Categories A – irreversible impacts on environment are wide and diverse, Category B – possible irreversible impacts are more limited, and Category C – probably no adverse impacts, or minimal.

### 6.2 OP / BP 4.04 Natural Habitats

The policy of the World Bank on natural habitats have the goal to promote an environment friendly development by supporting protection, preservation, maintenance and rehabilitation of natural habitats and their functions. The Bank does not support projects that in their opinion involve significant changes or degradations of critical natural habitats. Appropriate measures of preservation and reduction of consequences must be defined for the project in case of impact on natural habitats, for this reason ecology experts will be involved during the entire process.

### 6.3 OP / BP 4.11 Physical Cultural Resources

This policy addresses physical cultural resources that are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. The projects are classified during the environmental screening process as Category A or B, and are subject to the provisions of this policy: (a) any project involving significant excavations, demolition, movement of earth, flooding, or other environmental changes; and (b) any project located in, or in the vicinity of, a recognized physical cultural

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<sup>11</sup> <http://www.worldbank.org/>

resources site. Projects specifically designed to support the management or conservation of physical cultural resources are individually reviewed, and are normally classified as Category A or B.

#### **6.4 OP / BP 4.36 Forestry**

The management, conservation, and sustainable development of forest ecosystems and their associated resources are essential for lasting poverty reduction and sustainable development, whether located in countries with abundant forests or in those with depleted or naturally limited forest resources. The objective of this WB policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests.

#### **6.5 OP / BP 4.12 Involuntary Resettlement**

The Project triggers OP/BP 4.12 on Involuntary Resettlement due to activities foreseen under Project sub-component 2B (support for pilot project investments in all three riparian countries that affect the reduction of the impact of climate change issues). The locations of these pilot projects and the extent of resettlement required have not yet been defined, as the detailed designs are not available at appraisal stage. As a guiding resettlement instrument, three separate Resettlement Policy Frameworks (RPFs) have been developed (for Bosnia and Herzegovina, Serbia and Montenegro). Once the specific impacts become known, the RPF will guide the preparation of site-specific Resettlement Action Plans (RAPs) where applicable. RAPs will be prepared for all subprojects that entail resettlement, in order to satisfy the provisions of OP 4.12 and the requirements of local legislation regarding land acquisition in all three countries.

Prior to the submission of pilot projects for funding consideration, the Project Implementation Unit (PIU) shall carefully screen the proposed projects to assess whether or not land acquisition may be necessary and to what extent. Following the screening process and determination of potential impacts, the PIUs shall report the findings of the screening process to the World Bank and prepare site-specific RAPs, ensuring that all project activities adhere to the requirements of the RPF. The RAPs will be submitted to the World Bank for review and approval. Civil works will start only after compensation for land acquisition and other land related impacts was completed.

#### **6.6 OP 7.50 – Projects on international waterways**

This policy applies to various international waterways, such as: any river, lake, canal or similar water body that forms the border between two units; any river or surface water body that flows through two or more countries; any tributary or other surface water body that is a component of any waterway and any creek, bay, gorge or canal connecting two or more countries. Or, if within one state, that is recognized as a necessary communication canal between the open sea and other states and any river that flows into such waters. Required action involves respecting the notification procedure. The project details attached to the notification letter usually relies on EIA and/or environmental assessment, to make determination that the Bank financed Project will not cause damage to riparian countries.

## 7. Social Analyses and Management

### 7.1 Social Analyses

#### 7.1.1 Demographic profile

The DRB in FBiH covers twelve municipalities: Goražde, Pale-Prača (FBiH), Foča-Ustikolina (FBiH), Kladanj, Sapna, Teočak, Živinice, Banovci, Kalesija, Tuzla, Olovo and Trnovo. The total number of inhabitants in the part of the DRB that belongs to FBiH is 58120 inhabitants (2013 census). At the territory of DRB in Republic of Srpska, 19 municipalities are located: Bijeljina, Bratunac, Čajniče, Foča, Gacko, Han Pijesak, Lopare, Milići, Novo Goražde, Pale, Rogatica, Rudo, Šekovići, Sokolac, Srebrenica, Ugljevik, Višegrad, Vlasenica and Zvornik. The total number of inhabitants in RS part of the DRB is 371461 inhabitants (2013 census). The population density in the RS is 51 inhabitants/km<sup>2</sup>, while in the FBiH it is 59 inhabitants/km<sup>2</sup>. The Municipality Teočak have highest population density in BiH and in the whole DRB, with 262 inhabitants/km<sup>2</sup>, and the lowest in municipalities of Han Pijesak, Foča (FBiH and RS), Pale (FBiH), Rogatica, Sokolac and Čajnice, with less than 20 inhabitants/km<sup>2</sup>.

The municipalities on the banks of the Drina River in Serbia are: Bagatić, Šabac (for a smaller part), Loznica, Osječina, Mali Zvornik, Ljubovija, Bajina Bašta, Užice, Krupanj, Čajetina, Priboj, Prijepolje, Nova Varoš and Sjenica. The highest population density in DRB is in the Serbian part of the basin with the approximate average of 63 inhabitants/km<sup>2</sup>. There are significant differences in population density among municipalities in Serbian part of DRB (municipalities of Sjenica, Nova Varoš and Čajetina - less than 30 inhabitants/km<sup>2</sup>, while cities of Šabac have high population density-145 inhabitants/km<sup>2</sup>). The population size in the DRB in Serbia is 506905 inhabitants.

Catchment area of the DRB in Montenegro is formed by 13 municipalities: Andrijevića, Berane, Bijelo Polje, Kolašin, Mojkovac, Nikšić, Plav, Pljevlja, Plužine, Podgorica, Rožaje, Šavnik and Žabljak. In strictest terms there are actually 15 municipalities in the DRB with two newly established (2013)-Gusinje taking land from Plav, and Petnjica taking land from Berane. These 13 municipalities occupy 49.7% territory of the state with only 25% of the total population of Montenegro. According to the Census from 2011, in the catchment area of the River Drina live 154,873 inhabitants, which is 16,517 less than the census 2003, representing over 10% of emigration due to moving to larger urban areas, during the last eight years.

According to the presented demographic profile in DRB, the WBDRBM project will have a positive social impact on about 750,000 people living in 58 municipalities and cities in all three countries. Taking into consideration the total population of DRB, only 14% of inhabitants live in Montenegro, while 47% live in Serbia and 39% in BiH. This project will contribute to social welfare of the local population in a way that it will support activities to prevent and deal with climate change-related disasters, notably floods and droughts.

#### 7.1.2 Rural and Urban Areas

**BiH (FBiH and RS) -** The country can be divided into two parts, urban and rural, which are considerably different. The foremost differences in BiH exist between urban parts that include major cities: Sarajevo, Banja Luka, Tuzla, Zenica, Mostar and Bijeljina, and the rest of the country that is mainly rural. The average level of urbanization in the RS and FBiH is 37%, while the differences at the municipal level are significantly higher. Greater participation of urban compared to rural population is characteristic for municipalities of Foča (62%), Pale (62%), Han Pijesak (53%) in the RS and the Municipality of Goražde (57%) in FBiH.

**Montenegro -** Analyzing three regions in Montenegro (OECD), north, central and southern, the northern region includes 14 municipalities, and it is a predominantly rural area (59.7% of the population lives in rural areas), while coastal (41.7%) and central (20.4%) belong to transition areas.

**Serbia** - By definition (OECD), 85% of Serbian territory lies in the so-called rural areas, with almost 55% of the total population. In the Serbian part of DRB, approximately 41% of people live in urban areas and 58% in rural areas. The highest level of urbanization is in the Municipality of Užice (approximately 77%).

The Drina River in its upper and middle part of the basin flows through rural areas. Except from the lower part, which belongs to the RS, it flows through the urban area of the Municipality of Bijeljina. This project will therefore have a great positive impact on the development of rural areas compared to urban, in terms of creating new opportunities and safe business environment for rural development and ecotourism.

### 7.1.3 Employment

The rate of unemployment in BiH in the last 5 years did not significantly change. The average unemployment rate in FBiH during the last 5 years has been 46.356 % and 38.35 % in the RS. In the RS in recent years, the highest unemployment was in 2012 (39.26%), while in FBiH the lowest rate of 47.14% was recorded in 2013.

Number of employed in BiH also did not significantly change last 5 years, both at the state at the entity level. The lowest rate of employment in last 5 years was recorded in 2013 in both entities. In the area of DRB which belongs to RS, Municipality of Ugljevik (65.5%) has the highest employment rate as opposed to the lowest employment rate in the Municipality of Rudo (29%). For DRB territory in FBiH, Municipality of Goražde has the highest employment rate (57.0%), while the lowest employment rate is in the Municipality of Teočak (15.1%).

**Montenegro** - According to data received through the Labour Force Survey conducted in 2014 (survey on 8,213 households) there were 21,101 persons. The rate of active population for the 2014 is 52.7%, the employment rate is 43.2% and unemployment rate is 18%. The average employment rate in DRB is 37.7%. The highest employment rate has the Municipality of Plužine (43.3%) and the lowest Municipality of Plav (22.2%).

**Serbia** – The average unemployment rate in Serbia in last 5 years is 22.98 %. According to Statistical Office of the Republic of Serbia in the last 5 years the highest unemployment rate was in 2012 (25.5%) and the lowest in 2014 (19.40%). Employment rate for DRB territory in Republic of Serbia is the highest in the Municipality of Užice (39.6%) and the lowest in the Municipality of Bogatić (14%). The unemployment rate is the lowest in the Municipality of Čajetina (18%), and the highest in the Municipality of Krupanj (58.4%).

Based on the presented data, unemployment in BiH is higher than in Montenegro and Serbia. The unemployment rate has not significantly changed for the last 5 years, except in Serbia, where unemployment decreased. The project will have a positive contribution to the unemployment issue, especially from the standpoint of self-employment within a family farm. Integrated management of water resources will contribute to a more secure business environment and thus have a positive impact on employment and economic growth.

The more in-depth social analyses of in DRB riparian countries is provided in the document: “Technical support papers” of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

## 7.2 Social Management

World Bank Operational Policy and Bank Procedures OP 4.12 “Involuntary Resettlement” has been triggered. Based on the current available data, no physical displacement of occupants (legal or illegal) or restriction of access to resources or income streams is expected as a result of the Project. Further, the Project is not expected to entail permanent acquisition of residential or commercial structures.

RPF establishes the principles and objectives relating to issues of expropriation and relocation, and is prepared in situations where exact impact of the project and sub-projects cannot be determined at the stage before the evaluation and approval of the project, as is the case here. So, three separate Resettlement Policy Frameworks (RPFs) have been developed (for Serbia, Montenegro and Bosnia and Herzegovina), as a guiding resettlement instrument. When specific impacts become known, the RPFs will serve as a guide for the development of Resettlement Action Plans (RAPs) for specific locations, in accordance with the requirements of local legislation regarding land acquisition in all three countries and procedures of the WB.

In order to establish eligibility (for both formal and informal land owners/users), *cut-off date* will be established. This means that this will be the date of submission of proposals for expropriation by the expropriation beneficiary to relevant municipalities, or the date of the baseline survey for any informal properties that are not eligible to expropriation according to pertaining legislation. The cut-off date will be publicly disclosed in the local media and consultation meetings, with an accompanying explanation.

In cases where land acquisition and resettlement cannot be avoided, all Project Affected Persons (PAPs) shall be entitled to compensation, according to the compensation principles of the laws on expropriation in all three countries and OP 4.12 requirements. According to WB OP 4.12, three categories of PAPs have right to compensation eligibility. The issue of compensation eligibility according to various types of assets has to be given in more detail in the RPF. Criteria for eligibility must be established by the local authority in charge. Both the local authority and the Project Implementation Unit (PIU) are responsible for the implementation of compensation measures.

The more in-depth social management analyses of in DRB riparian countries is provided in the document: "Technical support papers" of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

## STAKEHOLDER ANALYSIS

During the project baseline fieldwork, the following stakeholder groups are identified on WBDRBM project:

- Local Community Stakeholders
- Local and NGO Stakeholders
- Governmental Stakeholders
- Groups and Associations Representing Commercial Stakeholders
- Media Stakeholders

**Local Community Stakeholders** - People who may be affected physically and socio-economically during the project phases of land acquisition, construction, and operation of the Project can be categorized as being directly and/or indirectly impacted. Although this group has not lost any of their assets, the Project will impact their lifestyles due to changes in the socio-economic environment. Therefore, their inclusion is essential in order to offer them the opportunity to explore the benefits and risks of the Project. Vulnerable groups are considered vulnerable because the project may pose additional social and economic risks for these groups that are already in a disadvantaged situation or/and have limited capacity to manage significant changes to their livelihoods. In WBDRBM project, vulnerable groups are assessed in terms of gender and human physical need based (gender/age/disability) vulnerable groups and according to vulnerability due to loss of assets. Civil society groups include informal groupings of civil society for example a neighborhood social group, public schools, women's associations or a local youth sports group. Consultation with such groups can not only identify local interests but they are also a good way of reaching and networking with local people

**Local NGOs** - There are few local NGOs that are active in the Drina region:

- BiH (FBiH and RS): Euroregija "Drina", Udruženje „Eko-Drina“, Drina River Committee (DRC), Udruženje građana Mreža razvojnih inicijativa „Logosfera“, Ekološko udruženje "Eko Put" Bijeljina, Udruženje Drina-Srebrenica.



- Serbia: NVO Kriva Drina, “ISKRA” Loznica, „Koreni”- EKO - Grozd Rakita , NVO Drinska regata“.
- Montenegro: NVO FORS Montenegro, NVO Natura, NVO Green Youth, NVO Breznica, NVO Mladi ekolozi Nikšić, NVO Amnesty, NVO Trešnjica, NVO ljubitelji rijeke Bukovice.

### **Governmental Stakeholders**

These stakeholders are governmental entities that have an influence on the design, implementation and operation phases of the project. They can be grouped into national, provincial, regional and local government stakeholders.

### **Media Stakeholders**

The involvement of media, regional and local commercial associations is also necessary for the Project. Media, especially at regional and local levels (local TV station, radio), is crucial to generate the public perception and information dissemination and to providing updated information on WBDRBM project.

## **STAKEHOLDER ENGAGEMENT AND PARTICIPATION**

Stakeholder engagement within the scope of the project GEF SCCF WBDRBM is crucial for supporting the project's risk management process, specifically the early identification and avoidance/management of potential impacts (negative and positive) and cost-effective project design. Stakeholder engagement is an on-going process and there are three phases relevant to GEF SCCF West Balkans Drina River Basin Management (WBDRBM) project and this SEP overview:

- Project GEF SCCF WBDRBM project Baseline Engagement Phase;
- Disclosure & Consultation Phase; and,
- Ongoing engagement after the Project disclosure process is complete and throughout the project life cycle.

### ***Baseline engagement phase***

During the GEF SCCF WBDRBM project baseline fieldwork, the focus of engagement is primarily on gathering information and opinions from stakeholders. Engagement activities will therefore include interviews with stakeholder representatives (informal leaders) and key information organizations (communities, authorities, NGOs) using one-on-one meetings, workshops and smaller focus group meetings.

### ***Disclosure & Consultation Phase***

This second phase of engagement focuses on disclosing and consulting on the draft results of the project process. At this stage of the project, it is planned to continue with the inclusion of the public in December 2015 by organizing public hearings in all three states along the Drina River Basin.

Furthermore, all stakeholders will be timely informed about the Project's scope and contacts for further information inquiries, the available grievance mechanism and the availability of the publicly available documents, are possible through:

- the website of the Ministry of Foreign Trade and Economic Relations- MOFTER ([www.mvteo.gov.ba](http://www.mvteo.gov.ba))
- the website of the Ministry of Agriculture, Water Management and Forestry of FBiH-MAWMF FBiH ([www.fmpvs.gov.ba](http://www.fmpvs.gov.ba))
- the website of the Ministry of Agriculture, Forestry and Water Management of RS- MAFWM RS ([www.vladars.net](http://www.vladars.net))
- the website of the Ministry of Agriculture and Environmental Protection- MAEP (Water Protection Division) ([www.mpzzs.gov.rs](http://www.mpzzs.gov.rs))
- the website of the Ministry of Agriculture and Rural Development – MARD ([www.minpolj.gov.me](http://www.minpolj.gov.me))
- the website of the involved municipality.

Anyone can comment on the draft document during a disclosure period. Feedback forms (Annex 9.8) will accompany all the disclosure documentation.



### ***Grievances Redress Mechanism***

A Complaint and Grievance Procedure provides a mechanism for communities and affected parties to raise complaints and grievances and allows the project to respond to and resolve the issues in an appropriate manner.

The grievance mechanism will be established by the Project Implementation Unit (PIU) for dealing with the issues of acquisition of land and other assets, as well as the losses and damages caused by the construction works. Any comments or concerns can be brought to the attention of the PIU or municipal administrations (the Local municipal officer) verbally or in writing (by post or e-mail) or by filling in a Grievance form (Annex 9.8), without any costs incurred to the complainant. All grievances will be recorded in the register and assigned a number, and acknowledged within 7 calendar days.

The more in-depth analyses of the stakeholder engagement is provided in the document: “Technical support papers” of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

## 8. Institutional structure

This chapter presents brief overview of the institutional set up in DRB countries Bosnia and Herzegovina, Montenegro and Serbia within the water and environment sectors, which corresponds to the GEF SCCF West Balkans Drina River Basin Management (WBDRBM) project needs. The more in-depth analyses is provided in the document: “Technical support papers” of the ESMF (web - BiH: <http://www.mvteo.gov.ba/>; MNE: <http://www.mpr.gov.me/ministarstvo>; SRB: <http://www.rdvode.gov.rs/aktuelno.php>).

### 8.1 Water management organization in Drina River Basin

#### BiH (FBiH and RS)

At the State level, the Ministry of Foreign Trade and Economic Relations (MoFTER<sup>12</sup>), established by the Law on Ministries and other bodies of administration of Bosnia and Herzegovina (“OG of BiH”, 5/03, 42/03), is responsible for tasks related to defining policies; coordinating activities and harmonizing plans of Entity authorities and bodies at international level – among others in the fields of agriculture, energy, protection of the environment, development and use of natural resources and tourism. In relation to water management, the MoFTER focuses on development and use of water resources as part of natural resources, and the coordination of the Entity Ministries of Water Management.

Bosnia and Herzegovina has two highly autonomous Entities: the Federation of Bosnia and Herzegovina and Republic of Srpska, each having its own laws that affects and encompass the responsibilities related to delivery of water and wastewater services, addressing most aspects of technical, administrative and financial matters.

