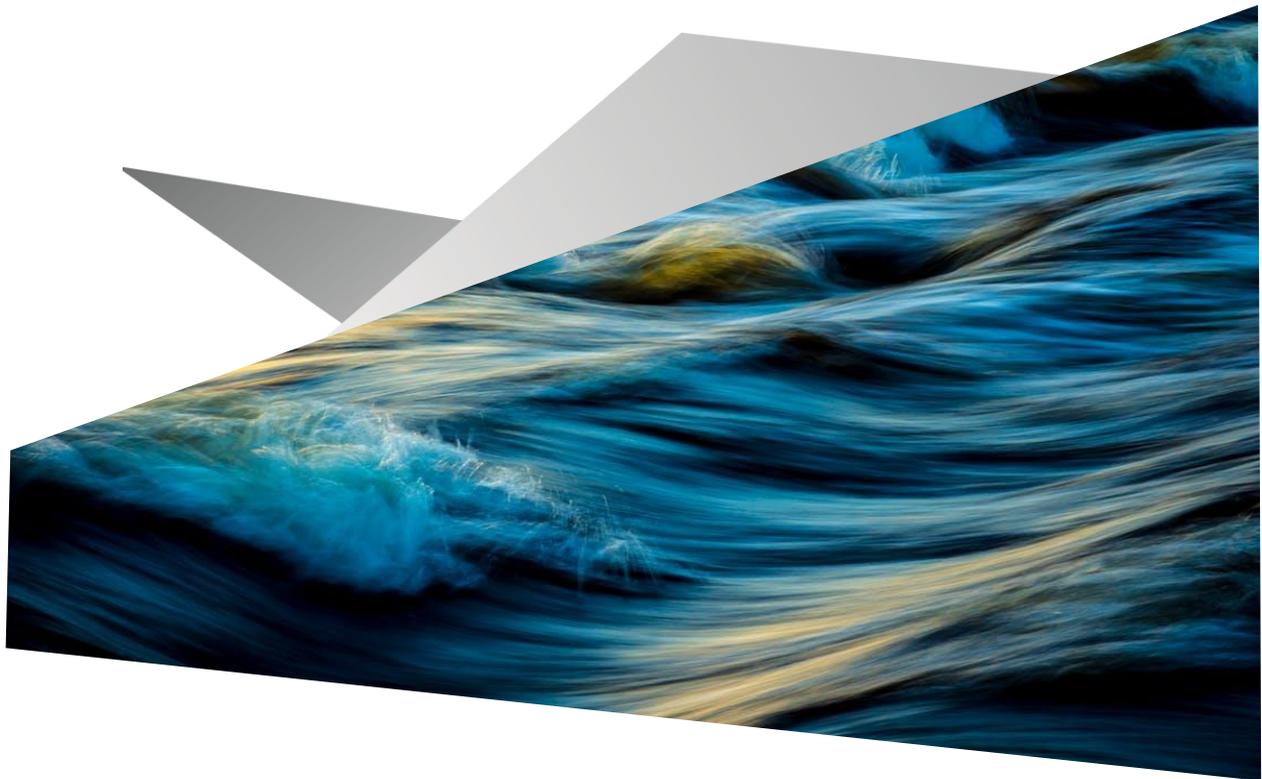


MONTENEGRO, MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

PREPARATION OF THE PRELIMINARY DESIGN FOR THE FLOOD PROTECTION, REHABILITATION AND IRRIGATION OF **LIM RIVER BASIN** (WITH GRNCAR RIVER) WITH THE AIM OF MITIGATING THE IMPACT OF CLIMATE CHANGE AND SUSTAINABLE USE OF NATURAL RESOURCES AND (II) ASSESSMENT OF CLIMATE CHANGE IMPACTS ON GROUNDWATER IN **DRINA RIVER BASIN IN MONTENEGRO**

NOVEMBER 2020

**ENVIRONMENTAL AND SOCIAL MONITORING AND MANAGEMENT PLAN (ESMMP) - LIM RIVER REGULATION – URBAN AREA BERANE  
- REVISED VERSION FROM MAY 2022-**



THE REGIONAL ENVIRONMENTAL CENTER  
for Central and Eastern Europe

hidrozavod did

CeS.TRA

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

MONTENEGRO, MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

**PREPARATION OF THE PRELIMINARY DESIGN FOR THE FLOOD PROTECTION, REHABILITATION AND IRRIGATION OF LIM RIVER BASIN (WITH GRNCAR RIVER) WITH THE AIM OF MITIGATING THE IMPACT OF CLIMATE CHANGE AND SUSTAINABLE USE OF NATURAL RESOURCES AND (II) ASSESSMENT OF CLIMATE CHANGE IMPACTS ON GROUNDWATER IN DRINA RIVER BASIN IN MONTENEGRO**

NOVEMBER 2020

**ENVIRONMENTAL AND SOCIAL MONITORING AND MANAGEMENT PLAN (ESMMP)  
LIM RIVER REGULATION – URBAN AREA BERANE**

PROJECT NO.	A10245
DOCUMENT NO.	A10245_ESMP_v2.0
VERSION	2.0
DATE OF ISSUE	16/11/2020
PREPARED	JLUK
CHECKED	RUZA
APPROVED	DMIL