The Federal Ministry of Agriculture, Water Management and Forestry<sup>13</sup> governs the water management and encompass following responsibilities: preparation of strategies and development policies for water management, water management facilities and public water properties (in the field of water use, water protection and protection against harmful effects of water and water monitoring); proposing development documents for the integrated water management (river basin management plans, programs of measures, flood protection plans, water pollution prevention plan, plans for water emergencies, droughts and erosion and other documents according to applicable laws) and monitoring the implementation of aforesaid documents; preparation of legislation and regulations and institutional arrangement in the field of water management within the competence of the Federation BiH; participation in the process of drafting of budget proposal of the Ministry in the fields as covered by the Sector; coordination of monitoring activities in water resources and preparation of information material in the field of water management; guiding the development of water regime and water status through the identification and implementation of development projects and cooperation with units and services for the implementation of projects in the Ministry and with Federal Ministry of Finance, water management institutions and other institutions; carrying out concession granting procedures within the competence of the Ministry in this field; carrying out activities related to international contracts, agreements, conventions and protocols in water management (Danube Convention, Barcelona Convention, Helsinki Convention, the Sava River Agreement, Water Management Cooperation Agreement with the Republic of Croatia) and activities related to inter-entity cooperation according to Inter-entity Water Management Cooperation Memorandum, etc. (taking part in the preparation, coordination and implementation of commitments taken in line with these documents together with country-level institutions and the institutions from the Republic of Srpska); supervision of the activities undertaken by water management institutions at the Federation level (Water Agencies) and control of legality of documents issued by cantons

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<sup>12</sup> <http://www.mvteo.gov.ba/>

<sup>13</sup> <http://www.fmpvs.gov.ba>

and these agencies in administrative procedure; coordination with cantons in the field of water management; and other activities within the competence of the Sector.

The Ministry of Agriculture, Forestry and Water Management of Republic of Srpska<sup>14</sup> is responsible for: integrated environmental management; development and adoption of plans and foundation, balance water; enforcement of protection from harmful water, determining conditions and issuing permits for water abstraction and use, implementation and organization of quality control of water, take measures to provide water for water supply and population industry; monitoring; hydro melioration; affairs of establishment and maintenance of information systems: water in GIS and other formats; keeping registers; preparation of strategies, programs, monitoring and coordination of the work of other organizations in the field of water management and other activities determined by law and the administration of the Hydro-meteorological Institute of the Republic of Srpska.

Both above presented Ministries are each responsible for their public water sector institutions in their administrative areas, in the FBiH Water Agencies and in Republic of Srpska the Public Institution 'Waters of Srpska'.

## **MONTENEGRO**

The responsibilities, organization and capacities of various water management institutions in Montenegro are interlinked. The most important government institutions in charge of WRM in Montenegro are the Ministry of Agriculture and Rural Development and Water Management Administration.

### Ministry of Agriculture and Rural Development (MARD)

MARD is the main government institution responsible for water policy in Montenegro. The scope of work and responsibilities of the Ministry encompass (among other): development of water management policy; systemic solutions of provision and use of water, water land and water sources for water supply, water protection against pollution, monitoring of water quality and quantity, water and waterway development and protection against harmful effects of water; ; systemic and other incentives aimed at improvement in the subject sphere; relevant record keeping; international cooperation within jurisdiction of the ministry; harmonization of domestic regulations from the ministry's scope of responsibilities with the legal system of the European Union, etc.

### Directorate for Water Management (DfWM)

DfWM established as per Article 20, Paragraph 1 of the Regulation on Organization and Operation of Public Authorities, as one of five authorities of the MARD and responsible for: provisions and implementation of measures and works of water and waterway development, protection against adverse water effects and protection against water pollution; providing use of water, waterway materials, water land and state owned water faculties, through concessions, lease and similar; water facility management for the purpose of protection against adverse water effects; issuing water documents; setting water charges; creating and operating water information system, water cadastre, water registry; setting the boundaries of the water assets and setting the status of the public water asset; cooperation with relevant international organizations and institutions in line with relevant responsibilities; as well as other activities within its responsibility (Regulation on Organization and Operation of Public Authorities, Article 20, Paragraph 5).

## **SERBIA**

The responsibilities, organization and capacities of various water management institutions In Republic of Serbia are interlinked and many instances overlapping. The most important government institutions in charge

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<sup>14</sup> <http://www.vodars.org>

of WRM in Serbia are the Ministry of Agriculture and Environmental Protection and Republic Water Directorate.

Ministry of Agriculture and Environmental Protection (MAEP)

Responsibilities of the MAEP, set in Article 5 of the Law on Ministries ("OG of RSRB", No. 44/14 and 14/15), encompass, among others, activities related to agriculture, water management, environmental protection, etc. The Republic Water Directorate is part of the MAEP, responsible for WRM in the MAEP, whilst environmental protection is undertaken by "Water Protection Division" of the Department of Natural Resources Protection in MAEP.

Republic Water Directorate (RWD)

RWD, as the administrative authority within MAEP, is responsible for following activities: water management policy; multi-purpose water use; water supply, excluding water distribution; water protection; implementation of water protection measures and systematic rationalization of water consumption; development of water regimes; tracking and maintaining water regimes creating and cutting RS borders; inspection oversight in the sphere of water management, as well as other activities set by law.

## 8.2 Environmental protection organization in Drina River Basin

### BiH (FBiH and RS)

Specific jurisdictions are assigned to BiH Ministry of Foreign Trade and Economic Relations (MOFTER) over environmental protection under the Law on Ministries and other administrative bodies of BiH. One of the eight divisions within the Ministry is the Division for natural resources, energy and environment protection. Ministry of Foreign Trade and Economic Relations is competent for Foreign trade policy and customs tariff policy of BiH and for tasks and duties falling within the jurisdiction of the State of BiH, including defining policies and basic principles, coordinating activities and consolidating entity plans with those of international institutions in the areas of Agriculture; Energy; Protection of environment and use of natural resources and Tourism.

All of the 10 cantons in FBiH have their own environmental bodies with 2-9 employees, except Sarajevo Canton (27) and Herzegovina-Neretva Canton (44). Two Entity ministries have specific competencies in the environmental field: Ministry of Tourism and Environment of FBiH and Ministry of Physical Planning, Civil Engineering and Ecology of RS.

Environmental protection competences in the **Republic of Srpska** belong to the **Ministry of Physical Planning, Civil Engineering and Ecology**. The Ministry performs public administration activities referring to improvement of operation in the areas of spatial planning, construction and environment through preparation and working within the Committees for developing drafts and proposals of laws and other regulations under the Ministry's authority. Within its scope of work the Ministry prepares and proposes questions and materials, and coordinates activities in the areas of spatial planning, construction and environment for consideration by the committees and other Governmental bodies and Council of Ministers responsible for these areas.

### MONTENEGRO

In Montenegro, environmental protection activities are under jurisdiction of the other **Ministry for Sustainable Development and Tourism (MSDT)**. Monitoring and enforcement of environmental sectorial laws falls under the Environmental Protection Agency. Following the governmental restructuring in 2006, environmental policy has been in the competency of the Ministry of Tourism and Environment, reformed into the Ministry of Spatial Planning and Environment in 2009 and restructured again to become the Ministry of Sustainable Development and Tourism in 2011. The Ministry of Sustainable Development and Tourism is the main governmental authority responsible for policymaking on environment and sustainable development. The Ministry responsibility encompass following: sustainable development; implementation of sustainable development programs and

projects; provision of technical, organizational and administrative support to the National Council for Sustainable Development and Climate Change; spatial and environmental strategic planning; system of integrated environmental protection and sustainable utilization of natural resources; integrated pollution prevention and control; organization of communal services, including water supply and sewerage, and wastewater treatment; developing environmental protection standards; monitoring environmental conditions; cooperation with the international financial institutions and EU funds in implementation of environmental protection and utility services projects; cooperation with NGOs; harmonization of regulations under the Ministry's jurisdiction with EU *acquis*; and other activities under the Ministry's jurisdiction (Regulation on Organization and Operation of Public Authorities, Article 21, Paragraph 1).

MSDT exercises supervision of legality of work and legality of administrative acts of the IHMS, Public Works Directorate and Environmental Protection Agency - EPA (Regulation on Organization and Operation of Public Authorities, Article 51, Paragraph 1, Item 10).

**Environmental Protection Agency of Montenegro (EPA)** established in 2008 (Regulation amending the Regulation on the Organization and Operation of Public Administration ("OG of MNE", No. 68/08)) and operational since 2009, ensures implementation of environmental legislation. Its mandate includes implementation of strategies, programmes, laws and regulations in the field of environment, implementation of international treaties within its jurisdiction, environmental permitting, EIA, SEA, IPPC licensing, environmental monitoring, keeping relevant registers and databases, and reporting and coordination of reporting on the state of the environment. The EPA is also responsible for the provision of information to national and international organizations and to the public.

## SERBIA

In Serbia main competencies for environmental protection has the **Ministry of Agriculture and Environmental Protection**. In the scope of environmental protection the Ministry's scope of work includes: system of environmental protection and improvement; national parks; inspection services in the field of environmental protection; implementation of the Convention on access to information, public participation and access to justice in environmental matters; nature protection; air protection; ozone layer protection; climate changes; cross-border pollution of air and water; water protection against pollution for the purpose of preventing the ground and surface water quality deterioration; approval of cross-border trade of waste and protected plant and animal species; other activities determined by the law, etc.

Monitoring and enforcement of environmental sectorial laws falls under **the Environmental Protection Agency**, which responsibilities encompass: implementation of state monitoring over the quality of water, along with the implementation of prescribed and harmonized programs for surface water quality control, as well as groundwater of unconfined aquifers and precipitation; National Laboratory management; collection and integration of data on the environment, their processing and compiling of the *report on the state of the environment* and environmental protection policy; keeping the national information system in environmental protection; Cooperation with the European Environment Agency (EEA), etc.

## 9. Annexes

## 9.1 ANNEX: Socio-economic characteristics of DRB

DRB flows through three countries (BiH, Montenegro and Serbia) which survived the internal structural and political changes during the past two decades. According to economic criteria, DRB riparian countries belong to the upper middle-income countries, whose slow economic development was further affected by the global economic crisis and the floods in 2014.

In the municipalities of Montenegro, local economy is mostly based on the wood processing industry. The Municipality of Pljevlja produces most of the timber (47%) in Montenegro. The second most important economic sector is agriculture. The Municipality of Bijelo Polje has the largest amount of cultivable land in Montenegro, but only 19% is irrigated, mostly from surface flows (Lake Plav) and underground water sources. The fisheries sector in DRB municipalities in Montenegro is organized as small fish farms (family or small companies-owned), with the production of 5-20 tons per year. The exceptions are two large fish farms that produce 40-130 tons per year, which are run by private companies. The main problem for fish farming is a seasonal lack of water during the summer months. Mining and stone industry is based on the extraction of lead and zinc, which in this region has a long tradition. The most important are deposits of brick clay, lime and bentonite. Exploitation of sand and gravel in riverbeds is under concession and under the jurisdiction of the Directorate for Water. This is why it is a significant source of income for small private companies. Tourism is developed in the Durmitor and the Tara River National Park through promotion of eco-tourism, sport and adventure as well as sport fishing.

In Serbia, the wood processing industry is one of the most important industries in DRB area. Public Enterprise "Serbian Forests" manages state-owned forest assets, while furniture companies and sawmills are mostly privately owned. Agricultural production in SRB is mainly focused on small agricultural farms and family farms that produce crop and livestock for their own needs. Fish sector is developed in the Municipality of Mali Zvornik, mainly breeding carp and trout. The significance of the Drina River is reflected in its hydro potential, which is only partially used for "Bajina Bašta" hydro power plant. The Tara National Park in Serbia contributes to the development of tourism, as well as adventure tourism, e.g. rafting and sport fishing on the Drina.

In the northern part of the DRB in BiH, local economy is based on trade, manufacturing and agriculture. In this part of the DRB there are significant areas of farming land where cultivation of cereals and vegetables is mostly represented. The same applies to livestock production which has recently focused on specialized types of production (milk, meat) in order to improve production and incomes. As far as other municipalities are concerned, it can be concluded that the local economy is based on the electric power industry (Ugljevik), mining (Milići), energy industry, forestry and agricultural production within the small farms. Important and safe source of income is employment in the public administrations and in the private companies. The development of tourism is partially related to the Drina, but as a source of income that part is small, except for the Municipality of Foča where additional sources of income are realized within the Sutjeska NP. The only significant fish farm in the RS is on the Krupica River, near Foča. There are some natural fish farms and reservoirs in "Višegrad" (area of 890 ha), "Bajina Bašta" (1,030 ha) and "Zvornik" (1,380 ha), where about 25-35 kg/ha of fish is estimated to be available. Gravel extraction from the riverbed of the Drina River is an economic activity regulated by the state but the data on the quantities of excavated sediments are unavailable, although this type of activity is a significant source of income for small private companies.

As for the Labor Market, it has not recovered from the economic crisis in 2008. The unemployment rate is significantly high in all three countries (BiH-27.5%, MNE-19.4%, SRB-20.8%), which is a clear indicator of the biggest problems for all three economies.

The rate of unemployment in the DRB is 22.56%. For the last 5 years the unemployment rate in BiH has not significantly changed. The average unemployment rate in FBiH during the last 5 years is 46.35 %, while it is 38.35% in the RS. The unemployment rate in SRB is 22.98%. The highest unemployment rate in Serbia is in the municipality of Krupanj (58.4%) and the lowest in the Municipality of Čajetina (18%). The average



employment rate in Montenegro is 37.7%. The highest unemployment rate in DRB area in Montenegro is in the Municipality of Plav (50.4%) and lowest in the Municipality of Šavnik (22.4%).

RS DRB is characterized by a higher share of urban population in the Municipality of Foča (62%), Pale (62%), Han Pijesak (53%) and the Municipality of Goražde in FBiH has 57% of the urban population. In Montenegro DRB, there are municipalities at the lowest level of urbanization in comparison to the rest of the state, namely those are municipalities of Andrijevica (18%) and Šavnik (19%). In the part of the basin belonging to Serbia, approximately 41% of the population lives in urban areas and 58% in rural areas. Užice has the highest level of urbanization (about 77%).

For BiH territory, gender and age structure data is available only at the national level. More women than men live in BiH, 51.3% compared to 48.7%. The highest percentage of the population includes the age group of 45-59 years. The age structure in DRB in Montenegro is characterized by a slightly higher proportion of the male population (50.2%) compared to women (49.8%). SRB is characterized by a higher proportion of the female population, namely 50.5% of female and 49.5% of male population.

The negative impacts of floods affected a large part of the population and land mass, especially in BiH. At the end of May 2014, 25 people died, about 90,000 people were evacuated and around 1 million, or one quarter of the total population, were directly affected by the floods. In the year 2014, all three countries suffered from the setback, especially in economic terms, and the greatest economic damage occurred in sectors such as energy, mining, and agriculture. Significant damage was inflicted on the transport infrastructure (roads, bridges and railways).

The assessment of flood damage in BiH in 2014 amounts to about 15% of GDP, damage (9.3% of GDP) and losses (5.6%), in SRB about 4.7% of GDP, 2.7 % of GDP referring to damage and 2% of GDP to losses in 2014, respectively.

In the Drina River Basin, there are problems related to the protection of water resources from pollution due to the discharge of waste water and solid waste. It has been observed that there is a lack of facilities for treating waste water before it is released into surface water. This applies to urban and rural areas, as well as more isolated industrial plants.

The use of water for water supply, irrigation, etc. is not very significant in view of the considerable Drina water resources, except in the lower flow.

In DRB, there are 10 major reservoirs (and many other smaller ones) and 9 associated hydropower plants. The water potential of the Drina River and its tributaries is mainly used for energy production. The total technically used hydro-potential is 1,838.6 MW, with estimated annual production in 2014 of 5,200 GWh. One of the most important economic revenues is certainly the sediment exploitation, which, on the other hand, causes the major dispute between the riparian countries (e.g. the determination of the border between Serbia and BiH).

Natural conditions in the Drina basin create excellent opportunities for a broad spectrum of economical use like hydropower, agriculture, tourism and fishery. Moreover, there are also great possibilities for protection against floods, for the supply of municipal and industrial water and recreation. The importance of water for hydro-power plants on the Drina will gradually contribute to other uses of water, such as water supply, irrigation, flood protection, etc. Regulated water management in the Drina River basin will provide access to water for all users and ensure flood protection under all conditions.

Summarizing the aforementioned, it can be concluded that local economy is in large part dependent on the Drina River. This especially applies to agricultural production which depends on weather conditions because it is mostly carried out in the open agricultural land, only partially irrigated. Given that agricultural production

is organized in the form of small farms where the family members are involved in the production, improved management of the Drina River will positively affect the security of self-employment within these households.

Although people are increasingly migrating to larger urban centers, many of them rely on agriculture as part of the family farms and as an additional source of income. Providing an adequate protection for people and goods in extreme hydrological situations such as floods, droughts, torrents, riverbed erosions, etc. is one of the most important social benefits of the WBDRBM project.

## 9.2 ANNEX: DRB countries in figures

### BiH (FBiH and RS) in figures:

Bosnia and Herzegovina, a former Yugoslav Republic, is located in southeast Europe, on the Balkan Peninsula, with the total area of 51,129 km<sup>2</sup>. Bosnia and Herzegovina shares boundaries with Croatia on the north, west, and south, Serbia and Montenegro on the east, and the Adriatic Sea on the south, with a total boundary length of 1,459 km. Bosnia and Herzegovina's capital city is Sarajevo with the population of 318,000 (2015). The BiH is emerging democracy, with a rotating, tripartite presidency divided between predominantly Serb, Croatian, and Bosnian political parties. Within Bosnia and Herzegovina's recognized borders, the country is divided into a joint Bosniak/Croat Federation (about 51% of the territory) and the Bosnian Serb-led Republic of Srpska or RS (about 49% of the territory); the region called Herzegovina is contiguous to Croatia and Montenegro, and traditionally has been settled by an ethnic Croat majority in the west and an ethnic Serb majority in the east. The population is 3,867,055 (July 2015 est.) and comprised from Bosniak 48.4%, Serb 32.7%, Croat 14.6%, and other 4.3%. In BiH there are 3 official languages: Bosnian, Croatian and Serbian.

Bosnia and Herzegovina is a federal state divided into two entities, the Republic of Srpska and the Federation of Bosnia and Herzegovina, composed of municipalities (*opštine*) and cantons (*kantoni*). Local level: 63 municipalities in the Republic of Srpska and 80 in the Federation of Bosnia and Herzegovina. Regional level: 10 cantons (Kantoni).

Bosnia has a transitional economy with limited market reforms. The economy relies heavily on the export of metals, energy, textiles and furniture as well as on remittances and foreign aid. Economic summary: GDP/PPP: \$38.06 billion (2014 est.); per capita \$9,800. Real growth rate: 0.8%. Unemployment: 43.6% official rate. Arable land: 19.61%. Agriculture: wheat, corn, fruits, vegetables; livestock. Labour force: 1.281 million (2014); agriculture 19.%, industry 30.0%, services 51% (2013). Industries: steel, coal, iron ore, lead, zinc, manganese, bauxite, vehicle assembly, textiles, tobacco products, wooden furniture, tank and aircraft assembly, domestic appliances, oil refining. Natural resources: coal, iron ore, bauxite, copper, lead, zinc, chromite, cobalt, manganese, nickel, clay, gypsum, salt, sand, forests, hydropower.

The topography of Bosnia and Herzegovina features hills, mountains, and valleys. Approximately 50% of the land is forested. The country has three main geographic zones: high plains and plateaus along the northern border with Croatia, low mountains in the center, and the higher Dinaric Alps, which cover the rest of the country. Approximately 10% of the land in Bosnia and Herzegovina is arable. Bosnia and Herzegovina's natural resources include coal, iron, bauxite, manganese, timber, wood products, copper, chromium, lead, and zinc. Bosnia and Herzegovina is subject to frequent and destructive earthquakes. It has a narrow coastline without natural harbours stretching 20 km along the Adriatic Sea.

### Montenegro in figures:

Montenegro is a former Yugoslav republic located in south-eastern Europe on the Balkan Peninsula. Length of the land border is 614km, of which 14km with Croatia, with Bosnia and Herzegovina 225km, with Serbia 203km and with Albania 172km, while the coastline is 293.5 km. Montenegro has an area of 13,812km<sup>2</sup>, of which 6,219 km<sup>2</sup> or 45% is located in the Drina River Basin. According to the census of 2011, Montenegro has 620,029 inhabitants, of which in the Drina River Basin live 154,873 or around 25% of the Country population. Country has total area 13,812 km<sup>2</sup>, out of which land -13,452 km<sup>2</sup> and water - 360 km<sup>2</sup>.

Montenegro's economy is transitioning to a market system. From the beginning of the privatization process in 1999 through to 2015, around 85% of Montenegrin state-owned companies have been privatized, including 100% of banking, telecommunications, and oil distribution. Net foreign direct investment in 2014 reached

\$483 million and investment per capita is one of the highest in Europe. The Country's GDP is \$9.36 billion (2014 est.), while GDP per capita reaches \$15,000 (2014 est.), compared to \$14,800 in 2013 est. The capital town is Podgorica (187 085 population), which is the main administration center. The country's old historic capital is Cetinje (13 991, 2011 census), founded by ruler Ivan Crnojević in 1482. Today Cetinje is the residence of the President of Montenegro.

The employment rate at the state level is about 40%, while in the northern region reduced significantly to only 25%. Unemployment is more pronounced in the northern region (40%) in relation to Montenegro (19.5%) and this leads to massive population emigration. According to the Census from 2011, in the catchment area of the River Drina live 154,873 inhabitants, which are 16,517 less in accordance with the census from 2003. According to the census from 2011, Montenegro has agricultural land - 38.2% (arable land 12.9%; permanent crops 1.2%; permanent pasture 24.1%), forest - 40.4% and 21.4% of other.

These indicators that represent national averages are not relevant for the northern region of Montenegro, since it had relatively high revenues generated in the tourism sector along the Adriatic coast and data on GDP per capita may not be relevant in the Drina River Basin in Montenegro. Average net wage in the northern region in 2011 is 2% lower compared to national average. These figures show that the economic crisis affected more of the richer part of countries and led to a near equalization of wages.

From a total of 23 municipalities in Montenegro, 13 are located in the Drina River Basin (municipalities of Andrijevisa, Berane, Bijelo Polje, Kolašin, Mojkovac, Nikšić, Plav, Pljevlja, Plužine, Podgorica, Rožaje, Šavnik and Žabljak – according to the data from WBDIWRM project). In strictest terms there are actually 15 municipalities in the DRB with two newly established (2013)-Gusinje taking land from Plav, and Petnjica taking land from Berane.

### **Serbia in figures:**

Serbia, a former Yugoslav republic, is largely mountainous country. Its northeast section is part of the rich, fertile Danube Plain drained by the Danube, Tisa, Sava, and Morava river systems. It borders Croatia on the northwest, Hungary on the north, Romania on the northeast, Bulgaria on the east, Macedonia on the south, and Albania, Montenegro, and Bosnia and Herzegovina on the west. The total area is approximately 77,474 km<sup>2</sup>, and total land boundary length is 2,114.2 km. Serbia's capital is Belgrade, situated in north central Serbia.

The population of Serbia is comprised of Serb 83.3%, Hungarian 3.5%, Romany 2.1%, Bosniak 2%, other 5.7%, undeclared or unknown 3.4% (2011 est.), and Serbian is the official language. The population size is 7,176,794 mil. (note: does not include the population of Kosovo (July 2015 est.). The capital town Belgrade has the population of 1.182 million (2015). Besides the City of Belgrade, the capital, there are another 23 **cities** in Serbia: Valjevo, Vranje, Zaječar, Zrenjanin, Jagodina, Kragujevac, Kraljevo, Kruševac, Leskovac, Loznica, Niš, Novi Pazar, Novi Sad, Pančevo, Požarevac, Priština, Smederevo, Sombor, Sremska Mitrovica, Subotica, Užice, Čačak and Šabac. Serbia also has 150 urban areas with municipality status.

Rich fertile plains are found in the north of Serbia, while in the east there are limestone ranges and basins. Nearly half of Serbia is mountainous, with the Dinaric Alps on the western border, the North Albanian Alps (Prokletije) and the Sar Mountains in the south, and the Balkan Mountains along the southeast border. The highest point is Daravica, in the North Albanian Alps, at 2,656 m. Of its mountains, 15 reach heights of over 2,000 m. The Danube is the longest river. With a total length of 2,783 km, about 588 km in Serbia, flows from west to east through the northern region of Serbia. The Tisa, Sava and Morava rivers are major tributaries of the Danube.

Serbia has a transitional economy largely dominated by market forces, but the state sector remains significant in certain areas and many institutional reforms are needed. The economy relies on manufacturing and exports, driven largely by foreign investment. Serbia has made some progress towards EU membership, signing a Stabilization and Association Agreement with Brussels in May 2008, and with full implementation of the Interim Trade Agreement with the EU in February 2010, gained candidate status in March 2012. In January 2014, Serbia's EU accession talks officially opened. The GDB \$95.49 billion (2014 est.) and GDP - per capita (PPP) is \$13,300 (2014 est.). The GDP consumption by use is as follows: household consumption: 73.7%, government consumption: 19.3%, investment in fixed capital: 20.2%, investment in inventories: -1.9%, exports of goods and services: 45.8%, imports of goods and services: -57.1%. The unemployment rate in 2014 was 19.7% (2014 est.).

### 9.3 ANNEX: Checklist questionnaire

| CHECKLIST QUESTIONNAIRE                           |   |  |   |   |
|---|---|--|---|---|
| (to be filled in for every subproject separately) |   |  |   |   |
| <b>Administrative and institutional data</b>      |   |  |   |   |
| 1.  | Sub-project name  | (Name of rehabilitation sub-project)                     |   |   |
| 2.  | Sub-Project location  | (National authority/Municipality/Management authority)   |   |   |
| 3.  | Proximity to nearest settlement (houses)  |  |   |   |
| 4.  | Proximity to nearest river/lake   |  |   |   |
| 5.  | Institutional Arrangements (names and contacts)   | WB (Task team leader)                                    | Project Management/<br>Project Implementation<br>Unit (PIU) | Local Counterpart or Recipient  |
| 6.  | Implementation arrangements (names and contacts)  | Safeguard Supervision                                    | PIU Supervision   | Contractor  |
| 7.  | Project description (Describe main project features and location of work execution)                                   |  |   |   |
| <b>Project exclusion criteria</b>                 |   |  |   |   |
|   | Issue   | Yes/No   |   | Comment   |
| 8.  | Is the project found on the WBDRBM "positive" list of selected projects.  | Yes <input type="checkbox"/> No <input type="checkbox"/> |   | <input type="checkbox"/> If yes, the project is eligible for financing.<br>If not the assessment needs to be made, in line with the Project-related documents, and then either approved, or rejected. |
| 9.  | Is the project found on the list of projects that must undergo environmental assessment based on national legislation | Yes <input type="checkbox"/> No <input type="checkbox"/> |   | <input type="checkbox"/> If yes, the project is not eligible for financing. Identify another project.   |
| 10.   | Will the project implementation result in the resettlement of population or permanent land occupation                 | Yes <input type="checkbox"/> No <input type="checkbox"/> |   | <input type="checkbox"/> If yes, the project shall respect developed RFP(s).  |
| 11.   | Will the project involve actions which will cause new physical changes in the   | Yes <input type="checkbox"/> No <input type="checkbox"/> |   | <input type="checkbox"/> Go back to original design   |

|                                |  |   |   |  |  |
|--------------------------------|--|---|---|--|--|
|                                | locality (topography, land use, water bodies, etc.) compared to the state before reconstruction?   |   |   | and avoid any physical changes in the locality<br>[ ] Develop a site specific EMP<br>[ ] Exclude the project and identify another site   |  |
| 12.                            | Will the project result in increased use of natural resources such as land, water, materials or energy compared to the state before reconstruction?  | Yes [ ] No [ ]  |   | [ ] Go back to original design and avoid increase in natural resources use<br>[ ] Develop a site specific EMP<br>[ ] Exclude the project and identify another site   |  |
| 13.                            | Is the project satisfying general reconstruction requirements?   | All legally required permits for reconstruction from local authorities are acquired.<br>Yes [ ] No [ ]<br><br>Water acts from responsible authorities are obtained.<br>Yes [ ] No [ ]<br><br>Reconstruction materials are purchased from licensed sources/companies only?<br>Yes [ ] No [ ] |   | [ ] Temporary stop the project until required permits and water acts are obtained<br>[ ] Ensure that Contractor is contractually obliged to purchase material from licensed companies<br>[ ] It is not possible to fulfill all general reconstruction requirements. Identify another site. |  |
| <b>Environmental Screening</b> |  |   |   |  |  |
|                                | <b>Possible environmental impacts</b>  | <b>Yes/No?</b>  | <b>Mitigation measures (circle those implemented upon completion of monitoring)</b>   | <b>Monitoring parameters</b>   | <b>Responsible Body</b>  |
| 14.                            | Will project activities be implemented in protected areas or they will affect protected endemic plant-, fungi- or animal species or their habitats ? | [ ] Yes<br>[ ] No   | a) A site-specific EMP prepared to include all measures and best environment protection practice.<br>b) All necessary local permits are acquired.<br>c) The activity is in accordance with the management regime for the observed location<br>d) No endemic or protected species will be used.  | a) Visual inspection on site<br>b) Construction diary<br>c) Public complaints  | a) Contractor for execution of civil works<br>b) Supervising engineer on behalf of PIU |
| 15.                            | Will project activities be implemented at/near archaeological or cultural sights?  | [ ] Yes<br>[ ] No   | a) Project will cause no harm to any such sight.<br>b) Special attention will be paid to the protection of such sights, or they will be incorporated into the site specific EMP for construction works.<br>c) (The project is implemented in cooperation with a person authorized for cultural/archaeological findings and in accordance with regulations | a) Visual inspection on site<br>b) Construction diary<br>c) Public complaints  | a) Contractor for execution of civil works<br>b) Supervising engineer on behalf of PIU |



|     |  |   |   |   |  |
|-----|--|---|---|---|--|
| 16. | Are there any areas on or around the location which are important or sensitive for reasons of their ecology, e.g. wetlands, watercourses or other water bodies, mountains, forests or woodland, which could be affected by the project?      | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | <ul style="list-style-type: none"> <li>a) All recognized areas in the immediate vicinity of the activity will not be damaged or exploited</li> <li>b) Staff will be strictly prohibited from foraging, logging or other damaging activities.</li> <li>c) A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided</li> <li>d) Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences</li> <li>e) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas.</li> </ul> | <ul style="list-style-type: none"> <li>a) Visual inspection on site</li> <li>b) Construction diary</li> <li>c) Public complaints</li> </ul>   | <ul style="list-style-type: none"> <li>a) Contractor for execution of civil works</li> <li>b) Supervising engineer on behalf of PIU</li> </ul> |
| 17. | Are there any areas on or around the location which are used by protected important or sensitive species of fauna or flora, e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the project? | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | <ul style="list-style-type: none"> <li>a) All recognized areas will be completely avoided</li> <li>b) Staff will be strictly prohibited from hunting, foraging or other damaging activities.</li> </ul>   | <ul style="list-style-type: none"> <li>a) Visual inspection on site</li> <li>b) Construction diary</li> <li>c) Public complaints</li> </ul>   | <ul style="list-style-type: none"> <li>a) Contractor for execution of civil works</li> <li>b) Supervising engineer on behalf of PIU</li> </ul> |
| 18. | Will the project lead to risk of contamination of land or water from releases of pollutants onto the ground or in surface/ground waters during construction and operation?   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | <ul style="list-style-type: none"> <li>a) Set up sediment traps along rivers and/or gabions along banks to filter out eroded sediments</li> <li>b) Provide slope protection through bank compaction, rip-rapping on critical sections, or vegetative stabilization</li> <li>c) Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils</li> <li>d) Use material for restoration of degraded areas</li> <li>e) Provide oil &amp; grease traps in stilling ponds</li> <li>f) Provide ring canals around fuelling tanks/motor pool/maintenance areas</li> <li>g) Collect used oils in containers and hand over to</li> </ul>  | <ul style="list-style-type: none"> <li>a) Complaints received</li> <li>b) Visually for presence of turbidity in surface water</li> <li>c) Analyze surface water quality in case of complaints (for pH, turbidity, conductivity and suspended solids and total mineral oils)</li> <li>d) If groundwater is used for drinking water supply, analyze tap water for drinking water quality parameters as prescribed in</li> </ul> | <ul style="list-style-type: none"> <li>a) Contractor for execution of civil works</li> <li>b) Supervising engineer on behalf of PIU</li> </ul> |

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|     |  |   | <p>authorized agency for handling</p> <p>h) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.</p> <p>i) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities</p> <p>j) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment</p>  | <p>national legislation</p> <p>e) Appropriate approvals by the local authorities</p>   |   |
| 19. | Will the project involve actions such as construction/demolition activities, use of machinery and/or transport vehicles, etc. that might release pollutants to air during construction or operation (e.g. exhaust fumes, dust, fire smoke, odors)? | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | <p>a) Regular equipment maintenance</p> <p>b) Contractor to present proof of compliance with emission standards as part of the annual vehicle registration process</p> <p>c) Compact spoils storage piles</p> <p>d) Wet areas of dust sources to minimize discomfort to nearby residents</p> <p>e) Control of vehicle speed to lessen suspension of road dust</p> <p>f) Keep the surrounding environment (sidewalks, roads) free of debris to minimize dust</p> <p>g) During interior demolition debris-chutes shall be used above the first floor</p> <p>h) No open fire at the site</p> <p>i) Ensure no pollutants are released originating from building heating system</p> <p>j) increase energy performance of buildings</p> | <p>a) Presence of black smoke from construction vehicles</p> <p>b) Attestation documentation</p> <p>c) Visual inspection of dust presence</p> <p>d) Public complaints received</p> | <p>a) Contractor for execution of civil works</p> <p>b) Supervising engineer on behalf of PIU</p> |
| 20. | Will the project cause excess noise generation during construction?  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | <p>a) Schedule equipment movement during non-peak hours of daytime vehicular traffic</p> <p>b) Avoid night-time construction activities and abide by local laws on construction hours</p> <p>c) Provide silencers/mufflers for heavy equipment</p>  | <p>a) Public complaints received</p> <p>b) Measure a noise level in case of complaints</p>   | <p>a) Contractor for execution of civil works</p> <p>b) Supervising engineer on behalf of PIU</p> |