## Table of Contents

1	Introduction .....	1-5
2	Project description .....	2-6
2.1	Location.....	2-6
2.2	Existing situation with the flooding .....	2-7
2.3	Proposed technical solution.....	2-8
3	Policy, legal and administrative framework.....	3-9
3.1	EIA procedure in Montenegro .....	3-9
3.2	Other relevant government policies and regulations.....	3-10
3.3	Applicable environmental and social standards of the World Bank.....	3-12
4	Environmental and Social Baseline .....	4-13
4.1	Water quality .....	4-13
4.2	Biodiversity and protected areas.....	4-13
4.3	Air quality .....	4-14
4.4	Land acquisition .....	4-14
4.5	Cultural heritage .....	4-15
5	Environmental and Social Impact Assessment .....	5-15
5.1	General overview of potential impacts.....	5-15
5.2	Identified negative environmental impacts of proposed sub-project.....	5-16
5.3	Identified positive impacts of proposed sub-project.....	5-17
5.4	Assessment of identified impacts .....	5-17
6	Environmental and social mitigation plan .....	6-211
6.1	Overview of mitigation measures during the pre-construction phase.....	6-211
6.1.1	Land acquisition.....	6-211
6.2	Overview of mitigation measures during the construction phase.....	6-211
6.2.1	Site-Specific Implementation Plan .....	6-211
6.2.2	Erosion of embankment slopes .....	6-211
6.2.3	Increased generation of pollution – Supply of material .....	6-222
6.2.4	Potential air pollution - Dust.....	6-222
6.2.5	Potential water impacts .....	6-222
6.2.6	Waste management.....	6-222

6.2.7	Equipment maintenance and fueling.....	6-233
6.2.8	Occupational Health and Safety.....	6-233
6.2.9	Noise .....	6-233
6.2.10	Labor risk.....	6-244
6.2.11	Chance finds.....	6-244
6.3	Environmental and social mitigation plan .....	6-1
7	Environmental and social monitoring plan .....	9
8	Implementation arrangements.....	16
8.1	Roles and responsibilities.....	16
8.2	Implementation schedule .....	16
8.3	Environment and Health Training and Awareness .....	17
8.4	Emergency Preparedness.....	17
8.5	Stakeholder Engagement.....	17
8.6	Workers Grievance Mechanism.....	199
8.7	Monitoring .....	199
8.8	Capacity Strengthening and Training.....	199
9	Cost of Implementing the ESMMP.....	199
10	Public consultations and public disclosure of the ESMP.....	199
<b>Annex 1. Scoping Decision .....</b>		<b>20</b>
<b>Annex 2. Water Requirements .....</b>		<b>211</b>

**List of Tables:**

Table 4-1	Water quality of Lim River .....	4-13
Table 5-1	Project impacts .....	5-177
Table 6-1	Mitigation Plan.....	6-1
Table 7-1	Monitoring of environmental impacts.....	10
Table 7-2	Monitoring of social impacts.....	12

**List of Figures and Photos:**

Figure 1	Project locations, Montenegro .....	1-5
Figure 2	Sub-project micro location - Berane .....	2-7
Figure 3	Situation with the existing and regulated riverbed .....	2-8
Figure 4	Typical cross-section for Lim river – embankment (Berane Urban Area), type 1.....	2-9
Figure 5	Typical cross-section for Lim river – embankment (Berane Urban Area), type 2.....	2-9
Figure 6	Distance between the Project area, the four businesses and orchards .....	4-15

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

## Table of abbreviations

<i>Abbreviation</i>	<i>Meaning</i>
BP	Bank Procedures
CA	Contracting Authority
CC	Climate change
CSO	Civil Society Organization
DD	Detailed Design
DWM	Directorate for Water of Montenegro
DRB	Drina River Basin
EC	European Commission
EHS	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
E&S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
EPA	Environmental Protection Agency
ESA	Environmental and Social Assessment
ESF	Environmental and Social Framework
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standards
EU	European Union
E&S	Environmental and social
GEF	Global Environment Facility
GEMM	General Environmental Mitigation Measures
GOM	Government of the Republic of Montenegro
IWRM	Integrated Water Resource Management
LIDAR	Light Detection and Ranging
LMP	Labor Management Procedure
MAFWM	The Ministry of Agriculture and Rural Development
MNE	Montenegro
MSDT	Ministry of Sustainable Development and Tourism
NGO	Non-Governmental Organization
OG	Official Gazette
PD	CONCEPTUAL Design
PM	Project Manager
PIU	Project Implementation Unit
RB	River Basin
RBMP	River Basin Management Plan

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

<b>Abbreviation</b>	<b>Meaning</b>
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SAC	Strategic Action Program
SCCF	Special Climate Change Fund
SEA	Strategic Environmental Assessment
SESA	Strategic Environmental and Social Assessment
ToR	Terms of Reference
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
US\$	US Dollar
WA	Water Authorities
WB	World Bank
WBDRBM	West Balkan Drina River Basin Management
WFD	Water Framework Directive
WUA	Water User Association

## 1 Introduction

Sava and Drina Rivers Corridors Integrated Development Program (SDIP) represents the World Bank’s long-term undertaking, to address neglected infrastructure development in the region while promoting joint decision making and development along the two river corridors. This Program will implement subprojects with high implementation readiness and relevance to the program objectives, with detail designs and tender documents likely to be ready by effectiveness in Montenegro, Bosnia and Herzegovina (BiH), and Serbia. One of the subproject that is financed under SDIP is the design and construction of the flood protection, rehabilitation and irrigation structures on the Lim River in Montenegro (hereinafter referred to as “the Project”). The project involves activities in four Montenegrin municipalities Bijelo Polje, Berane and Gusinje and Plav.