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| 21. | Will the project produce solid waste during construction and/or demolition and operation?   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)<br>b) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.<br>c) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.<br>d) Construction waste will be collected and disposed properly by licensed collectors<br>e) No open burning of wastes on or off site<br>f) The approach to handling solid wastes from building sites must be approved by the local authorities | a) Visual inspection of separate waste management piles<br>b) Written receipts of all separate waste streams handled by the designated authorities<br>c) Visual inspection of burn marks on site<br>d) Construction diary<br>e) Appropriate approvals by the local authorities | a) Contractor for execution of civil works<br>b) Supervising engineer on behalf of PIU |
| 22. | Will the project involve use of substances or materials which could be harmful to human health or the environment or raise concern about actual or perceived risks to human health? | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Use renewable construction materials (e.g. use of ECO cement, wood fiber insulation boards, wooden floors and windows, etc.) if economically feasible.<br>b) Use low VOC paints and varnishes.<br>c) Do not use asbestos containing materials in construction.   | a) Construction diary<br>b) Visual inspection on site  | a) Contractor for execution of civil works<br>b) Supervising engineer on behalf of PIU |
| 23. | Will there be any risk of accidents during construction which could affect human health?  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) notify the local construction and environment inspectorates of upcoming activities.<br>b) Notify the public of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works).<br>c) Formally agree with the Contractor that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.<br>d) Formally agree with the Contractor that workers   | a) Keep written proof of notifications, local permits, and/or media announcement clippings<br>b) Supervisor to ensure use of PPE<br>c) Supervisor to visually inspect adequate signage   | a) Site supervisor<br>b) PIU<br>c) Contractor for execution of civil works             |

|                         |   |   |   |  |  |
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|                         |   |   | health and safety requirements will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots).<br>e) Appropriate signposting of the sites will inform workers of key rules and regulations to follow and emergency contact numbers.<br>f) Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit.<br>g) Provide portable water & sanitary facilities for construction workers. |  |  |
| 24.                     | Are there any (transport) routes on or around the location which are used by public which could be negatively affected by the project?  | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Schedule vehicle movement during lean daytime traffic hours or at night.<br>b) Provide traffic aides/flagmen, traffic signs to help ensure the free and safe flow of traffic.<br>c) Maintain & Repair temporary alternative route of vehicles & pedestrians.   | a) Presence of traffic signs<br>b) Public complaints received<br>c) Occurrence of traffic jams | a) Contractor for execution of civil works |
| 25.                     | Are there any facilities on or around the location which are used by public which could be negatively affected by the project (e.g. difficult public access)?   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Designate an alternate route for pedestrian and/or vehicles in coordination with the Municipal Authorities or provide safe passageway through the construction site.   | a) Public complaints received  | a) Contractor for execution of civil works |
| 26.                     | Are there existing land uses on or around the location e.g. homes, gardens, other private property, industry, commerce, recreation, public open space, community facility, agriculture, forestry, tourism, mining or quarrying which could be negatively affected by the project? | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Address the issue of expropriation/ economic loss using appropriate resettlement instruments in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation.   | a) Public complaints received  | a) PIU                                     |
| <b>Social Screening</b> |   |   |   |  |  |
|                         | <b>Possible social impacts</b>  | <b>Yes/No?</b>  | <b>Mitigation measures (circle those implemented upon completion of monitoring)</b>   | <b>Monitoring parameters</b>   | <b>Responsible Body</b>                    |
| 27.                     | Will the project lead to Involuntary resettlement   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Develop an appropriate resettlement instruments - RAP in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation.  | a) Public complaints received  | a) PIU, local authority                    |

|  |  |   |  |                               |                         |
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| 28.  | Will the project lead to any loss of income resources due to land acquisition, restriction of access to assets or resettlement                                       | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Develop an appropriate resettlement instruments - RAP in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation  | a) Public complaints received | a) PIU, local authority |
| 29.  | Will the project activities pose social and economic risks on vulnerable groups, i.e internally displaced persons, poor people, people with disabilities, elderly    | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Define vulnerable groups according to RPF<br>b) Develop an RAP for each project location in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation.                                  | a) Public complaints received | a) PIU, local authority |
| 30.  | Will the project affect PAPs who have formal rights to land and are entitled to compensation for the land they use and other assistance                              | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Define formal rights to land and compensation eligibility according to RPF<br>b) Develop an RAP for each project location in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation. | a) Public complaints received | a) PIU, local authority |
| 31.  | Will the project affect PAPs who do not have formal rights to land at the time the census begins but have a claim to such land and assets, provided by domestic laws | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Define formal rights to land and compensation eligibility according to RPF<br>b) Develop an RAP for each project location in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation. | a) Public complaints received | a) PIU, local authority |
| 32.  | Will the project affect PAPs who have no recognizable legal right or claim to the land they are occupying, but are entitled to resettlement assistance               | <input type="checkbox"/> Yes<br><input type="checkbox"/> No | a) Define formal rights to land and compensation eligibility according to RPF<br>b) Develop an RAP for each project location in accordance with the O.P. 4.12 Involuntarily Resettlement and national legislation. | a) Public complaints received | a) PIU, local authority |
| <b>Summary of features of project and of its location indicating the need for specific EMP development</b>   |  |   |  |                               |                         |
|  |  |   |  |                               |                         |
| <b>Decision:</b>   |  |   |  |                               |                         |
| <b>The following action is proposed to be implemented for the subproject<sup>15</sup>:</b><br><input type="checkbox"/> Approved without additional requirements. |  |   |  |                               |                         |

<sup>15</sup> Evaluator should propose, the implementing agency is to approve, after obtaining NO form the Bank, as relevant.

- ☐ Approved with use of readymade EMP.
- ☐ Approved with requirement to produce site-specific EMP for this subproject.
- ☐ Not approved.

**Name of the evaluator:**

**Date:**

**Place:**

**Signature:**

## 9.4 ANNEX: Generic Environmental and Social Management and Monitoring Plan

| Project Phase / Activities  | Possible Environmental Impacts   | Mitigating Measures   | Monitoring parameters  | Responsible Body  |
|---|--|---|--|---|
| <b>Construction phase</b>   |  |   |  |   |
| <b>Mobilization/ Temporary facilities/ Construction/De-mobilization</b> | <b>General Site Conditions and Safety Notifications</b>  |   |  |   |
|   | <ul style="list-style-type: none"> <li>• Notification of public and Overall Site Safety</li> </ul> | <ul style="list-style-type: none"> <li>• The local construction and environment inspectorates and communities have been notified of upcoming activities</li> <li>• The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)</li> <li>• All legally required permits have been acquired for construction and/or rehabilitation</li> <li>• The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighbouring residents and environment.</li> <li>• Workers' personnel protective equipment (PPE) will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</li> <li>• Appropriate signposting of the sites will inform workers of key rules and regulations to follow and emergency</li> </ul> | <ul style="list-style-type: none"> <li>• Keep written proof of notifications, local permits, and/or media announcement, clippings</li> <li>• Supervisor to ensure use of PPE</li> <li>• Supervisor to visually inspect adequate signage</li> </ul> | <ul style="list-style-type: none"> <li>• Site supervisor</li> <li>• PIU</li> <li>• Contractor for execution of civil works</li> </ul> |



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|  |  | contact numbers<br>• Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit<br>• Provide portable water & sanitary facilities for construction workers   |   |                          |
| Mobilization/<br>Temporary facilities/<br>Construction/De-<br>mobilization | <b>Traffic and Pedestrian Safety</b>   |   |   |                          |
|  | • <b>Increased traffic</b> due to heavy equipment/vehicle movement/works in vicinity of main/local roads<br>• <b>Decreased public access</b> through the construction area | • Schedule vehicle movement during lean daytime traffic hours or at night.<br>• Provide traffic aides/flagmen, traffic signs to help ensure the free and safe flow of traffic<br>• Maintain & Repair temporary alternative route of vehicles & pedestrians<br>• Designate an alternate route for pedestrian and/or vehicles in coordination with the Municipal Authorities or provide safe passageway through the construction site | • Presence of traffic signs<br>• Public complaints received<br>• Occurrence of traffic jams<br>• Public complaints received | • Contractor             |
|  | <b>Air Quality – dust and noise suppression</b>  |   |   |                          |
|  | • <b>Gas &amp; particulate</b> emissions from vehicles, equipment & generators   | • Regular equipment maintenance<br>• Contractor to present proof of compliance with emission standards as part of the annual vehicle registration process   | • Presence of black smoke from construction vehicles<br>• Attestation documentation   | • Contractor<br>• _____  |
|  | • <b>Dust suspension</b> vehicle movement in unpaved roads & construction works  | • Wet areas of dust sources to minimize discomfort to nearby residents<br>• Control of vehicle speed to lessen suspension of road dust  | • Public complaints received<br>• General observation   | • Contractor             |
| Mobilization/<br>Temporary facilities/<br>Construction/De-                 | • <b>Noise generation</b> from equipment & operations  | • Schedule equipment movement during non-peak hours of  | • Public complaints received<br>• Measure a noise   | • Contractor:<br>• _____ |

|  |   |   |   |  |
|--|---|---|---|--|
| mobilization   |   | daytime vehicular traffic<br><ul style="list-style-type: none"> <li>• Avoid night-time construction activities and abide by local laws on construction hours</li> <li>• Provide silencers/mufflers for heavy equipment</li> </ul>   | level in case of complaints   |  |
|  | <b>Waste and Inert Material Management</b>  |   |   |  |
|  | <ul style="list-style-type: none"> <li>• Environmental pollution caused by improper waste management</li> </ul>   | <ul style="list-style-type: none"> <li>• Waste collection and disposal pathways and sites will be identified for all major waste types expected from construction activities.</li> <li>• Mineral construction will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</li> <li>• Construction waste will be collected and disposed properly by licensed collectors</li> <li>• No open burning of wastes on or off site</li> </ul> | <ul style="list-style-type: none"> <li>• Visual inspection of separate waste management piles</li> <li>• Written receipts of all separate waste streams handled by the designated authorities</li> <li>• Visual inspection of burn marks on site</li> </ul> | <ul style="list-style-type: none"> <li>• Contractor for execution of civil works</li> <li>• _____</li> </ul> |
| Mobilization/<br>Temporary facilities/<br>Construction/De-mobilization | <ul style="list-style-type: none"> <li>• Soil erosion and landslides due to clearing and/or excavation</li> </ul> | <ul style="list-style-type: none"> <li>• Provide slope protection through bank compaction, riprapping on critical sections, or vegetative stabilization</li> <li>• Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils</li> <li>• Use material for restoration of degraded areas</li> </ul>  | <ul style="list-style-type: none"> <li>• Presence of eroded areas near the site</li> <li>• Signs of a potential/imminent landslide (unstable soil, signs of slippage, etc.)</li> </ul>  | <ul style="list-style-type: none"> <li>• Contractor for execution of civil works</li> <li>• _____</li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Removal of vegetation</li> </ul>   | <ul style="list-style-type: none"> <li>• Do replacement planting that would restore removed vegetation</li> <li>• Secure: (i) environmental permit, (ii) Urban consent and</li> </ul>   | <ul style="list-style-type: none"> <li>• Area replanted</li> <li>• Number and type of plants replanted</li> </ul>   | <ul style="list-style-type: none"> <li>• Contractor</li> <li>• _____</li> </ul>                              |

|  |  |   |   |   |
|--|--|---|---|---|
|  |  | (iii) Tree cutting consent  |   |   |
| <b>Water Quality and Quantity</b>                                |  |   |   |   |
|  | <ul style="list-style-type: none"> <li>Increased surface and groundwater turbidity &amp; siltation, causing inconvenience in community use of the affected surface or ground waters along the path of the irrigation canals</li> </ul> | <ul style="list-style-type: none"> <li>Set up sediment traps along rivers and/or gabions along banks to filter out eroded sediments</li> <li>Same measures above for erosion control and slope stabilization</li> </ul>   | <ul style="list-style-type: none"> <li>Complaints received</li> <li>Visually for presence of turbidity in surface water</li> <li>Analyse surface water quality in case of complaints (for pH, turbidity, conductivity and suspended solids)</li> <li>If groundwater is used for drinking water supply, analyse tap water for drinking water quality parameters as prescribed in national legislation</li> </ul> | <ul style="list-style-type: none"> <li>Contractor: _____</li> </ul> |
|  | <ul style="list-style-type: none"> <li>Oil &amp; grease contamination of water bodies due to for poor equipment M&amp;R &amp; refuelling</li> </ul>  | <ul style="list-style-type: none"> <li>Provide oil &amp; grease traps in stilling ponds</li> <li>Provide ring canals around fuelling tanks/motor pool/maintenance areas</li> <li>Collect used oils in containers and hand over to authorized agency for handling</li> </ul> | <ul style="list-style-type: none"> <li>Complaints received</li> <li>Analyse surface water quality in case of complaints (for COD and total mineral oils)</li> <li>If groundwater is used for drinking water supply, analyse tap water for drinking water quality parameters as prescribed in national legislation</li> <li>Presence of oil film on water surface</li> </ul>                                     | <ul style="list-style-type: none"> <li>Contractor: _____</li> </ul> |
| <b>Cultural Property and Chance Findings</b>                     |  |   |   |   |
| Mobilization/ Temporary facilities/ Construction/De-mobilization | <ul style="list-style-type: none"> <li>Damage to cultural property or chance findings which may be traversed reencountered during construction</li> </ul>  | <ul style="list-style-type: none"> <li>Stop the works and observe reporting and conservation protocols based on prior coordination with the responsible agency:</li> </ul>  | <ul style="list-style-type: none"> <li>Approval to continue or other relevant documentation from the nationally competent</li> </ul>  | <ul style="list-style-type: none"> <li>Contractor: _____</li> </ul> |

|                                  |   |   |   |  |
|----------------------------------|---|---|---|--|
|                                  |   | Institute for Protection of Cultural & National Heritage  | institution   |  |
| <b>Operation and Maintenance</b> |   |   |   |  |
|                                  | <ul style="list-style-type: none"> <li>• <b>Dumping of wastes</b> into the irrigation canals, including obstructions from improperly managed canals can decrease quality and quantity of water available in the system</li> </ul> | <ul style="list-style-type: none"> <li>• Sustained and regular monitoring and maintenance &amp; repair of IS Structure</li> <li>• Allocate sufficient budget for M&amp;E and maintenance and repair (introduce a volume based water-use fee system if applicable.</li> <li>• Proactive occasional surveys beyond the system itself</li> </ul> | <ul style="list-style-type: none"> <li>• Accurate reports on O&amp;M status</li> <li>• Back- jobs</li> <li>• Occurrence of accumulated waste at the check/ control gates</li> <li>• Reduction in Water flows</li> </ul>                   | <ul style="list-style-type: none"> <li>• WUA or other form of system users organization</li> <li>• _____</li> </ul>  |
|                                  | <ul style="list-style-type: none"> <li>• <b>Decrease of downstream water quantity</b> due to water use</li> </ul>   | <ul style="list-style-type: none"> <li>• Ensure capacity of the system remains as per the planned capacity</li> <li>• Monitor water use within system</li> <li>• Ensure the ecological minimum flow is always released</li> </ul>   | <ul style="list-style-type: none"> <li>• Water use and</li> <li>• flow monitoring</li> </ul>  | <ul style="list-style-type: none"> <li>• WUA</li> </ul>  |
|                                  | <ul style="list-style-type: none"> <li>• <b>Drawdown of groundwater table, or saltwater intrusion</b> due to over - extraction of groundwater source for the IS</li> </ul>  | <ul style="list-style-type: none"> <li>• Ensure capacity of the system remains as per the planned capacity</li> <li>• Monitor water use within system</li> <li>• Ensure the ecological minimum</li> <li>• flow is always released</li> <li>• Secure clearance/water</li> <li>• permits from responsible</li> <li>• Water Agency</li> </ul>    | <ul style="list-style-type: none"> <li>• Water use and flow monitoring</li> <li>• Monitor the following:</li> <li>• yields and extraction rates for groundwater sources</li> <li>• Reservoir tapped by the community</li> </ul>           | <ul style="list-style-type: none"> <li>• WUA</li> <li>• Other</li> </ul>   |
|                                  | <ul style="list-style-type: none"> <li>• <b>Decreased downstream water quality</b> due to increased use of agrochemicals (pesticides &amp; fertilizers)</li> </ul>  | <ul style="list-style-type: none"> <li>• Use only the agro-chem. allowed/ cleared by relevant national authority and follow prescribed/allowed dozes</li> <li>• Training of the farmers on the good agricultural practices including proper selection, dosage and timing of agrochemical</li> </ul>   | <ul style="list-style-type: none"> <li>• Conduct sampling of downstream water. If particular agrochem is detected in excessive amounts, track down the source (farm plot)</li> <li>• Number of trainings &amp; farmers trained</li> </ul> | <ul style="list-style-type: none"> <li>• WUA</li> <li>• Local agricultural organisations</li> <li>• _____</li> </ul> |

|  |  | applications   |   |  |
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|  | <ul style="list-style-type: none"> <li>• <b>Rise of water table, waterlogging and reductions in crop productivity</b> due to over-use of irrigation water</li> </ul> | <ul style="list-style-type: none"> <li>• Define crop water Requirements</li> <li>• Ensure WUA/Land user(s) has (have) viable irrigation schedule</li> <li>• Improve calibration and functioning of water management devices</li> </ul> | <ul style="list-style-type: none"> <li>• Observable salt deposits or water-logged areas</li> <li>• Reductions in crop productivity</li> <li>• Soil parameters analysis</li> </ul> | <ul style="list-style-type: none"> <li>• WUA</li> <li>• _____</li> </ul> |

## 9.5 ANNEX: Initial Environmental Assessment and Impact of WBDRBM Project

TABLE 9.5-1 INITIAL ENVIRONMENTAL ASSESSMENT AND IMPACT OF WBDRBM PROJECT

| PCN comp. | NAME OF THE PCN COMP AND SUB-ACTIVITY   | DESCRIPTION OF ACTIVITIES  | ENVIRONMENTAL ASSESSMENT (OP 4.01)   | ENVIRONMENTAL MANAGEMENT   |
|-----------|---|--|--|--|
| COMP 1    | Multi-state Cooperation on International Drina Management (GEF&SCCF)  |  |  |  |
| 1A        | Development of an agreed Strategic Action Program (SAP) mainstreaming transboundary IWRM and climate change adaptation in national planning. (Regional) |  |  |  |
| a.)       | Preparation of a Drina Basin Strategic Action Program (SAP)   | <ul style="list-style-type: none"> <li>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. The SAP would also include climate change impacts on groundwater as source for water supply.</li> </ul> | <p><b>Impacts:</b> Significant positive impacts are envisioned due to the synergised and harmonised regional and national activities on all levels (state and local), fostered and strengthened government and stakeholder cooperation in DRB countries, in the sphere of water management, hydrological data gathering, exchange and monitoring, increased understanding of the climate change impact on DRB and to mitigation of future adverse effects.</p> <p>Minor negative impacts could be expected to be a consequence of sub-project activities through human presence and nature of construction works at site, which are limited to the location of works or its surrounding vicinity.</p> <p><b>Significance of impact:</b> high positive impacts</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing</p> | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> <p>If the data gathering shall take place in protected area the Permit for work in protected area and/or Appropriate Appraisal shall be required by the relevant management/national authority, in accordance with national regulation.</p> |

|     |   |   | agency  |   |
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| b.) | <b>Water resources and basin study</b> <ul style="list-style-type: none"> <li>• LOT 1: Regional Hydrological study</li> <li>• LOT 2: Localized minimum ecological/environmental/maintenance/duty flow study.</li> <li>• LOT 3: Register of torrential flows.</li> <li>• LOT 4: Initial sediment, river bed and banks study.</li> <li>• LOT 5: Initial surface and groundwater temperature study.</li> </ul> | <ul style="list-style-type: none"> <li>• define the basin and water resources parameters to inform regional strategies for water resources management, water resources development, energy and hydropower development and rationalization.</li> <li>• characteristic discharges, and flow duration curves, flood volume, peak, and duration is expected to be analysed and hydrographs typified for a set of probabilities, as well as drought magnitude, duration, water deficit, and recession curves.</li> <li>• The minimum duty flow to be determined along Drina River. register of quantitative and descriptive information on torrential flows, which will serve as a guide for water resources development planning</li> <li>• initial sediment, river bed and banks study that will be the base for the future equalization of watercourses training works and measures in the whole river basin focused on the river banks</li> <li>• climate change influence analysis on surface and groundwater by monitoring data: annual temperature fluctuation for both surface and groundwater, and ice duration and frequency, beginning and end of the ice appearance, as well as characteristics of the ice and ice features in the critical river reaches</li> </ul> | <p><b>Impacts:</b> If any analyses and data gathering will take place, the impacts are minor and localised.</p> <p>Significant positive impacts are envisioned through strengthen hydrological data gathering and more efficient exchange of received data among DRB riparian countries, which will elevate national and regional preparedness for potential negative impact of climate change.</p> <p><b>Significance of impact:</b> high positive impacts</p> <p><b>Mitigation measures:</b> within the desk research identify potential natural habitats, protected areas/forest, cultural and historic properties, in order to avoid impact of prescribed actions in those areas. If certain hydro-meteorological data gathering is needed and that action shall take place in protected areas, the national and WB regulation should be respected and permits obtained, assessment implemented.</p> <p><b>Monitoring:</b> by the implementing agency</p> | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> <p>If the data gathering/analyses shall take place in protected area the Permit for work in protected area and/or Appropriate Appraisal shall be required by the relevant management/national authority, in accordance with national regulation.</p> |
| c.) | <b>Hydraulic and Hydrologic Model for the Drina River Basin with Reservoir Operation Optimization</b>   | <p>The main project activities that seek to establish and operate a suitable, jointly endorsed hydrological real-time and</p>   | <p><b>Impacts:</b> no overall negative impacts on environment. Significant positive impacts on water resource management and</p>  | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction</p>   |



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|     |  | <p>hydraulic simulation model combined with a climate change impact module, are:</p> <ul style="list-style-type: none"> <li>• Data collection, compilation, analysis, and exchange;</li> <li>• Hydrological modelling;</li> <li>• Hydraulic modelling;</li> <li>• Reservoir operation;</li> <li>• Sediment – River morphology simulation;</li> <li>• Purchase of incremental equipment (automated flow /level gauges); ICT software and hardware.</li> </ul> | <p>decision making process are envisioned due to the more synergised data gathering in DRB, as well as more efficient data exchanged, which will elevate national and regional preparedness for potential negative impact of climate change.</p> <p><b>Significance of impact:</b> high positive impacts</p> <p><b>Mitigation measures:</b> within the desk research identify potential natural habitats, protected areas/forest, cultural and historic properties, in order to avoid impact of prescribed actions in those areas. If certain hydro-meteorological data gathering is needed and that action shall take place in protected areas, the national and WB regulation should be respected and permits obtained, assessment implemented.</p> <p><b>Monitoring:</b> by the implementing agency.</p> <p>Once developed, the implementation of the study will be a responsibility of the national institutions, which will perform monitoring through their yearly operational program.</p> | <p>works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> <p>If the data gathering shall take place in protected area the Permit for work in protected area and/or Appropriate Appraisal shall be required by the relevant management/national authority, in accordance with national regulation.</p> |
| e.) | Preparation of Study for floating waste in the Drina River Basin | <ul style="list-style-type: none"> <li>• description of state of environment in the municipalities located within project coverage area, in the terms of solid waste generation and management, and identification of the population as potential waste generators;</li> </ul>   | <p><b>Impacts:</b> Significant positive impacts on water resource management and decision making process, as well as waste management in DRB by reduction of floating waste.</p>  | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project</p>   |

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|               |  | <ul style="list-style-type: none"> <li>analyses of morphological waste composition in municipalities, analyses of production, quantity and forecast;</li> <li>mapping of unlicensed waste disposal sites within DRB and proposal of future activities for its rehabilitation and closure;</li> <li>identification of HPPs waste production;</li> <li>identification of main floating waste sources in the DRB;</li> <li>Proposal of solution;</li> <li>defining and establishment of system of measures for achievement of primary and specific project goals.</li> </ul> | <p><b>Significance of impact:</b> high positive impacts.</p> <p><b>Mitigation measures:</b> within the desk research identify potential natural habitats, protected areas/forest, cultural and historic properties, in order to avoid impact of prescribed actions in those areas. If the prescribed actions in the Study shall take place in those areas, the national and WB regulation should be respected and permits obtained, assessment implemented.</p> <p><b>Monitoring:</b> The implementation of the study will be a responsibility of the national institutions, which will perform monitoring through their yearly operational program.</p> | <p>implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> <p>If the data gathering shall take place in protected area the Permit for work in protected area and/or Appropriate Appraisal shall be required by the relevant management/national authority, in accordance with national regulation.</p> |
| <b>1B</b>     | <i>Institutional Development and Capacity Building</i>                                 | <ul style="list-style-type: none"> <li>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.</li> <li>Establishment of a Project-based Drina Task Force</li> <li>Inter-ministerial committees</li> <li>Help prepare appropriate national and local policy and regulatory reforms</li> </ul>                        | <p><b>Impacts:</b> no impacts on environment.</p> <p><b>Significance of impact:</b> high positive impacts</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing agency.</p>   | n/a   |
| <b>COMP 2</b> | <b>Pilot investments for Integrated Basin Management and Climate Change Resilience</b> |   |  |   |
| <b>2A</b>     | <i>Strengthening capacity for climate change</i>                                       |   |  |   |

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|     | resilience  |   |  |   |
| a.) | <b>Strengthening the Hydro-meteorological Services with equipment and complete the hydro- and meteorological measuring system</b> | <p>Strengthening national Hydro-Met institutions by:</p> <p><b>i.1 Improving the existing meteorological and precipitation stations network:</b> procurement and installment of 13 meteorological, 15 all-weather, and 24 precipitation gauges (MNE-7, RS-7, FBiH-2, and SRB-8.</p> <p><b>i.2 Providing conditions for the reliable rating curves at hydrological stations:</b> In the RS, it is procurement of 30 staff gauges with placers (for attended monitoring) and its instalment, as well as geodetic survey at 7 HS cross sections for the '0' datum establishment. The HMS of MNE will also be supported for geodetic survey of 10 HSs. For regular hydrometric measurements, 4 mobile Doppler systems will be procured. At two locations of HSs in MNE in the mountainous terrain cableways will be procured and installed, and at HS Radalj on the Drina river the cableway reconstructed and jointly installed by HMSs of RS and SRB.</p> <p><b>i.3 Rehabilitation, modernizing and completing hydrological stations facilities:</b> procurement, installment, and integration into the existing network of 27 automatic hydrological stations with water level, temperature (optional), flow (optional), turbidity (optional), sensors/devices, power supply and data transfer ability.</p> <p><b>i.4 Modernization of the groundwater station monitoring network:</b> 20 automatic hydrological</p> | <p><b>Impacts:</b> minor local negative impacts: waste produced shall be stored in nearby containers or landfill, or taken by a licenced company; small quantities of soil from excavation works could either disposed on nearby landfill or used locally for replanting; no noise impact or air pollution.</p> <p>Significant positive impact are expected due to the increase of efficiency of Hydro-meteorological Services in data gathering, processing and exchange. This will result in better preparedness for potential negative climate change impacts in DRB.</p> <p><b>Significance of impact:</b> high positive impacts.</p> <p><b>Mitigation measures:</b> storing waste on nearby landfill or to be taken by licenced institution; works to be taken during the day when the noise has minimal impact on nearby houses/settlements.</p> <p><b>Monitoring:</b> by Hydro-meteorological services.</p> <p>This infrastructure, hydrological and meteorological stations, in general do not have negative impact on environment. The "houses" which store such hydrological stations are made from metal and are as such brought to the location to be put on the pipes, to</p> | <p>The equipment is part of hydro-technical infrastructure, which by the legislation (Law on Waters and Law on Hydro-meteorological services) belongs within the scope of the responsibilities, management and services of Hydro-meteorological Institutes, which they manage according to their internal, national and international standards.</p> <p>In addition, data received from these installations/stations should be used for national and cross border goals of water management, which should be matter of inter institutes cooperation agreements, between institutes of BiH (FBiH and RS), MNE and SRB.</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> <p>If the works shall take place in protected area the Permit for work in protected area and/or Appropriate Appraisal shall be required by the relevant management/national authority, in accordance with national</p> |

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|     |  | <p>stations with water level and temperature sensors, power supply and data transfer ability are needed to complete groundwater monitoring network in the HMS in SRB. Ten out of twenty will be financed from this project.</p> <p><b>i.5 Providing support to soil condition monitoring:</b> procurement of one agro-meteorological automatic station for FBiH and software applications for automatic provision of Standard Precipitation Index (SPI) and LANDSAF satellite data processing (MNE).</p> | <p>which the “house” is anchored for stability reasons. There is no radiation linked with the hydro-technical infrastructure. Small amounts of soil resulting from pipe positioning could be use locally for planting. It uses solar panels for power supply.</p> <p>Small amounts of waste, if generated from unpacking of equipment, should be disposed at the local landfilled or directly into the waste containers at or nearby location.</p> | regulation. |
| b.) | <b>Develop protocols to improve data compatibility among the three countries</b> | <p>Develop protocols to improve data compatibility among the three countries, within the seat of the Hydro-meteorological Standing Committee of the International Sava River Commission.</p> <p>Provide support activities related to data issues, including training and periodic Expert Group for Hydrological and Meteorological issues meetings.</p>   | <p><b>Impacts:</b> no impacts on environment.</p> <p><b>Significance on impact:</b> high positive impact</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing agency(ies).</p>   | n/a         |
| c.) | <b>Public Awareness Program</b>  | <p>Information activities by the respective governments and/or under the leadership of the International Sava River Commission; a semi-annual publication “Our Drina”; school and community initiatives in this regard.</p>  | <p><b>Impacts:</b> no negative impacts on environment. Significant positive impacts are expected due to the fact that raised public awareness of project activities and achievements shall increase the stakeholders ownership of the project’s results and accomplishments.</p> <p><b>Significance of impact:</b> high positive impacts.</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing agency (ies)</p>    | n/a         |

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| d.)       | <b>Small grants program</b>   | (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. These community-based demonstration projects will encompass practices that would conserve water resources, promote improved water quality, reduce pollutant loads, and maintain wetlands. | <p><b>Impacts:</b> no major negative impacts on environment. Positive impacts through rising awareness, education, eco-tourism activities.</p> <p><b>Significance of impact:</b> low</p> <p><b>Mitigation measures:</b> according to the Operational Manual and the site specific EMP that will be prepared.</p> <p><b>Monitoring:</b> by the organisation implementing the small grant/project.</p> | <p>The small grant demonstration projects will be administered according to an Operations Manual, that will include guidelines for environmental analysis and monitoring of small grants.</p> <p>If actions will take place in the protected area the Appropriate Assessment (Ocjena prihvatljivosti) and/or Permission on works in protected areas should be pursued from relevant authorities.</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> |
| <b>2B</b> | <i>Pilot Investments for Basin Climate Change Resilience and flood management</i>   |  |  |   |
| a.)       | <b>Enhanced Flood Forecasting and Early Warning System at regional scale to complement the existing ones in the riparian countries – Regional</b> | <ul style="list-style-type: none"> <li>• <b>Preparation of a Flood and Drought Preparedness Strategy.</b> The Strategy for the DRB will propose coordinated, integrated set of assessment and evaluation programs, decision methods, and funding mechanisms.</li> <li>• <b>Capacity building for implementation of flood and drought resilience</b></li> </ul>                                 | <p><b>Impacts:</b> no negative impacts on environment. Significant positive impacts are envisioned with improved coherent flood and drought policy at the basin level, and defined coordinated, integrated set of assessment and evaluation programs, decision methods, and funding mechanisms. In addition</p>  | n/a   |

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|     |   | <p><b>measures.</b> It will be based on prioritization of actions that affect water resources objectives of flood control, drought mitigation, ecosystem preservation and water quality protection. This will include a number of tools for flood management (flood regulations and zoning, floodplain restoration and riparian conservation, erosion control, channel maintenance, levee setbacks, data monitoring, etc.), and drought management (conservation, source diversification, drought restriction regulations, interconnection to neighboring systems, water reclamation and recycling, etc.).</p>       | <p>actions that affect water resources objectives of flood control, drought mitigation, ecosystem preservation and water quality protection will be prioritized.</p> <p><b>Significance of impact:</b> high positive impacts.</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing agency(ies).</p>   |   |
| b.) | Works/ infrastructure and equipment to pilot climate change resilience approaches and designs (SCCF)  |  |   |   |
| MNE |   |  |   |   |
| 1.  | <p><b>Assessment of Climate change impacts on groundwater in Lim, Piva and Čehotina river Basins</b></p> <p>Sub-component 1. Exploration – field work</p> <p>Subcomponent 2. Development of ground water model from the aspect of climate changes</p> | <p>The project needs to show if climate changes, which manifested in the past years in form of long dry periods with high temperatures and rainy seasons with extreme intensity of precipitation, affected change of the level of ground waters.</p> <p>For the purpose of project realization, hydrological explorations shall be conducted and based on these explorations, connection between surface and ground waters shall be determined, their level, capacity, water quality and map ground waters, and also, justifiability of their usage for water supplying of local population shall be determined.</p> | <p><b>Impacts:</b> Localised negative impacts on the location of drilling: noise during works; waste (soil drilled); local and temporary air pollution; potential disturbance of underground aquifers during works.</p> <p><b>Significance of impact:</b> low/medium negative impacts</p> <p><b>Mitigation measures:</b> safety measures respected by the Contractor; watering paved road while transferring machines for drilling; storing waste on nearby landfill or to be taken by licenced institution; works to be taken during the day when the noise has minimal impact</p> | <p>Installed piezometers are the property of the Institute for Hydrometeorology and Seismology of Montenegro, which would operate and manage them in accordance with their internal procedures and in accordance with national legislations.</p> <p>In addition, data received from this installations should be used for national and cross border aims of water management, which could be matter of inter institutes cooperation agreements, between institutes of BiH, MNE and SRB.</p> <p>If the exploration will take place in the protected area the Appropriate</p> |

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|    |   |   | <p>on nearby settlements.</p> <p><b>Monitoring:</b> by the implementing agency(ies).</p> <p>The project in the essence does not have impact on environment, but some potential impacts could be experienced locally, connected to hydrological explorations (putting piezometers) for monitoring of underground water hydrological parameters.</p> <p>At this stage of project description and envisioned activities, it should be taken into account that during hydrological explorations following local impacts might be experienced: increase of noise level and production of small quantities of waste. However, nationally recognised institutions for works execution should perform works following prescribed procedure of best practice and in accordance with national standards, which would minimise or exempt potentially negative impacts of exploration.</p> | <p>Assessment (Ocjena prihvatljivosti) and/or Permission on works in protected areas should be pursued from relevant authorities. In Addition, in accordance with national legislation (the Law on Nature Protection and the Law on EIA) the opinion on the need for EIA for concrete works should be requested from the relevant national authorities (Montenegro EPA).</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> |
| 2. | <p><b>Assessment of climate changes impacts on floods and drought in Lim River basin and their prevention</b></p> <p>Subcomponent 1: flood presentation</p> <ul style="list-style-type: none"> <li>a) Analysis of basic climate parameters</li> <li>b) Analysis of hydrological parameters;</li> <li>c) identification of flood areas</li> <li>d) Population education.</li> <li>e) Works on critical sections</li> </ul> | <p>These activities will analyse climate parameters; determine if there has been deviation from the average; determine their possible impact on Lim River flow; determine the line of flood levels of typical and extreme waters; determine the most vulnerable sections, propose non-structural and structural measures for prevention of floods; prepare conceptual designs for the jeopardised sections.</p> | <p><b>Impacts:</b></p> <p>Sub-component 1: the works envisioned within project have certain impact on environment/water resource during the construction. Analyses performed should provide best available material for construction of embankments, as well as weather wall or embankments should be built, taking into account that wall maintenance once built is less</p>  | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages</p>   |



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|  | <p>Subcomponent 2: irrigation needs</p> | <p>The works envisioned encompass biotechnical measures (planting vegetation on slopes and erosion-prone land), regulation works outside riverbeds (construction of embankments, gabion walls).</p> <p>According to the spatial plan for Lim River Valley, that area needs to be the zone of intensive development of agriculture.</p> <p>This project needs to define irrigation options and needs for agricultural areas to increase crops yield; identify and propose optimal locations for new allocation and to prepare conceptual designs for the same.</p> | <p>demanding and is ideal for urban situations where the defence can be designed to blend into the local infrastructure; impact of transporting the machinery to site; noise of construction.</p> <p>Sub-component 2: no negative impacts on environment at the level of analyses and documentation prepared. However, the project itself triggers different OPs due to the location and irrigation scope of the project, such as Environmental Assessment, Natural habitats, Cultural and Historic Properties due to the fact that agricultural areas needed might be extended to the new location affecting or encompassing these sensitive areas. However, during the implementation of the project the focus will be made to avoid sensitive areas and privately owned land.</p> <p><b>Significance of impact:</b> medium negative impacts.</p> <p><b>Mitigation measures:</b></p> <p>Sub-component 1: Safety procedures must be observed by contractors during the construction procedure; construction best practices for waste management, equipment maintained during construction, materials used, attested transportation vehicles; The noise level will be controlled at all times and the activities will be controlled to avoid excessive disturbance and will be set</p> | <p>of project implementation.</p> <p>Once the concrete work intervention in environment is defined, if needed the opinion of the relevant authorities should be requested on the need to perform the EIA, in accordance with the national legislation.</p> <p>As the project results will present the need and propose new locations for allocation for irrigation/agriculture, several aspects need to be taken into account in the following steps of future project implementation, such as: if the location do possess any natural or cultural/historic value (whether known or found by chance), which would trigger the opinion of the relevant institutions on nature protection as well as Institute for protection of cultural heritage; the ownership of the land on those locations, if new locations are not owned by the State, which would trigger obtaining process.</p> <p>If the new locations for agriculture/irrigation possess any cultural heritage/value relevant national authority-Institute for Cultural Protection will be responsible for the findings, and manage it according to internally prescribed procedures and national legislation.</p> |
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|                                  |  |   | <p>out in the generic EMP/or set in site specific EMP, if found needed to be prepared.</p> <p>Sub-component 2: within the desk research identify potential natural habitats, protected areas/forest, cultural and historic properties, in order to avoid works and impact of prescribed actions in those areas. In addition</p> <p><b>Monitoring:</b> by the implementing agency(ies)</p>   |  |
| <b>BiH<br/>(FBiH<br/>and RS)</b> |  |   |   |  |
| 1.                               | <b>Feasibility study and preliminary design for waste water collector and treatment plant for Municipality of Goražde.</b> | <p>Feasibility study will contain assessment of water demands for the wider area of Goražde wastewater projections, especially having in mind plans for wastewater network expansion. Also analysis of the options for treatment process, proposals for phased development (having in mind dynamic of network expansion) and cost-benefit analysis.</p> <p>Preliminary design will be the part of the feasibility study, where key parameters of the WWTP will be done.</p> | <p><b>Impacts:</b> The project is expected to have significant positive impacts on improvement of environmental protection at local level and on Drina River water quality, due to discharge of treated communal waste waters from part of Municipality of Goražde.</p> <p>Preparation of Project documentation will enable the next phase of project implementation. Feasibility study will contain assessment of water demands and wastewater projections for the wider area of Goražde. Analyses, of the options for treatment process and respective techno-economic analysis, proposals for phased development and cost-benefit analysis, will also be included. Preliminary design will be the part of the feasibility study, where key</p> | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> |