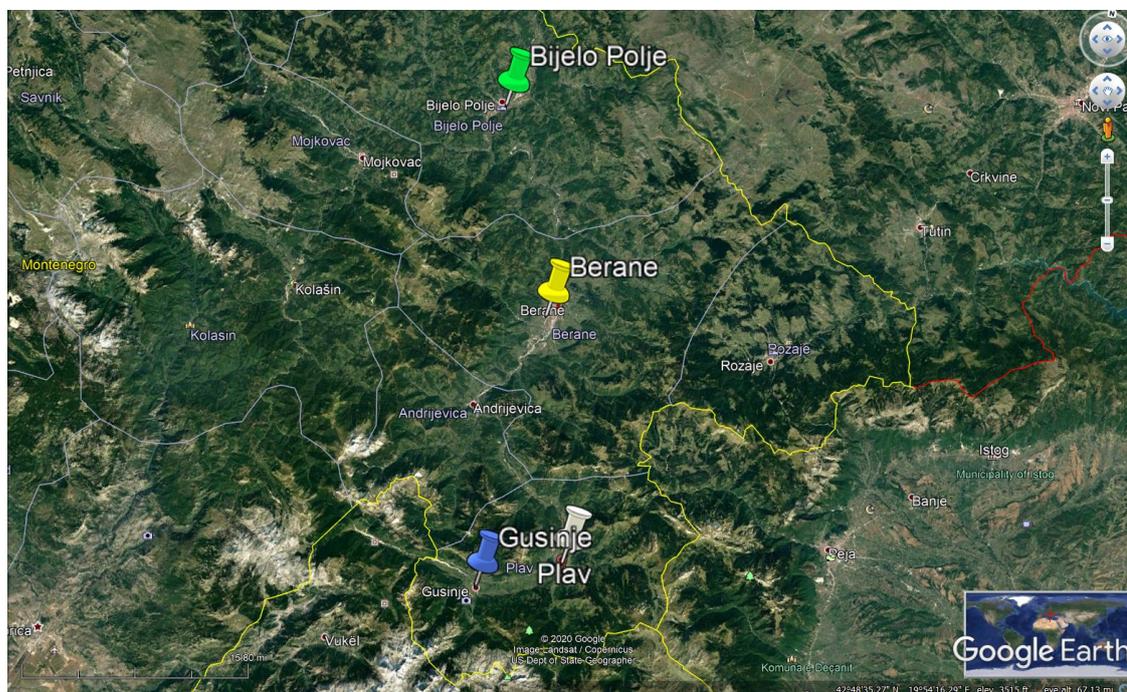


Figure 1 Project locations, Montenegro

Montenegro is, like all Balkan countries, particularly sensitive to future climate and precipitation change in Europe, with weather related events to become more frequent and intense<sup>1</sup>. Montenegro is already vulnerable to climate change, with signs of a trend towards a more extreme precipitation regime<sup>2</sup>. The whole country suffered damages and losses amounting to around €44 million (1.4 per cent of gross domestic product) from the 2010 flood. Future flooding potentially threatens 250 square kilometers of farmland and urban zones. This is particularly pronounced in areas surrounding Lake Skadar and the Bojana River, Zeta Valley, Bjelopavlici, Plav ravine and areas around the Lim, Tara and Cehotina river valleys. Therefore, the

<sup>1</sup> Third National Communication to the United Nations Framework Convention on Climate Change, Ministry of Spatial Planning and Environmental Protection of Montenegro, 2020

<sup>2</sup> *ibid.*

overall objective of the subproject is flood prevention and irrigation in the Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change

This document presents the Environmental and Social Management and Monitoring Plan (ESMMP) for design and construction of the flood protection structure in Municipality Berane. The ESMMP is first time prepared in November 2020 in the framework of the wider project entitled *Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TFOA2318-TFOA2321-QCBS-CS-17-2.b.1.3.2.* under Task 3. Assessment of environmental and social impacts of the Project. **The ESMMP has been revised by the Project Implementation Unit (PIU) of the Ministry of Agriculture, Forestry and Water Management (MAFWM)<sup>3</sup> in May 2022 to reflect the recent status of the Project.**

The purpose of this ESMMP is to ensure that the subproject meets the 2018 World Bank's Environmental and Social Framework and relevant national legislation. The ESMMP has been developed taking into account the Environmental and Social Management Framework developed and approved by the World Bank in February 2020.

This Project is classified as a project with moderate risk since the type of works envisaged by the technical documentation require certain excavation and dredging. However, mitigation measures, both environmental and social adequately respond to the identified impacts, leaving residual impacts at an almost negligible scale. The ESMMP identifies the key environmental and social impacts that will result from the Project related activities and proposes mitigation measures to address the most significant impacts. The ESMMP also shows the responsibilities of different parties involved in the project implementation.

The responsibility for implementation of this ESMMP lies with the MAFWM, that is the PIU formed within this Ministry. The MAFWM will be responsible for ensuring that third parties or contractors working on project sites meet the requirements of this ESMMP. This is expected to be accomplished by inclusion of appropriate requirements and conditions in Tender Documents, contracts, and subcontracts, and through direct oversight and supervision by the MAFWM. The Tender Documents and contracts will meet the WB procurement requirements. The MAFWM will also be responsible for ensuring that the end user, the manager of flood protection structures, follows the requirements of this ESMMP in the operational phase.

## 2 Project description

### 2.1 Location

The project in the Municipality Berane refers to the construction of an embankment that will provide protection from a 100-year flood. Additionally, the embankment will serve to protect the Lim riverbed from erosion.

The embankment with a total length of 1.234 m will be constructed in the Lim riverbed in the area between the two city bridges in the centre of Berane (Figure 2). The first bridge is on the E-65 road connecting Susica on the left bank with Maslovaric street on the right bank (km 1 + 708 as per relative watercourse stationary).

---

<sup>3</sup> Former Ministry of Agriculture and Rural Development.

The second bridge is the link between the Svetosavska street on the left bank and the Maslovarica street on the right (km 2 + 847 as per relative watercourse stationary).

The Detailed Design (DD) is prepared in June 2020 (i) to define dimensions, location and shape of the structures for reducing the speed of the water and (ii) to construct the new dykes, and other technical details and elements required for stabilization of erosion and rehabilitation of riverbank. The Lim River on this section has a smaller left tributary, an unnamed pond that flows at km 0 + 750 as per local chainage.