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|    |  |  | <p>parameters of the WWTP will be defined.</p> <p><b>Significance of impact:</b> high positive impact</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing agency</p>   |  |
| 2. | <b>Arrangement of degraded banks of Drina riverbed and its tributaries in urban city areas</b> | <p>Project activities which should provide a greater security of urban areas and city center zones, water intakes and water supply system of city water utilities, include:</p> <ul style="list-style-type: none"> <li>- detailed needs analysis and identification of priorities,</li> <li>- preparation of project documentation, and</li> <li>- arrangements of river beds of two water courses in total length of 2km in Novo Gorazde and recovery works on 3 landslides in Municipality of Bratunac.</li> </ul> | <p><b>Impacts:</b> the arrangements of riverbeds envisioned within project have certain impact on environment/water resource during the construction and removal of objects. Analyses performed should provide best available material for collection and separation of waste; impact of transporting the machinery to site; noise of construction; Waste, noise, dirt and dust on the location and the access roads.</p> <p><b>Significance of impact:</b> medium negative impacts</p> <p><b>Mitigation measures:</b> Sub-project specific EMP will be prepared.</p> <p>Safety procedures must be observed by contractors during the construction work and removal of objects; construction best practices for waste management and disposal, equipment maintained during construction, materials used, attested transportation vehicles; The noise level will be controlled at all times and the activities will be controlled to avoid excessive</p> | <p>The works anticipated (at this stage) do not require the EIA by RS Decree on Projects and installations for which EIA is mandatory, and the criteria for determining the obligation and extent of EIA ("OG of RS", No. 7/06, 124/12).</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> |

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|    |   |  | disturbance as set out in the generic/and in site specific EMP.<br><br><b>Monitoring:</b> by the implementing agency   |   |
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| 4. | <b>Preparation of feasibility study for identification of leachate at the area of the Municipality of Bijeljina and upgrade of leachate treatment system at regional sanitary landfill „Brijesnica“</b> | <p>Preparation of feasibility study for solving the leachate problem in the Municipality of Bijeljina, including identification leachate generation, leachate amount, measures for leachate collection and proposal of adequate technologies for water treatment prior to their disposition in the final recipients. In this way the integrated leachate management in the upper basin of the river Drina will be provided.</p> <p>Performing the construction works - upgrade of leachate treatment system at Regional Sanitary Landfill „Brijesnica“</p> | <p><b>Impacts:</b> the works envisioned within project have certain impact on environment during the construction and upgrade of objects/landfill. Analyses performed should provide best available material for collection and separation of waste/leachate as leachate treatment technologies fall into two basic types, biological and physical/chemical; disposal of excavated soil and other material from the excavation; impact of transporting the machinery to site; noise of construction/upgrade; contamination of surface and groundwater by spillage of chemicals used (if chemicals will be used); Waste, noise, dirt and dust on the location and the access roads.</p> <p><b>Significance of impact:</b> medium negative impact</p> <p><b>Mitigation measures:</b></p> <p>Safety procedures must be observed by contractors during the construction procedure and removal of objects; construction best practices for waste management and disposal, equipment maintained during construction, materials used, attested transportation</p> | <p>The best available practice in leachate treatment should be taken into consideration, which implementation and costs fit into the conditions at the ground (in the Municipality and landfill) as well as fir the available funding.</p> <p>One of the most common biological treatment is activated sludge, which is a suspended-growth process that uses aerobic microorganisms to biodegrade organic contaminants in the leachate. With conventional activated sludge treatment, the leachate is aerated in an open tank with diffusers or mechanical aerators.</p> <p>The works anticipated (at this stage) do not require the EIA by RS Decree on Projects and installations for which EIA is mandatory, and the criteria for determining the obligation and extent of EIA (“OG of RS”, No. 7/06, 124/12).</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project</p> |

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|    |  |  | <p>vehicles; The noise level will be controlled at all times and the activities will be controlled to avoid excessive disturbance as set out in the generic EMP/or set in site specific EMP, if found needed to be prepared.</p> <p><b>Monitoring:</b> by the implementing agency</p>  | <p>implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p>   |
| 5. | <b>Construction of the water source well for Municipality of Sapna</b> | <p>Existing water source in the Municipality of Sapna cannot provide continuous water supply for 14.000 inhabitants. As this situation jeopardies public health, hydrogeological investigation was done by pilot drilling in karstic aquifer. According to the results of investigation drilling, capacity of the karstic aquifer is 15 l/s.</p> <p>Objective is to meet the needs of inhabitants for the future period by construction of the new well. All necessary designs are prepared and partial financing provided. Measurable indicator will be the additional water quantities in the supply network and number of inhabitants connected to water supply. Identified beneficiaries are inhabitants that will be connected to water supply system, Municipality of Sapna and Tuzlanski Canton (TK).</p> | <p><b>Impacts:</b> impacts on the location of drilling: noise during works; waste (soil drilled); local and temporary air pollution; potential disturbance of underground aquifers during works.</p> <p>Positive impacts are sought to be additional water quantities in the supply network and number of inhabitants connected to water supply.</p> <p><b>Significance of impact:</b> low/medium negative impact</p> <p><b>Mitigation measures:</b> safety measures respected by the Contractor; watering paved road while transferring machines for drilling; storing waste on nearby landfill or to be taken by licenced institution; works to be taken during the day when the noise has minimal impact on nearby settlements.</p> <p><b>Monitoring:</b> by the implementing agency</p> <p>The project in the essence does not have impact on environment, but some potential impacts could be experienced</p> | <p>The best available practice in leachate treatment should be taken into consideration, which implementation and costs fit into the conditions at the ground (in the Municipality and landfill) as well as fir the available funding.</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> |

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|               |  |   | <p>locally, connected to hydrological explorations (putting piezometers) for monitoring of underground water hydrological parameters.</p> <p>At this stage of project description and envisioned activities, it should be taken into account that during hydrological explorations following local impacts might be experienced: increase of noise level and production of small quantities of waste. However, nationally recognised institutions/licenced contractor for works execution should perform works following prescribed procedure of best practice and in accordance with national standards, which would minimise or exempt potentially negative impacts of exploration.</p> |   |
| <b>Serbia</b> |  |   |   |   |
| 1.            | <b>Construction of flood protection for water source in the Municipality Ljubovija, Serbia</b> | <p>Design for the construction is prepared. Construction permit is issued. Flood protection of the water source will improve water quality and reliability of the water supply.</p> <p>No data on the methodology to be used.</p> | <p><b>Impacts:</b> impact of environment are at the location of the construction: waste; noise, air pollution from transportation.</p> <p><b>Significance of impact:</b> low/medium negative impacts.</p> <p><b>Mitigation measures:</b> best construction practices and safe measures implemented by the contractor. Mitigation measures prescribed in the generic or site-specific EMP.</p> <p><b>Monitoring:</b> by the implementing agency</p>  | <p>Prevention measures do not require EIA by national legislation.</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p> |

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| 2. | <p><b>Upgrade of existing flood protection from river Lim in Šarampov, Prijepolje.</b></p>   | <p>Activities encompass the construction of the base for the instalment of the mobile protection and procurement of the mobile protection, made for this specific section and location. Costs 20% works + 80% equipment (removable metal panels put in special holes before the elevation of water levels, and removed after the extreme weather conditions). Implementation of this project would provide improvement of existing flood protection in Prijepolje, but could be replicable in other parts of river basin.</p> | <p><b>Impacts:</b> impacts of environment are at the location of the construction: waste, noise, air pollution from transportation.</p> <p><b>Significance of impact:</b> low/medium negative impacts</p> <p><b>Mitigation measures:</b> best construction practices and safety measures implemented by the contractor, solid waste management; sludge management plan; works to be taken during the day when the noise has minimal impact on nearby settlements, etc.</p> <p>General mitigation measures are prescribed in the developed generic EMP. Sub-project specific EMP will be prepared.</p> <p><b>Monitoring:</b> by the implementing agency</p> | <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation.</p> <p>If needed, detailed site-specific EMP shall be prepared using guidance from this ESMF during the next stages of project implementation.</p>  |
| 3. | <p><b>Construction of wastewater treatment in the Municipality Mali Zvornik, Serbia</b></p> <ul style="list-style-type: none"> <li>Construction of WWTP Sakar</li> </ul> <p>Settlement Sakar (500 citizens) is located upstream from the dam and wastewater is discharged into the reservoir Zvornik without any kind of treatment. Municipality of Mali Zvornik prepared detailed design for the WWTP Sakar, capacity 2x200 PE, in 2012. SBR is the selected wastewater treatment process. Recipient is the small river Čečer (II category), in the vicinity of the beach and Zvornik reservoir (lake). WWTP is sized for</p> | <p>Protection of the reservoir and river is the priority of the municipality and DLHPP (Drinsko Limske hidroelektrane – Hydro plant Zvornik), and different project documentation is prepared for the storm water network and wastewater collection and treatment already. Feasibility study for the wastewater collection and treatment in the Municipality of Mali Zvornik was prepared in 2013 (REK) and locations for the several WWTPs are defined.</p>  | <p>Final assessment of categorization of the sub-projects in accordance with the WB policies will be made as a part of the EIA, which will be undertaken during project implementation. Providing that the environmental impact of small WWTPs is considered not significant, detailed EMPs will be developed. However, if the impact is considered to be potentially significant, these WWTPs will not be included in the Project funding.</p> <p><b>Impacts:</b> impacts of environment are at the location of the construction: waste,</p>  | <p>By Serbian national legislation, the EIA is prescribed for construction of wastewater treatment plants of the municipality of 100000 population or bigger. This plant does not fall under that requirement (List of project for which the EIA is prescribed (“OG of RSRB”, No.114/08).</p> <p>Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project</p> |



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|    | <p>2x30m<sup>3</sup>/day, dry water flow 2 l/sec and wet water flow 3,32 l/sec in max hour. Entry water quality is BOD 2x12kg/day, suspended materials. 2x14 kg/day, N 2x2 kg/day, P 0,5x2 kg/day. WWTP will provide BOD &lt;25 mg/l, Chpk &lt;125 mg/l.</p> <ul style="list-style-type: none"> <li>Construction of WWTP Novi most</li> </ul> <p>Municipality of Mali Zvornik prepared detailed design for the WWTP Novi most, capacity 2x500 EC, for the treatment of wastewater with BOD 190 mg/l, Chpk 430 mg/l, suspended materials 210 mg/l. SBR is the selected wastewater treatment process. Sludge, as the result of treatment process (in SBR), has to be transported to landfill in Loznica (like other waste from the whole municipal territory). WWTP is within the urban planning documents and land is municipal owned. Environmental impact assessment was prepared for WWTP Novi most in 2012. Design conditions and permits are provided from the relevant institutions, construction started in 2013 and floods stopped the works in the first half of 2014 at the early beginning stage.</p> |  | <p>noise, air pollution from transportation.</p> <p><b>Significance of impact:</b> low/medium negative impacts</p> <p><b>Mitigation measures:</b> best construction practices and safety measures implemented by the contractor, solid waste management; sludge management plan; watering paved road while transferring machines for drilling; works to be taken during the day when the noise has minimal impact on nearby settlements, etc.</p> <p>General mitigation measures are prescribed in the developed generic EMP. Sub-project specific EMP will be prepared.</p> <p><b>Monitoring:</b> by the implementing agency</p> | implementation.  |
| 4- | <p><b>Conceptual design for flood protection of the Mačva plain, section Loznica-Badovinci, Serbia</b></p>  | <p>Plain Mačva is placed on the right bank of the river Drina. Agriculture land in the municipalities Bogatić, Šabac and Loznica, as well as water source for Šabac (in Prnjavor), are in danger from the floods from Sava and Drina. Until 2015, flood protection activities are completed in Šabac along river Sava and in Bogatić along Sava and Drina.</p> <p>Flood protection on the left bank in the</p> | <p><b>Impacts:</b> the Conceptual design shall assess the positive and negative impacts of the future project implementation, once all documentation and permits are acquired. At the current level of project information, no further assessment of impacts could be made.</p> <p><b>Significance of impact:</b> low negative</p>  | Prepared generic EMP provide general mitigation measures and monitoring structure for construction works, and or analyses that might take place within project implementation. |

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|               |  | <p>same part of the river basin, is in the design phase. World bank supports preparation of the project documentation for flood protection in Republic of Srpska, BiH.</p> <p>Even without construction of flood protection on the left bank, in Republic of Srpska, water source for Šabac is hampered every year and floods damage agriculture land.</p> <p>Project documentation is missing - conceptual design, design for the construction permit and design for the construction of 24 km flood protection along Drina from Prnjavor to Loznica. Conceptual design will enable SRB to prepare remaining project documentation (worth approx. US\$330.000) and intensify completion of flood protection of the whole area (estimated approx. value of the construction US\$40 million).</p> | <p>impacts.</p> <p>Prepared generic EMP contains sets of measures for mitigating negative impacts of construction works, which could be used as a base for development of site-specific EMP that will in detail assess negative impacts and specific mitigation measures.</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> by the implementing agency</p> |     |
| <b>COMP 3</b> | <b>Project management, evaluation and monitoring</b> |  |   |     |
|               |  | <p>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 be supported by Project Implementation Units (PIUs) in each of the three countries.</p>  | <p><b>Impacts:</b> no impacts.</p> <p><b>Significance of impact:</b> no impact</p> <p><b>Mitigation measures:</b> n/a</p> <p><b>Monitoring:</b> n/a</p>   | n/a |

## 9.6 ANNEX: Legal framework on environmental impacts

The EIA shall identify, describe and assess, in each individual case and in the in the sphere of industry, water, energy, mining, transportation, tourism, agriculture, forestry and utility services, for projects planned within protected natural resources and in protected environment of immovable cultural assets, the potential direct or indirect impact of an intended project on the following: human life and health, flora and fauna; land, water, air, climate and landscape; material assets and cultural heritage and mutual relations of mentioned elements.

### 9.6.1 Environmental Impact Assessment (EIA)

#### BiH (FBiH and RS)

Environmental Impact Assessment process in the Federation BiH is regulated by the Law on Environmental Protection ("OG of FBiH", No. 33/03 and 38/09). Additionally, this matter is regulated in the Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit ("OG of FBiH", No. 19/04). Cantons in FBiH have the authority to regulate environmental issues, EIA process is additionally regulated with Cantonal laws and bylaws (for example):

- Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of Canton 10 (Official Gazette of Canton 10, No. 7/05 and 12/08);
- Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of Herzegovina-Neretva Canton (Official Gazette of Herzegovina-Neretva Canton, No. 1/05), and
- Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of West Herzegovina Canton (Official Gazette of West Herzegovina Canton, No. 2/06).

The Regulation on Plants and Facilities Subject to Obligatory Environmental Impact Assessment, and Facilities Allowed to be Constructed and Commissioned Only if Granted Environmental Permit of FBiH regulates thresholds on facilities which are under the jurisdiction of the Federal Ministry of Environment and Tourism (FMoET). For certain plants and facilities, FMoET determines on case to case basis if the impact assessment is required or not. If the EIA is not required, FMoET issues EP based on Request/Application for issuing the EP. For plants and facilities for which an EIA is not required, as well as for plants and facilities below the thresholds regulated in FBiH regulation, the EP is issued by the competent cantonal ministry. Hence, in the FBiH, wastewater treatment plants which treat over 50 000 PE are subject to EIA and the EP is issued by the FMoET. Wastewater treatment plants with capacity from 10.000 to 50.000 PE are subjected to FMoETs evaluation whether EIA is needed or not. If evaluation shows that EIA is not needed, EP is issued by the FMoET based on Request/Application for issuing the EP. Wastewater treatment plants < 10.000 PE are subject to cantonal regulations.

Basic provisions related to EIA in the entity Republic of Srpska is the Law on Environmental Protection ("OG of RS", No. 53/2002-basic, and the latest amendments from 2012 -71/12). Several undertaken amendments relate mainly to the provisions for EIA procedure, to achieve harmonization with those in the Law of the Federation of Bosnia and Herzegovina.

Specific provisions related to EIA are set out in the Regulations and Governmental Decrees issued by both entity ministries. These regulations determine the following:

- Projects and installations for which EIA is mandatory, and the criteria for determining the obligation and extent of EIA ("OG of RS", No. 7/06, 124/12);
- Installations and facilities whose operation may be commenced only if the environmental permit has been granted ("OG of RS", No. 7/06, 124/12; "OG of FBiH", No.19/04);

- Specific requirements for submitting an environmental permit application for installations and sections for which environmental permits were issued prior to enacting the Laws on Environmental Protection ("OG of RS", No. 24/06, 124/12, "OG of FBiH", No. 68/05);
- Timeframe for applying for an environmental permit for installations issued with an environmental permit before the Law on Environmental Protection entered into force ("OG of RS", No. 24/06, 124/12; "OG of FBiH", No. 68/05).

In addition, regulations on the mandatory requirements and criteria for enterprises and institutions entitled to perform professional activities in environmental protection, such as compiling EIA studies, have been passed in both entities. ("OG of RS", No. 15/07, 124/12 and "OG of FBiH", No. 68/05).

Brief overview of the requirements in RS: for projects that may have impact on environment due to their nature, size or location, environmental impact assessment (EIA) shall be carried out, and obtain a decision on approval of the study from relevant authority (according to the Law on Environmental Protection ("OG of RS", No. 71/12).

Impact assessment is carried out in two phases:

- In the process of preliminary assessment in order to decide on the responsibility to carry out the EIA, as well as the extent of the assessment if the EIA is required
- In the process of EIA

Location condition for projects that may have a significant impact on the environment are issued by the authority in charge of planning, upon the prior decision on determining the responsibility to carry out the impact assessment and the extent of the assessment, if its implementation is mandatory.

Approval for construction of projects that may have a significant impact on the environment is issued by the authority responsible for spatial planning, based on previous decision on approval of impact studies and acquired environmental permit.

The procedure for prior EIA is commenced at the request of the holder of the project by submission to the ministry responsible for environment protection.

More info on EIA process in Republic of Srpska could be found in the **Error! Reference source not found.**, which is published on the web site of the Government of Republic of Srpska<sup>16</sup>.

## MONTENEGRO

The Law on Environmental Impact Assessment ("OG of MNE", No. 80/05, 40/10, 73/10, 40/11, 27/13, the last amendments in compliance with ESPOO and EIA Directive) and a set of govern the EIA in Montenegro. Laws stipulate the implementation on the central and local level. The Law is accompanied with the set of bylaws:

- Decree on project subject to environmental impact assessment ("OG of MNE", No. 20/07, 27/13 and 53/14),
- Rulebook on the content of documentation to be submitted together with request for determination on the need for environmental impact assessment ("OG of MNE", No. 14/07),
- Rulebook on the content and extent of documentation to be submitted together with request for determination on the scope and content of environmental impact assessment ("OG of MNE", No. 14/07),
- Rulebook on the content of environmental impact assessment ("OG of MNE", No. 14/07).

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<sup>16</sup> [http://www.vladars.net/eng/vlada/ministries/MSPCEE/Documents/Information%20leaflet%20-%20EIA\\_415223766.pdf](http://www.vladars.net/eng/vlada/ministries/MSPCEE/Documents/Information%20leaflet%20-%20EIA_415223766.pdf)

Within the Montenegro regulation on EIA, projects are classified in two groups (lists): projects listed in List 1 are all subject to compulsory EIA while for projects in List 2, the assessment contains an element of discretion, noting that an EIA procedure will, in any event, be required for projects with potentially significant environmental impacts. The public and other parties are to be consulted on the EIA.

Stages in EIA Procedure encompass: I. Decision on the need for conducting EIA; II. Defining the scope and contents of the EIA Study (Environmental Report); III. Decision on granting the approval of the EIA Study. Procedure of notification about project cross-border impact is regulated by a separate provision.

The competent authorities for the implementation of the EIA and SEA legislation are: the Ministry of Sustainable Development and Tourism (MSDT), the Environmental Protection Agency - EPA and the municipalities (employees responsible for the EIA and SEA for municipal programmes and projects).

## **SERBIA**

An Environmental Impact Assessment (EIA) in Republic of Serbia is regulated by the Law on Environmental Impact Assessment ("OG of RSRB"; No. 135/04 and 36/09) and complementary by-laws. The law and by-laws set out the requirements for undertaking environmental assessments of the potential environmental impacts of public and private projects which are likely to have a significant impact on the environment (anticipate potential environmental harm and to avoid or mitigate such harm while balancing environmental, social and economic objectives ) before development consent / construction permit is granted in the form of an approval for project implementation. Thus, the activities related to water resources management are among those for which it is obligatory or may be required to conduct environmental impact assessment. The Law on EIA ("OG of RSRB", No. 135/04, 36/09), in the Article 3, paragraph 3 of the Law on EIA, envisions that facilities in the field of water management and energy be considered an integral part of a group of projects for which the impact assessment is conducted. Assessed impacts on the environment include: impacts on human beings and biological diversity; soil, water, air and other natural resources and climate; historical and cultural heritage as well as the interaction between these elements.

The whole EIA process includes three specific procedures, they are the following:

1. 'screening' (i.e., the stage of determining whether an EIA is required),
2. 'scoping' (i.e., the stage of determining the scope or extent of the environmental impact assessment), and
3. 'review' (i.e., the stage of reviewing the EIA study to see if it has been undertaken to an acceptable standard and in accordance with the legal requirements).

The Serbian Ministry of Agriculture and Environmental Protection is the competent administrative authority for the EIA process for projects for which project development consent (e.g. construction permit) is issued by a State (national) authority, as it the Ministry responsible for environmental matters.

The types of projects that may require an EIA are determined in the "Decree determining a list of projects for which an environmental impact assessment shall be carried out and a list of projects for which an environmental impact assessment may be required" - EIA Decree ("OG of RSRB", No. 84/05 and 114/08).

Under the EIA Decree, projects are classified in two groups (lists): projects listed in List 1 are all subject to compulsory EIA while for projects in List 2, the assessment contains an element of discretion, noting that an EIA procedure will, in any event, be required for projects with potentially significant environmental impacts. The public and other parties are to be consulted on the EIA.

### **9.6.2 Strategic Environmental Assessment (SEA)**

The Strategic Environmental Assessments (SEA) creates a framework for future project development, subject to EIA, as well as for plans and programs, where the area of implementation may have an impact on protected

areas, natural habitats and preservation of wild flora and fauna. SEA legislative framework objectives encompass:

- 1) to ensure that environmental and public health issues are fully taken into consideration in the development of plans or programs;
- 2) to set clear, transparent and efficient procedures for SEA;
- 3) to provide for public participation; 4) to provide for sustainable development; 5) to enhance the level of protection of human health and the environment.

## **BiH (FBiH and RS)**

Legal framework for SEA is differently defined in each entity of Bosnia and Herzegovina. These framework obligations for SEA are not yet operational due to the lack of implementing secondary legislation.

- Federation of Bosnia and Herzegovina: the provisions of the SEA are generally defined in Art. 51-52 of the Law on Environmental Protection (“OG of FBiH”, No. 33/03, and by the new Law from 2009- and “OG of FBiH”, No. 38/09).
- Republic of Srpska: SEA generally defined in Art. 60-61 of the Law on Environmental Protection (basic from 2002, and amendments on that Law, with the latest from 2012 –“OG of RS”, No. 71/12).

Nevertheless, the Law on Environmental Protection (in both entities: Federation of Bosnia & Herzegovina; and Republic of Srpska) - includes the main provisions from the Espoo Convention: Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 1991.

Bosnia and Herzegovina has not ratified the Kiev Protocol on SEA<sup>17</sup>.

## **MONTENEGRO**

The main transposing instrument is the Law on Strategic Environmental Assessment (“OG of MNE”, No. 80/05, 73/10, 40/11 and 59/11), which defines the SEA procedure for plans or programs in different sectors and sectorial policies, including water management.

The obligation prescribed this Law encompass that authority responsible for preparing a plan or program shall not submit the plan or program for further adoption procedure without having previously obtained an approval of the SEA Report from the authority responsible for environmental protection. In addition, a project developer may not commence with project implementation without having conducted environmental impact assessment (EIA) procedure and obtained the approval of the Competent Authority for the EIA Study.

Stages in the SEA Procedure encompass: I. Decision on the need to prepare the SEA for the plans and programs; II. Defining the scope and contents of SEA Report; III. Decision on granting the approval for the SEA Report.

In regard to the competences responsible for the implementation of the SEA procedure, they have been divided in two levels, national and local: the state administration body responsible for preparing the plan or program - for the plans and programs to be adopted by the authorities at the national level; the local administration body responsible for preparing the plan or program - for the plans and programs to be adopted by the authorities at the local level. The authority responsible for granting an approval of the SEA Report is the Administration authority responsible for environmental protection (EPA) and the local authority responsible for environmental protection. Competent authorities responsible for the implementation of the EIA

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<sup>17</sup> [http://www.unece.org/env/eia/sea\\_protocol.html](http://www.unece.org/env/eia/sea_protocol.html)

procedure are: state authority responsible for environmental protection – for projects for which approvals, permits and licenses are issued by other state authorities (EPA) and local authority responsible for environmental protection – for other projects for which approvals, permits and licenses are issued by other local authorities.

SEA Directive is transposed by the Law on SEA. Montenegro has ratified the Convention on environmental impact assessment in a Transboundary context - Espoo Convention, with its two amendments: the First and the Second ("OG of MNE", International Treaties No. 8/08). Montenegro signed the Multilateral agreement among the Countries of South-Eastern Europe for implementation of the Convention on environmental impact assessment in a Transboundary context, (the law on ratification of the multilateral Agreement is published in the "OG of MNE", International treaties No. 02/09). Law on ratification of the SEA Protocol - Protocol on strategic Environmental assessment in a Transboundary context, to the Espoo convention, is published in the "OG of MNE"- International treaties, 02/09.

Further to the water management actions and SEA, the Article 29 of the LW defines that WMMP and other water sector plans require SEA. In addition, Article 31 of the Law on Spatial Development and Construction ("OG of MNE", No. 51/08, 40/10, 34/11, 47/11, 35/13, 39/13, 33/14) has defined that if the planning document is subject to SEA, a decision must be made simultaneously with a decision on development and the SEA report is subject to a public hearing, in parallel with the hearing for the draft planning document.

## **SERBIA**

In order to regulate and minimize the adverse effects of development in the field of environment, nature protection, water and other sectors, the Republic of Serbia imposes the Strategic Environmental Impact Assessment (SEA) process and Environmental Impact Assessment (EIA) principles. Republic of Serbia SEA is governed by the Law on SEA ("OG of RSRB", No. 135/04, 88/10).

The divergence between EIA and SEA, provides that EIA deals with minimizing adverse effects of concrete activities and action that would be implemented in the environment, while SEA provide the same framework on a higher and strategic level that includes plans/master plans, programs, sectorial policies, etc. The SEA ultimately establishes framework for the approval of future development projects determined by provisions regulating EIA (Article 5 of the Law on SEA, "OG of RSRB", No. 135/04, 88/10). It is important to note that SEA could be required for plans and programs that could possibly have significant impact on the environment, even though their areas and scope are not listed by the Law.

Serbia is a member state of the Kiev Protocol on SEA ("OG of RSRB – *International Agreements*", No. 1/10). Serbia, being a member state of the Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 1991 ("OG of RSRB – *International Agreements*", No. 102/07), also refers to the obligation of EIA procedure in a transboundary context.

### **9.6.3 Public participation in EIA of Investment**

In order to fully integrate environmental protection into plans, programs and activities, the importance of access to information and public participation has been taken as one of preventive measures for minimizing potential negative impact of developmental actions, as well as to take into account the opinions and needs of the wider public. Public participation in environmental and water management matters, on national and local level, is enabled by transposition of Aarhus and Espoo convention, but also Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) EU directives, into national regulations. Relevant national



EIA and SEA regulations encompass provisions for public participation through public hearings and right to raise opinion and concerns regarding the activity/work to be implemented.

## **BIH (FBIH and RS)**

Basic laws which provides right of citizens to information is the BiH and RS Law on Freedom of Access to Information (initially adopted in 2000 – BiH and in 2001 – RS), which defines goals and basic concepts related to access to information. In addition, the Law prescribes in detail the procedures for requesting the information, complaint procedures and obligations of public authorities to publish information. The Law On amendments to the freedom of Access to information act for Bosnia and Herzegovina ("OG of BiH", No. 102/09) has been adopted in 2009. The procedures in regard to environment issues were further elaborated in the Law on Environmental Protection in BiH and the Law on Environmental Protection of RS. Several other act also contribute to the access to information and public participation legislative framework in BiH and RS, thus Law on Freedom of Access to Information Act, the Environmental Protection, Law on Administrative Procedure and the Law on Administrative Disputes, represent a legal framework that ensures the public's right of access to environmental information, which is in line with the principles of the Aarhus Convention, and complies with the Directive EU 2003/4 / EC on the right of access to environmental information.

In the Republic of Srpska in 2008 the Government issued guidelines for republic administration bodies on participation of the public and consultations in legal drafting ("OG of RS", No. 123/08), which defines the obligation of the institution proposing and drafting certain regulation to establish a "significant impact on the public" of that regulation which would be adopted.

Laws on Environmental Protection of both BiH and RS prescribe cases where it is necessary to implement methods to assess the effects on individual projects, which may have an impact on the environment and, where required before commissioning a specific facility or installation should obtain an environmental permit. Legal provisions on impact assessment and the issuance of permits are general and it was necessary to provide by-laws that would regulate this area in detail.

Bosnia and Herzegovina ratified the UNECE Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (AC) in September 2008 ("OG BiH"-MU 8/08). Following its ratification and implementation, the first national report on implementation of the Aarhus Convention has been submitted by relevant authorities. For fully integrated access to information and public participation in BiH and RS, efforts are required to implement the Environmental Impact Assessment (EIA) Directive in a harmonized manner at State and Entity levels (In European Commission Progress Report for 2012). BiH has ratified the Espoo Convention on Environmental Impact Assessment in a Trans-boundary Context ("OG of BiH"-MU 8/09) in March 2010.

Network of Aarhus Centers has been established in November 2013 to maintain the implementation of the Aarhus Convention in Bosnia and Herzegovina. The network represents a platform for the exchange of information between the competent institutions on one side and the public on the other, fostering transparency of public bodies and allowing citizens to express their opinions on decisions that have an impact on the environment / environment. The network of Aarhus Centers constitute the Aarhus Centers in Banja Luka, Sarajevo and Tuzla<sup>18</sup>.

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<sup>18</sup> <http://www.aarhus.ba/mreza-ac-bih.html>

## MONTENEGRO

The basic public participation in Montenegro is regulated by the Procedure and Method of Conducting Public Participation in Preparation of Law ("OG of MNE", No.12/12), defining, among other, when a public hearing is compulsory (Article 4). The other law governing this topic is Law on Free Access to Information ("OG", No. 44/12). In relation to fostering the public participation in decision-making the cooperation with NGOs has been regulated by a special act (Regulation on the Method and Procedure of Cooperation between the Public Administration and NGOs, ("OG of MNE", No. 7/12). From the water management aspect, the Law on Water ("OG of MNE", br. 27/2007 and "OG of MNE", br. 32/2011, 47/2011 and 48/2015) stipulates (Article 19, paragraph 9) and regulates cooperation with the public in preparation of plans (Article 30), i.e. public participation, and several other articles are also related to the "public".

The Law on the Environment ("OG of MNE", No. 48/08, 40/10, 40/11, 27/14) of Montenegro stipulates governing principles of environmental protection, stating the principle of access to information and public participation (Article 5, paragraph 12): Everyone has the right to be informed about the state of the environment and to participate in decision-making, which implementation could affect the environment. Environmental data are public. Following that principle, the Environmental Protection Agency each year publishes the State of Environment Report for Montenegro (for the previous reporting year).

Montenegro has good level of alignment with the Aarhus Convention related acquis on the access to information, the public participation and the access to justice. Directive 2003/35/EC on public participation and access to justice is fully transposed and implemented. Legislative alignment with the Directive 2003/4/EC on public access to environmental information is almost completed, with only a couple of provisions related to definition of information held for public purposes (Article 2), defining an applicable exception to the obligation to supply environmental information (Article 4) and ensuring quality assurance of information (Article 8) remaining to be transposed. Full alignment with the Environmental Information Directive is foreseen by the through amendments to the Law on Environment (soon to be adopted). Montenegro submitted second report on implementation of the Aarhus Convention in mid-2014.

Montenegro has ratified the Convention on the Access to Information, the Public Participation in Decision Making and the Access to Justice in Environmental Matters (the Aarhus Convention) in 2009.

The dissemination of the information pertaining to the environment is also done through the 3 Aarhus Centers: Podgorica (2011), Nikšić (2011) and Berane (2012).

## SERBIA

In Republic of Serbia the access to information and public participation is regulated by several acts related to environmental protection, water management and other act, among which the Law on Free Access to Public Information ("OG of RSRB", No.120/04, 54/07, 104/09, 36/10) as a general framework law, the Law on Waters ("OG of RSRB", No. 30/10 and 93/12) and the Law on Environmental Protection. Serbia is a member state of the Convention on access to information, public participation in decision-making and access to justice relating to environmental issues (Aarhus Convention) ("OG of RSRB – International Agreements", No. 38/09). Apart of legislation framework, Serbia since 2011 has an Strategy for Implementing the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters ("OG of RSRB", No. 103/11), accompanied by an action plan. Both documents aim is to improve the dialogue between the public and decision makers on environmental matters. In that respect Serbia also has four Aarhus centers (Kragujevac, Niš, Novi Sad and Subotica). NGOs establishment has been regulated by the Law on Associations ("OG of RSRB", No. 51/09). The acts that have most developed procedure and rules for public participation in decision-making, are the ones regulating public participation in carrying out the EIA procedure, and in SEA.

## 9.7 ANNEX: World Bank requirements-procedures

All projects funded by the WB are subject to safeguard policy of the WB and procedures, especially OP/BP 4.01 EA and documentation relating to the public consultations and requests of public publications that describe instruments and procedures for the elimination of negative economic, social and environmental issues that can occur. EA in the proposed project is a process whose width, depth and type of analysis depend on the nature, size and potential impacts on environment. It evaluates potential environmental risks and impacts of the project; studies alternatives of the project; identifies manners for the improvement of project selection, aspect, planning, design and implementation preventing, minimizing, mitigating or compensating for negative impacts on environment; and improving positive impacts.

World Bank's policy on environmental and social measures of protection is a backbone of its support to sustainable poverty reduction. The objective of these measures of protection is to prevent and mitigate inappropriate damage to humans and their environment in the project elaboration process. These measures provide guidelines for the Bank and loan users in the identification, preparation and implementation of programs and projects. The conditions – OPs have been explained and presented in details at the World Bank web site<sup>19</sup>.

### **OP/BP 4.01 Environmental Assessment**

The objective of this policy is to add the assurance of ecological and social integrity and sustainability of investment projects, as well as to support the integration of environmental and social aspects of the project in the decision-making process.

Environment assessment (EA) evaluates potential surroundings risks of the project and impacts in its area of activity, tests alternatives of the project and identifies manners for the project selection improvement, planning, design, and implementation by prevention, minimization, mitigation and compensation for adverse impacts on environment.

Proposed projects are classified based on the type, location, sensitivity, nature and reversibility of the impact on environment. World Bank's system classifies projects into one of 3 categories based on environmental selection, in the following way:

- Category A – irreversible impacts on environment are wide, diverse, act outside the construction site location, irreversible; any bigger relocation or change/degradation of natural habitats; hazardous materials.
- Category B – possible irreversible impacts are more limited, fewer, exclusively possible at the construction site mainly reversible, ready and reliable reduction of consequences by known methods
- Category C – probably no adverse impacts, or minimal and lightly reduced

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<sup>19</sup> <http://www.worldbank.org/>.

#### **OP/BP 4.04 Natural Habitats**

The policy of the World Bank on natural habitats have the goal to promote an environment friendly development by supporting protection, preservation, maintenance and rehabilitation of natural habitats and their functions.

Natural habitats are land and water areas where ecosystems of biological communities are formed mainly of original plant and animal species, where human activity did not significantly change primary environmental functions of the area. All natural habitats have a significant biological, social, economic and the value of existence.

The Bank does not support projects that in their opinion involve significant changes or degradations of critical natural habitats. Appropriate measures of preservation and reduction of consequences must be defined for the project in case of impact on natural habitats, for this reason ecology experts will be involved during the entire process.