Figure 2 Sub-project micro location - Berane

Around the project location the following sensitive receivers are located: hospital and high school (250 m from the project), city market (100 m from the project), Limski Park (70 m from the project), Hotel Berane (50 m from the project).

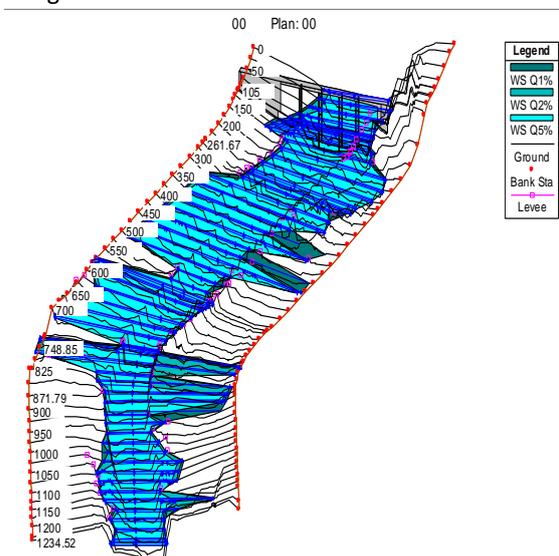
## 2.2 Existing situation with the flooding

On the right and left riverbanks, after existing roads, within the sub-project area, there are densely located residential, business, and industrial areas. Under the influence of large waters a flooding of the surrounding area occurs, as well as morphological changes of the riverbed (especially coastal erosion), leading to the risks for residential and commercial buildings and facilities, green areas, as well as other infrastructure (roads, existing bridges, sewers, electricity and telecommunication poles...).

The situation with flooding with the existing and regulated riverbed is shown on Figure 3.

### Berane

#### Existing riverbed



#### Designed riverbed

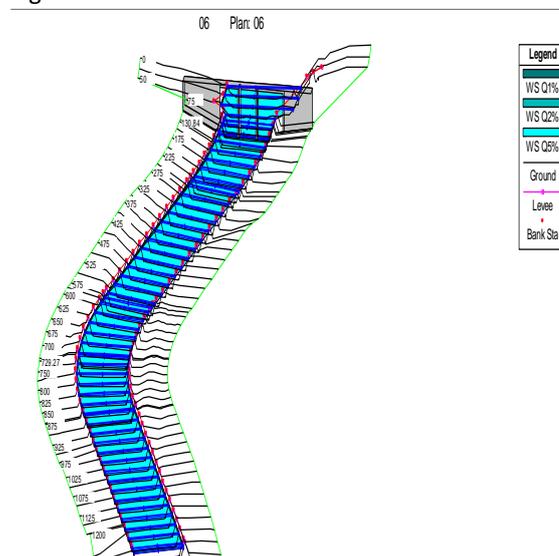


Figure 3 Situation with the existing and regulated riverbed

The Spatial-Urban Plan of the Municipality Berane has been prepared in 2014 and is still valid. According to the “Main Design of river Lim on location Berane – urban zone”, the flood protection structure construction zone is included in the Detailed Urbanism Plan whose validity is extended until the General Regulation Plan is adopted. Therefore, the flood protection structures are already covered with spatial documents and no update is needed. The valid Spatial Plan defines the axis of the riverbed and the width of the area defined as a river basin land area. The plan also envisages the area on both sides of the watercourse that can be used as a green (protection) belt for landscaping.

The existing spatial-urban documentation for the Municipality envisages the construction of a magistral road along the left bank of the Lim River. The flood embankment defined by the DD and the planned magistral road will form an integral and complete solution incorporated into the planning documents of the Municipality of Berane, defined through the urban planning documentation guidelines. According to the planning documents, construction of a magistral road is planned along the left bank of the river Lim and borders the protection belt.

### 2.3 Proposed technical solution

The length of the sub-Project section is 1.234 m. The radius of the designed curves is:  $R1 = 800$  m and  $R2 = 500$  m. The bridge is located downstream in the river curve R1. The regulated riverbed is placed symmetrically in relation to the disposition of the bridge structure.

The levelling of the terrain on the left bank is such that the area between Beranska Street and the water protection belt is sloped down toward the Lim River. Runoff drainage coming from the protection belt between Beranska Street and the left bank of the Lim will be captured with a protective drainage canal.

In accordance with the requirements of the representatives of the Municipality of Berane, as well as on the basis of the performed hydraulic analysis at the level of the Preliminary Design, a transverse trapezoidal

profile was adopted for the regulated riverbed, shown in the two figures below. The geometrical characteristics of the regulated riverbed were chosen so as to enable the acceptance of 100-year-old high water with the canopy of the embankment crown of at least 0.8 m.

The riverbed has a width of 62 m at the bottom, a depth of 4 m and a slope of 1: 1.5. The required dimensions of the riverbed are achieved by building an embankment with a crown 4 m wide, or larger in places where it is possible to fit into the high terrain of the coast, in the existing condition. The longitudinal slope of the regulated riverbed is 0.35%.