This policy will be applied to the Project and ESMF due to the interventions relating to the project include rehabilitation or reconstruction of local and regional roads, reconstruction of the embankment on riverbanks, and possible cleaning of soil are located in/next to protected areas, including Ramsar construction sites; provisions on regular maintenance and reduction of consequences will be necessary during the construction of works.

#### **OP/BP 4.11 Physical Cultural Resources**

This policy addresses physical cultural resources that are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community.

Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices.

The projects are classified during the environmental screening process as Category A or B, and are subject to the provisions of this policy: (a) any project involving significant excavations, demolition, movement of earth, flooding, or other environmental changes; and (b) any project located in, or in the vicinity of, a recognized physical cultural resources site. Projects specifically designed to support the management or conservation of physical cultural resources are individually reviewed, and are normally classified as Category A or B.

#### **OP/BP 4.36 Forestry**

The management, conservation, and sustainable development of forest ecosystems and their associated resources are essential for lasting poverty reduction and sustainable development, whether located in countries with abundant forests or in those with depleted or naturally limited forest resources. The objective of this WB policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests.

Where forest restoration and plantation development are necessary to meet these objectives, the Bank assists borrowers with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. The WB also assists borrowers with the establishment and sustainable management of environmentally appropriate, socially beneficial, and economically viable forest plantations to help meet growing demands for forest goods and services.

#### **OP/BP 4.12 Involuntary Resettlement**

Involuntary resettlement policy includes safeguards to address and mitigate social risks that result from involuntary resettlement and land acquisition caused by the Bank-assisted investment projects. The overall objectives of the policy are the following:

- a) Involuntary resettlement should be avoided or minimized where feasible, exploring all viable alternative project designs.
- b) Where resettlement cannot be avoided, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should be encouraged to participate in planning and implementing resettlement programs.
- c) Displaced persons should be assisted in improving their former standards of living and livelihoods (income earning capacity, and production levels), or at least in restoring them.

The Project triggers OP/BP 4.12 on Involuntary Resettlement due to activities foreseen under Project sub-component 2B (support for pilot project investments in all three riparian countries that affect the reduction of the impact of climate change issues). The locations of these pilot projects and the extent of resettlement required have not yet been defined, as the detailed designs are not available at appraisal stage. Based on the conducted initial due diligence and screening of likely land acquisition and resettlement impacts, the potential for such impacts has been estimated to be acceptably low to moderate, given that the subprojects within sub-component 2B will be implemented mainly on land owned by municipalities or other public bodies. Based on the current available data, no physical displacement of occupants (legal or illegal) or restriction of access to resources or income streams is expected as a result of the Project, and the Project is not expected to entail permanent acquisition of residential or commercial structures.

As a guiding resettlement instrument, three separate Resettlement Policy Frameworks (RPFs) have been developed (for Bosnia and Herzegovina, Serbia and Montenegro). Once the specific impacts become known, the RPF will guide the preparation of site-specific Resettlement Action Plans (RAPs) where applicable. RAPs will be prepared for all subprojects that entail resettlement, in order to satisfy the provisions of OP 4.12 and the requirements of local legislation regarding land acquisition in all three countries. The RAPs will include baseline census and socioeconomic survey information; specific compensation rates and standards; policy entitlements related to any additional impacts identified through the census or survey; description of resettlement sites and programs for improvement or restoration of livelihoods and standards of living; implementation schedule for resettlement activities; and detailed cost estimates.

Prior to the submission of pilot projects for funding consideration, the Project Implementation Unit (PIU) shall carefully screen the proposed projects to assess whether or not land acquisition may be entailed and to what extent. It is important to take into consideration during such screening that even though the planned project activities may not entail impacts in terms of land acquisition, preparatory investment activities foreseen during the project preparation period (such as drilling activities, site clearance or construction of access roads) may involve temporary land acquisition or temporary occupation of land, in which case the PIU will ensure that such preparatory activities are also in compliance with the requirements of the developed RPFs. In addition, the proposed projects involving the development of studies and designs that would facilitate/recommend the construction of physical infrastructure will be diligently screened to establish any potential impacts associated

with specific subsequent investments (regardless whether such future activities will be funded by the WB or other sources).

Following the screening process and determination of potential impacts, the PIUs shall report the findings of the screening process to the World Bank and prepare site-specific RAPs, ensuring that all project activities adhere to the requirements of the RPF. The RAPs will be submitted to the World Bank for approval and review.

#### **OP/BP 7.50 Projects on international waterways**

This policy applies to the following types of international waterways:

- Any river, lake, canal or similar water body that forms the border between two units;
- Any river or surface water body that flows through two or more countries;
- Any tributary or other surface water body that is a component of any waterway;
- Any creek, bay, gorge or canal connecting two or more countries. Alternatively, if within one state, that is recognized as a necessary communication canal between the open sea and other states and any river that flows into such waters.

Required action involves following:

- As early as possible during identification, the Bank advises the state proposing the project on an international waterway (beneficiary state) that, if it has not already done so, it should formally notify the other riparian of the proposed project giving available details.
- The notification contains, to the extent available, sufficient technical specifications, information, and other data (Project/Program Details) to enable the other riparian to determine as accurately as possible whether the proposed project has potential for causing appreciable harm through water deprivation or pollution or otherwise.
- After giving notice, if the beneficiary state or Bank receives a positive response from the other riparian (in the form of consent, no objection, support to the project, or confirmation that the project will not harm their interests), the Project shall be implemented.

The project details attached to the notification letter usually relies on EIA and/or environmental assessment, to make determination that the Bank financed Project will not cause damage to riparian.

International Sava river basin commission is an open communication channel for all countries that are riparians of the Sava River. The borrower is required to notify the representatives of these countries in line with Operational policy OP 7.50. Notification is effected independently of the environmental impact plan elaboration.

## 9.8 ANNEX: Sample forms for stakeholder engagement

### SAMPLE OF FEEDBACK FORM

|   |  |              |
|---|--|--------------|
| <h1>Feedback Form</h1> <hr/>                              |  |              |
| <b>Context (purpose of engagement, community context)</b> |  |              |
| <b>Stakeholder feedback/incident/comment/query:</b>       | <b>Follow up actions/response taken</b>    |              |
|   | <b>Further follow up actions required?</b> |              |
| <b>Print name:</b>  | <b>Signature:</b>                          | <b>Date:</b> |



### SAMPLE OF A GRIEVANCE AND COMMENT LOGGING FORM

|  |  |  |  |
|--|--|--|--|
| <b>Reference number:</b>   |  |  |  |
| <b>Full name (optional):</b>   |  |  |  |
| <b>Contact information:</b><br><br>Please mark how you wish to be contacted (mail, telephone, e-mail). | <input type="checkbox"/> <b>By post: Please provide mailing address:</b><br>_____<br>_____<br>_____  |  |  |
|  | <input type="checkbox"/> <b>By telephone:</b> _____<br><input type="checkbox"/> <b>By e-mail:</b> _____  |  |  |
| <b>Preferred language of communication:</b>  | <input type="checkbox"/> <b>Bosnian / Serbian / Croatian</b><br><input type="checkbox"/> <b>English (if possible)</b>  |  |  |
|  |  |  |  |
| <b>Description of incident for grievance:</b>  | What happened? Where did it happen? Who did it happen to? What is the result of the problem?   |  |  |
|  |  |  |  |
| <b>Date of incident / grievance:</b>   |  |  |  |
|  | <input type="checkbox"/> <b>One-time incident/grievance (date _____)</b><br><input type="checkbox"/> <b>Happened more than once (how many times? _____)</b><br><input type="checkbox"/> <b>On-going (currently experiencing problem)</b> |  |  |
|  |  |  |  |
| <b>What would you like to see happen?</b>  |  |  |  |
|  |  |  |  |
| <b>Signature:</b>  |  |  |  |
| <b>Date:</b>   |  |  |  |

**Please return this form to:**

**Head of PIT, West Balkans Water Management in Drina River Basin Project**  
**Ministry of Foreign Trade and Economic Relations**

Address: Musala 9, 71000 Sarajevo  
 Tel: + 387 33 220 093, +387 33 214 102  
 Fax: + 387 33 220 091  
 E-mail: info@mvteo.gov.ba

## 9.9 ANNEX: Strategic Environmental and Social Assessment (SESA)

### **Strategic Environmental and Social Assessment (SESA)**

#### **Short description of main tasks**

##### **A. Introduction**

1. This document presents only a short description of main tasks to be undertaken as a part of Strategic Environmental and Social Assessment (SESA), and is intended for public discussion as a part of the Project preparation process. Following the specific technical inputs from the implementing institutions in 3 stakeholder countries and any pertinent issues raised during the public discussion, full-scale Terms of Reference will be developed.
2. The main aim of SESA will be to fully appraise all the potential environmental and social issues associated with the development of the overall integrated water management in DRB, as part of the technical assistance to be provided for the improvement of the water management and adaptation to the climate change. The SESA will be prepared in a participatory manner, and its findings will inform ongoing development of sectorial policy.
3. Project specific environmental and social impacts will be addressed under separate safeguard instruments, namely, an Environmental and Social Management Framework (ESMF) for the overall project activities, and site-specific Environmental and Social Mitigation and Monitoring Plans (ESMPs) for specific activities and pilot projects.

##### **B. Context**

4. For country context, please refer to the appropriate section of ESMF.

##### **C. Project Description**

5. For the Project Description, please refer to appropriate section of ESMF.

##### **D. Objective**

6. The objective of this SESA is to: (i) identify the positive and negative social and environmental impacts and the risks associated with water resource management, in the aspects of climate change impact, and on the scale of the water basin as a whole (ii) assess the policy, legal and institutional framework and capacity to manage these issues, and (iii) to propose a set of actionable recommendations by which these issues can be addressed at a policy level so as to enhance environmental sustainability and social equity of development of cross-border/regional integrated water management.

##### **E. Approach**

7. The SESA seeks to ensure that environmental and social issues are taken into consideration during the development and implementation of sectorial policies and programs. Its findings and recommendations will be a core input to the technical assistance offered under Component 1 of the WBDRBM project as well as serving to inform national policies and strategies. The SESA will be prepared via a participatory process involving consultations with the main stakeholders in the water management sector. It should also help establish a platform for stakeholder dialogue, including those from key sectors that may be impacted by or

influence the policy and institutional reforms of the water sector such as forest sector, land use planning, pest and disease management and agriculture production.

## **F. Reporting Arrangements**

8. The SESA team will work under the direct supervision of the multi-sectorial team overseeing the preparation of the WBDRBM project, led by the national ministries responsible for water management: Ministry of Foreign Trade and Economic Relations (MOFTER) and the FBiH Ministry of Agriculture, Water Management and Forestry and its Sarajevo Water Agency, and the RS Ministry of Agriculture, Forestry and Water Management and RS Waters, the Water Directorate within the Ministry of Agriculture, Forestry and Water Management, as well as Ministry of Economy, Planning and Regional Integration in Serbia, and the Ministry of Agriculture and Water Management in Montenegro, or the technical secretariat of the project comprised of main national implementing authorities (to be decided).

## **G. Scope of Work**

### **(a) Situation Analysis**

#### **(i) Sectorial analysis**

9. The consultant will undertake a comprehensive bio-physical, social and environmental data gathering, using existing credible sources, and review this data to establish a baseline as well as to identify data gaps or weaknesses. To the extent possible the consultant will address these gaps/weaknesses through field visits and interviews and meetings with stakeholders and custodians of such data.

10. Based upon collected data, the consultant will use appropriate methodologies<sup>20</sup> to describe and analyse the existing and potential key beneficial and adverse environmental and social issues related to the water management, including an assessment of sectorial vulnerability to climate change. These issues may include but are not limited to: climate change - flood and drought impacts on biodiversity, natural habitats and ecosystems, soil, water; and at the water utilisation/irrigation/hydropower level, increased demand for water and land, and the generation of pollution, which may contribute negatively to the health of the environment and people. In addition, particular attention should be paid to social factors such as impacts on food security, livelihoods, income generation; likelihood of involuntary resettlement; threats to physical cultural resources, potential for natural resource user conflicts; gender effects; employment potential; and impacts on poverty, vulnerability and ethnicity.

11. The analysis must include a trend analysis of the development of the water management and adaptation to climate change sector in the short, medium and long-term and its environmental and social impacts in the assumption of both with and without implementation of the sector strategy. Cross-sectorial linkages must be taken into account to analyse the influence of other sectorial policies or strategies.

#### **(ii) Institutional and Legislative Framework Analysis**

The analysis will include but not be limited to the sector's institutional and legislative framework, including the existing and proposed institutions that may influence or be responsible for the implementation of the sector

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<sup>20</sup> The consultant should refer to the WB safeguard policies, IFC performance standards and any relevant environmental or sectorial regulations.

strategy and the management of environmental and social impacts. Furthermore, an overview will also be given to sector policy framework, environmental and social regulatory framework and the wider policy framework related to the sector strategy. The consultant will assess the existing institutional and human capacity to manage the selected environmental and social priorities in the context of the political economy of the sector.

12. The role of institutions in various sectors linked to water management should be considered (e.g., including spatial planning, environmental protection, agriculture, energy production, water processing/bottling, dam safety etc.), and the assessment should look at the full range of public and private organizations involved in the water management, and not only institutions involved in environmental and social management.

### **(iii) Stakeholder Analysis**

13. The consultant will identify the key stakeholders, being sure to differentiate by gender, analyse their interests in and influence over the water management sector including reviewing the role, mandate and linkages of the various institutional stakeholders, the planning agencies, local agencies and civil society organizations. NGOs and other specific interest groups (energy production companies, farmers, processors, etc.) that are likely to be benefited or affected by developments in the water resource management sector and linked adaptation to climate change activities should be also included. Specific attention will be paid to identifying local communities and analysing their structure and organization for water use and environmental protection, and to assessing possible changes in ecosystem and tourism.

14. Taking into account stakeholder interests and power to affect the formulation and implementation of the main policies proposed in the strategy, the consultants will in addition consider how best to include specific stakeholders such as women and youth into the SESA during the situation analysis, selection of priorities and validation of results.

### **(b) Identification and Evaluation of Environmental Opportunities and Risks**

15. Based on the environmental, social, institutional analyses, the consultants will identify the priority environmental and social opportunities and risks facing the water management sector and linked adaptation to climate change activities. This priority setting exercise will be done in consultation with key stakeholders. The consultants will discuss how these priorities are likely to be influenced, positively or negatively, by the continued development of the water sector, and will suggest appropriate and proportional institutional and policy adjustments for the sector to take advantage of these opportunities or to mitigate against the risks. Any suggested institutional and policy adjustment must be justified by its benefits relative to its cost.

16. The consultant's findings will be discussed and validated together with key stakeholders.

### **(c) SESA Recommendations**

17. The consultant will propose concrete recommendations to address the technical, institutional, governance and policy gaps and capacity building needs identified. This will include specific investments, policy and institutional adjustments that should be captured in an action plan detailing key actions, timeframe and estimated costs that can then be incorporated into national policies, strategies and plans.

## **H. Public participation and dissemination**

18. The consultant should describe the different public participations activities that they plan to undertake for the identification and selection of SESA's priorities, including but not limited to surveys, interviews, focus groups, workshops, etc.

19. The SESA draft report and recommendations will be validated in a workshop that will convene sectorial and area wide stakeholders. A final dissemination meeting will be organised to present to the stakeholders the SESA final report, recommendations and monitoring plan. The final report will be provided to the World Bank for review, following which it will be publically disclosed both in-country and in the World Bank web site.

## **I. Deliverables**

20. The key deliverables will include:
- Inception report, including the proposed analytical framework and detailed report outline
  - Draft SESA
  - Final SESA

## 9.10 ANNEX: Draft table of Content of SESA

### DRAFT TABLE OF CONTENTS FOR SESA

#### Acronyms and abbreviations

#### Acknowledgements

#### Executive summary

#### 1. INTRODUCTION

*(Set the framework for the SESA: explain and justify why an environmental and social analysis is required, why a combined - SESA (institutional and impact) is the appropriate instrument, and the link to the water management sector strategies and master plans of DRB riparian countries. Outline methodological approach, report structure and participatory approaches to be used).*

- 1.1 Background
- 1.2 Objectives of the Assessment
- 1.3 Approach
- 1.4 Structure of the Report
- 1.5 Process for participatory dialogue and analysis

#### 2. ANALYSIS OF THE WATER SECTOR IN DRB COUNTRIES

*(Describe and analyse the water management sector, including the relationship between the likely evolution of this sector in the short, medium and long-term and environmental, social and economic opportunities and risks).*

- 2.1 Processing (e.g. waste water treatment)
- 2.2 Generation (e.g. electricity)
- 2.3 Supply (e.g. water supply to local communities)
- 2.4 Production (e.g. bottling of water)

#### 3. ASSESSMENT OF INSTITUTIONAL, LEGAL AND POLICY FRAMEWORK AND CAPACITY

*(Assess the current and proposed policy, legal and institutional framework governing the sector including identification of institutional and legislative gaps, and an assessment of existing institutional and human resource capacity to manage the identified environmental and social opportunities and risks).*

- 3.1 Policy, Legal and Regulatory Framework
- 3.2 Institutional Roles and Responsibilities
- 3.3 Public participation and consultation mechanisms
- 3.4 Political economy of water management sector
- 3.5 Environmental and Social Management capacity at the sector level
- 3.6 Institutional arrangements for dam safety, flood defence, etc.

#### 4. ENVIRONMENTAL, SOCIAL AND INSTITUTIONAL OBJECTIVES

*(Identify the environmental, social and institutional objectives for the sector).*

- 4.1 Key Findings
- 4.2 Key Environmental and social issues
- 4.3 Key overarching government priorities

- 4.4 Consultation process to identify issues and select priorities
- 4.5 Validation of findings and recommendations

## **5. FINDINGS AND RECCOMENDATIONS**

*(Propose a set of recommendations by which these issues can be addressed at both a policy and project level so as to enhance environmental sustainability and social equity of the water management sector development).*

- 5.1 Summary of key findings
- 5.2 Recommendations
- 5.3 Political economy challenges
- 5.4 Critical success factors

## **6. ACTION PLAN**

*(Present a time frame, costs, five or 10 (tbd) year action plan).*

## **7. COMMUNICATIONS PLAN**

*(Recommended strategy for dissemination of findings to the stakeholders).*

## **References**

## **ANNEXES**

- Stakeholder analysis
- Matrix Environmental and Socioeconomic Issues, Gaps, and Recommendations
- SESA Validation Workshop Report
- List of stakeholder meetings
- Etc.