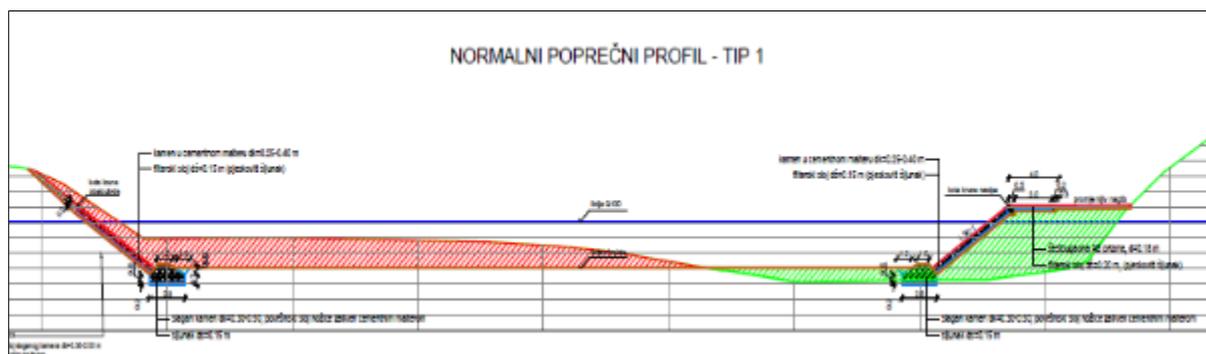


Figure 4 Typical cross-section for Lim river – embankment (Berane Urban Area), type 1

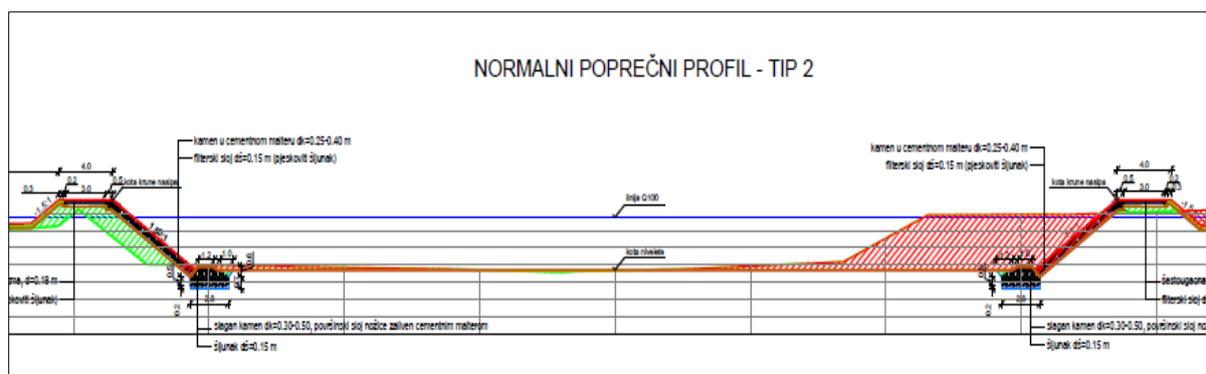


Figure 5 Typical cross-section for Lim river – embankment (Berane Urban Area), type 2

The embankment slopes will be coated with the stone in cement mortar in a layer of dimensions sufficient to prevent erosion of the embankment. On the embankment crown on the left and right riverbanks, a walking lane is envisaged, 3 m wide.

The design envisages the acceptance of coastal waters (from surrounding ponds) from the defended side of the embankment through concrete channels along the embankment foot. The accepted water is discharged in a controlled manner into the regulated riverbed of Lim by building tubular culverts through the body of the embankment, with mandatory lids, to prevent the reverse flow of water from Lim during high water levels.

### 3 Policy, legal and administrative framework

#### 3.1 EIA procedure in Montenegro

The Law on Environmental Impact Assessment (Official Gazette of Montenegro, No. 75/18) regulates the complete process of evaluation of impact of projects that can have a significant and/or concrete impact on

the environment (on the territory of Montenegro), the contents of official environmental impact assessments (EIA), including the provisions governing the participation of authorities and public organizations, administrative rules and assessment approvals, notification of projects that can have a significant impact on the environment of another state, supervision 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.

Within the Montenegro regulation on EIA, projects are classified in two groups (lists)<sup>4</sup>: projects included in the List 1 are all subjects to compulsory EIA while for projects included in the 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.

The EIA procedure, defined by the Law, is divided into the following steps: 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 programs and projects).

According to the project classification, the flood protection structures are found on the List 2. The opinion on the need of EIA is sought from the Municipality of Berane, which is the responsible authority for this project in line with Article 5 of the Law on EIA. On 11 March 2022 **the Municipality Berane issued the Decision based on which EIA for this project is not required** (Decision no. 16-322/22-17/8). With this Decision the Municipality has extended the former Decision no 16-353-84/12 that was first issued in December 2019, but it expired since the project construction did not commenced in the two years period of time. The renewed Decision is given in Annex 1.

### 3.2 Other relevant government policies and regulations

The **Law on Water** (Official Gazette of Montenegro, No. 27/07, 32/11, 47/11 48/15 and 52/16, 55/16, 02/17, 84/18) regulates the legal status and manner of integrated management of water, water and coastal land and water facilities, conditions, and manner of conducting water related activities and other issues of importance for waters and waters management. In case of project which includes e.g., construction of flood protection facilities, as well as any other activity which may affect volume and quality of water, the following water management acts must be obtained:

- › Water Requirements (WR), which prescribe the terms and conditions under which the responsible Water Administration will allow water use. The investor must obtain the WR for the preparation of technical documentation for the construction of new or reconstruction of existing structures and the execution of geological surveys and other works that may permanently, occasionally or temporarily lead to changes in the water regime. WR cease to be valid after one year, unless a duly filed application for the issuance of a Water Permit has been submitted within that period. If, during the process of issuing WR, it is determined that the facilities and works cannot cause changes in the

---

<sup>4</sup> Rulebook on the project that are subject to EIA procedure (Official Gazette of Montenegro no. 20/07, 47/13, 53/14, 37/18)

water regime or that they cannot be affected by the water regime, the responsible authority informs the investor that the WR are not needed.

- › Water Consent (WC), which is necessary before construction of new, and reconstruction of existing structures and facilities and the execution of other works subject to WR. The WC confirms that the technical documentation for the facilities and works is in compliance with the WR. The WC determines the period of its validity, depending on the nature, complexity and extent of construction or reconstruction of buildings and facilities, or other works, the period of validity of the Construction Permit (when required), as well as contractual conditions. The period of validity of a WC may not exceed two years.
- › Water Permit (WP) which confirms that all the requirements set in the WC are met, and which has to be issued before starting using a building or facility (or before the issuance of a Use Permit when required). The WP determines the manner, conditions and extent of water use, permitted quantities, limit values, manner and conditions of discharge of waste water, manner and conditions of storage and discharge of hazardous and other substances that can pollute water, as well as conditions for other activities or works that affects the water regime. The WP is valid up to a maximum of 10 years.

Water documentation is issued by the Water Administration of Montenegro or local self-government unit depending on type of activities which may affect the volume and quality of water. For example, for regulation of watercourses and construction of flood protection facilities on waters of significance for Montenegro, water documentation is issued by the Water Administration of Montenegro, while for regulation of watercourses and construction of flood protection facilities on waters of local significance, water documentation is issued by the local self-government unit. The Decision on Water Requirements for this project are issued by the Water Administration on Montenegro on March 31<sup>st</sup>, 2022. The Decision is given in Annex 2.

According to the **Law on Spatial Planning and Construction** (Official Gazette of Montenegro, No. 64/17, 44/18, 63/18, 11/19), Article 181, building permit is issued by a decision based on: 1) preliminary design, i.e. main design, certified in accordance with the Law; 2) reports on the positive revision of the preliminary design or the main design; 3) evidence of the right of ownership, i.e. other right on construction land (real estate certificate, concession agreement, decision on determining the public interest, etc.) or proof of the right to build, i.e. other right on the building. The Main Design got positive revision reports, which is, in the case of this project in the range of a building permit.

According to the Law, prior to the start of construction, the Constructor is obliged to prepare the Construction Site Management Plan in line with the Decree on Content of the Construction Site Management Plan (Official Gazette of Montenegro, No. 4/99). The Decree includes detailed description of the plans and measures that shall be included including water supply and wastewater management, material storage management, traffic regulation, OHS measures, organization of first aid and transport to a health care institution. The Decree also foresees development of a Separate Plan for the works that include high risk from worker's injury which may also be applied to this Project as the works will be carried out in the river bed and special construction techniques shall be employed.

The national legislation considers the issue of land acquisition under the **Law on Expropriation** (Official Gazette of Montenegro, No. 55/00, 12/02, 28/06, 21/08, 30/17, 75/18). The present 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

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

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).

### 3.3 Applicable environmental and social standards of the World Bank

Environmental and Social Standards relevant for the sub-projects are the following:

ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS2: Labor and Working Conditions	Relevant
ESS3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS4: Community Health and Safety	Relevant
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not relevant
ESS8: Cultural Heritage	Relevant
ESS9: Financial Intermediaries	Not relevant
ESS10: Stakeholder Engagement and Information Disclosure	Relevant

## 4 Environmental and Social Baseline

### 4.1 Water quality

Monitoring of the qualitative and quantitative characteristics of surface and groundwater in Montenegro is carried out by the Institute of Hydrometeorology and Seismology of Montenegro, within the framework of its basic activities and competences determined by the *Water Law (Official Gazette of Montenegro, No. 27/07, 32/11, 47/11, 48/15, 52/16, 55/16, 2/17, 80/17 and 84/18)*. In 2019, for the first time, surface and groundwater monitoring was carried out according to the Water Framework Directive, i.e. according to the *Rulebook on the manner and deadlines for determining the status of surface water (Official Gazette of Montenegro, 25/2019)* and the *Ordinance on the manner and deadlines for determining the status of groundwater Official Gazette of Montenegro, 52/2019)*.

The Lim River belongs to the Black Sea basin. The latest water quality monitoring results are available for 2020<sup>5</sup>. The monitoring on Lim was performed at three measuring points, upstream from Vinicka (the settlement in the Berane Municipality), downstream from Bijele Polje – industrial zone, and in Dobrakovo. The water quality test results, based on the 5 tested parameters, are given in the following table. The most relevant point of observation for this project is Upstream from Vinicka in the Berane Municipality where the quality of Lim river is determined to be good according to three observed parameters.

Table 4-1 Water quality of Lim River

Water body	Monitoring location	General physico-chemical parameters	Phytoplankton	Phytobenthos	Macrophyte	Macrozoobenthos	Total ecological status
Lim	Upstream from Vinicka	G	-	G	-	G	G
	Downstream from Bijelo Polje-Industrial zone	M	-	G	-	P	P
	Dobrakovo	M	M	G	-	M	M

G-good, M-moderate, P-poor

### 4.2 Biodiversity and protected areas

The Lim river is the habitat to different fish species from cold water riverine salmonids to lake dominant species. The species list includes grayling (*Thymalus thymalus*), Danube Salmon (*Hucho hucho*), various trout species including brown trout (*Salmo labrax*), pike, and others.

Fly fishing is popular throughout Lim, especially in Berane. Right at the end of the planned regulation in Berane, there is a main place for anglers.

<sup>5</sup> Institute of Hydrometeorology and Seismology of Montenegro. Status of water quality in Montenegro: Annual Report II-20, April 2021.

The subject area of the river Lim regulation in Berane is covered with low vegetation, so the presence of valuable plant and animal species is not expected.

Project location is placed in the urban area, hence not in the vicinity of any of the protected or potentially protected areas.

### **4.3 Air quality**

Environment protection Agency of Montenegro – EPA Montenegro is the authority in charge for monitoring the air quality in Montenegro. The data on air quality are collected through automatic stationary measuring stations located in: Podgorica, Niksic, Pljevlja, Bar, Tivat, Golubovci and Gradina (Pljevlja). There are no measuring stations in the vicinity of Project area.

The Berane Municipality belongs to North Air Quality Zone where the new monitoring station is set up in Bijelo polje. The measurement indicates increased presence of air pollutants during winter months as a result of poor-quality heating<sup>6</sup>. However, these results cannot be taken as relevant for Municipality Berane although it can be indicative of poor quality in winter months.

### **4.4 Land acquisition**

According to the information presented in the Draft Resettlement Action Plan (April 2022), socio economic survey and census revealed that total of two land plots will be affected by the Project, both privately owned. One is owned by a single PAP, and the other co-owned by three PAPs. Both land plots will be affected only partly, meaning that they will only lose a part of land along the river – one will lose 1.2% of the entire plot, and the other 9.1%.

No households were identified on the affected land plots as no one lives on these land plots. However, on one affected land plot, 4 small businesses with auxiliary structures (canopy and shed) have been identified – they are located approx. 60 m from the Project area (Figure 6). All these businesses were surveyed. Considering the distance of businesses from the Project area, as well as their location (entrances to businesses are oriented opposite to the Project area and have access directly from the local road), no significant impacts on these businesses are expected. There are also orchards on both affected land plots, but the nearest trees are at a distance of about 10 m from the Project area, so it is not expected that fruit trees will be endangered during construction works (Figure 6).

No state-owned land plots are affected by the Project. The Project also does not include state-owned land plots that are ceded to natural or legal persons.

---

<sup>6</sup> Environmental Protection Agency. Information on status of environmental quality in Montenegro for 2020 (2021)

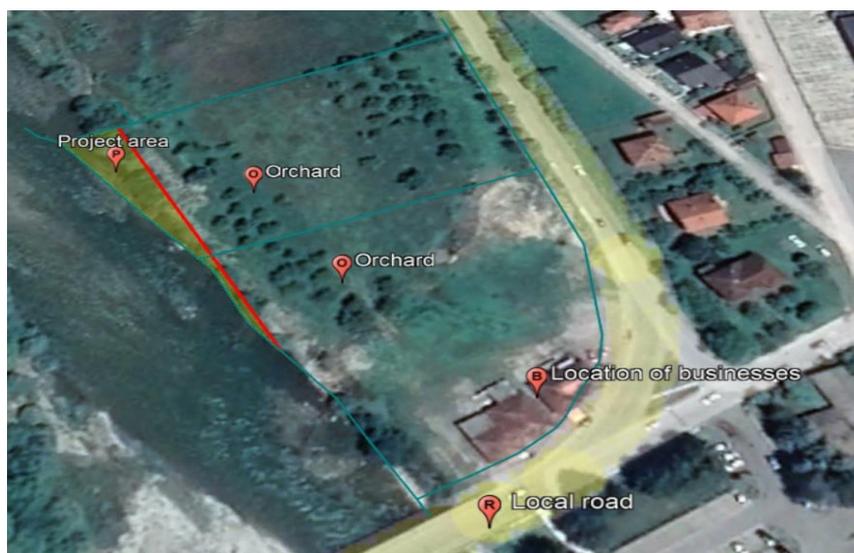


Figure 6 Distance between the Project area, the four businesses and orchards

#### 4.5 Cultural heritage

No objects of cultural heritage are presented in the project area of influence. There is a possibility of chance find during the excavation activities in the riverbed. The chance find procedure will be prescribed in case of any potential findings during the construction work.

### 5 Environmental and Social Impact Assessment

#### 5.1 General overview of potential impacts

Due to the nature of the measures to be implemented through the sub-projects, it is assessed that the impacts on environment will be a consequence of human presence and construction machines, and the nature of construction works at a location, which are limited to the location of works or its surrounding vicinity.

Embankment construction works would not pose significant risks to the environment. In addition, the objective of the designed measures is to decrease embankment erosion and deviation of the riverbed, and as such will have a localized impact on the flow of the river. Proposed works can be divided into surface and riverbed works. Riverbed works are expected to be implemented during low water levels periods, and should not last as long as surface works, which will start first. As a consequence, the range of impacts is limited and their magnitude remains small. Considering the nature of the proposed project, it is anticipated that adverse environmental impacts can be expected in the construction phase mainly. The aspect of health and safety at work is also taken into consideration. It is to be noted that parts of the construction work are taking place in an urban environment, however in all parts in an environment already strongly influenced by human activities. Broadly, the impacts in the construction phase can be of the following types:

**Soil and Water Pollution:** during construction activities, when using machinery, there is a possibility of soil contamination due to accidental spills of oils and fuel from construction machinery. In the area of construction works, construction waste is generated which, if not properly disposed of, may result in adverse impacts. The construction works carried out inside the river bed results in a temporary increase of turbidity of the watercourse.

**Flora and fauna:** construction works in the river bed along with the temporary increase of turbidity in the watercourse can pose a threat to freshwater habitats, while noise originating from construction machinery may temporarily impact surrounding surface habitats. Impacts on other habitats are not expected.

**Sourcing of materials.** As typical for construction works the project will increase consumption of energy and raw materials, waste generation and emission of pollutants. Impact will be mitigated through utilizing material plants possessing valid environmental permits.

**Disposal of excavated materials and construction wastes.** Demolition debris and excessive soil are usually generated during the repair / reconstruction works on drainage and river embankment systems.

**Degradation of landscapes and soil erosion.** The impacts on vegetative cover will be short-term, localized, and totally associated with repair / reconstruction works.

**Impacts from temporary access roads and work areas.** Establishment of temporary dirt roads to access work areas and temporary disposal sites for excavated materials can enhance soil erosion, and degrade the landscape.

**Noise and vibration disturbances** during construction and temporary air pollution (dust) related to the transportation of construction materials and truck traffic. These impacts will occur during the construction works, but will be only short-term. Effects include dust from construction activities, noise during trench excavation, possible effect of vibration caused by operation of heavy machinery, increased traffic in some sections of roads, etc.

**Safety hazards from construction activities.** No major hazards are expected the construction of the proposed project elements, as long as proper construction practices and safety procedures are applied. Still the community health and safety risks shall be considered especially those in case construction practices and safety procedures are not applied.

**Damages to private assets.** Although damage to private assets is a very common social impact encountered during flood protection works, no households were identified on the affected land plots in the vicinity of the project area. 4 small, identified businesses will be subject to expropriation. Nevertheless, the possibility of damage to private property while accessing the project site will be considered and appropriate mitigation measures prescribed.

**Impacts on historic-cultural and archaeological monuments.** No archaeological or cultural resources are expected to be encountered during project implementation.

**Key Labor Risks.** Contractor's employees will encounter difficult working conditions regarding the river bank works, any OHS impacts will be mitigated by applying the procedures put forth in this ESMMP document, project LMP document and relevant national legislation. The project LMP document can be accessed on the web page: <https://www.gov.me/mpsv/vodoprivreda>. All Employers of direct or contracted workers, in the project must ensure safety and health at work and strict adherence to the legal provisions in respect to worker's rights.

## **5.2 Identified negative environmental and social impacts of proposed sub-project**

In general, all negative impacts in the phase of construction are temporary and can be mitigated by applying good construction practices.

Construction of flood protection structures is based on the river bank regulation; it is about preventing the flooding of relatively small areas of urban zones, and at relatively shallow depths. The downstream impact on other water users in the construction phase can be expected in the area of 250 m downstream and will be reflected through changes in water quality (increased sedimentation and turbidity and possible incidental discharges of oils and lubricants).

The project impacts by phases are shown in following table:

*Table 5-1 Project environmental and social impacts*

Phase	Type of impact
Pre-construction phase	Land acquisition
Construction phase	Soil compaction and erosion Dust emission Noise Soil and water pollution Impact on aquatic ecosystem Degradation of riparian vegetation caused by construction work Community safety risks from unfenced and unlabeled construction site Health and safety risk for workers on the construction site
Operational phase	Low impact on natural environment on the project location Positive impact in terms of prevention of risks for environment, humans, and property
Degree of negative impact	Minimum if mitigation measures are applied

### 5.3 Identified positive impacts of proposed sub-project

The construction of flood protection infrastructure will bring economic, social, health and ecological benefits, to population and local community in the project area. Increase of flood protected areas will contribute to the safety and protection of the surrounding area and reduce potential material damages the local communities were facing.

During the construction phase a number of, project dependent or other positive national, regional and local economic and employment impacts are anticipated. It will beneficially impact the national economy through state receipt of import duties and value added taxes on construction supplies, and through state receipt of workforce income tax contributions. As contractors are likely to be local companies, it will have mainly local economic benefits on domestic construction businesses, local labour and local material suppliers.

Other environmental positive impact: Air quality and noise, water quality, biodiversity, geology, geomorphology, seismicity and soils, waste management.

### 5.4 Assessment of identified impacts

Summary of key impacts during pre-construction and construction phase and recommended mitigation measures are described in following table:

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Impact	Assessment of impact	ESS triggered	Impact significance
Land acquisition	The Sub-Project will require acquisition of two private land plots. Physical displacement is not required.	ESS5	minor
Ground and surface water	Temporary impact. Due to low amount of drainage water that can be potentially drained from the construction site and during works execution into the river the consequential impact is expected to be minimal to negligible. Adequate project supervision by the PIU will be established and no long term water disturbance or similar activities will be allowed. Considering the methodology of works on embankment regulation, localized impacts to the river flow (increased turbidity) are expected up to the 300 m downstream. Stopping the erosion of the riverbank will result in increased river flow in the operational phase. Also, improper disposal of excavated materials and construction waste could adversely impact ground and surface water.	ESS3	minor
Air quality	Temporary impact. Local air quality may experience some moderate and temporary deterioration due to dust from transportation of construction materials and truck traffic and elevated levels of nitrogen oxide (NOx) and sulfur oxide (SOx) from construction equipment exhausts.	ESS3	minor
Flora and fauna (protected areas and species)	Minimal loss or damage of vegetation and loss and damage or disruption to fauna can occur during works. The project works will lead to increased consumption of energy and raw materials, waste generation and emission of pollutants. Impacts can be offset or mitigated by following procedures and possession of valid environmental permits of the material suppliers. There will be no negative impacts on protected areas due to nature of works.	ESS6	minor
Noise and vibration	Only limited temporary impact during the construction phase. Mitigation measures in form of noise deflecting shields will be placed where the work-scheduling activities cannot have desired effect.	ESS3	minor
Soil quality	Soil contamination can occur from: Drainage of dredged materials, spillage of hazardous and toxic chemicals. Impact can be mitigated by following GEMM procedures	ESS3	minor
Loss of top soil	Loss of top soil due to temporary access roads and work areas	ESS3	minor

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Impact	Assessment of impact	ESS triggered	Impact significance
Waste	Health hazards and environmental impacts can happen due to improper waste management practices. Excess soil from excavation or other types of construction waste needs to be managed properly in line with the mitigation measures prescribed in Chapter 6.	ESS3	moderate
Cultural and religious issues	There is a possibility of chance find during the excavation activities in the river bed. The impact can be mitigated implementing measures prescribed in Chapter 6	ESS8	minor
Cumulative impacts	Cumulative impacts are not expected. Potential cumulative impact on quality of water in the river Lim is not expected since wastewater from Berane is treated on the municipal wastewater treatment plant. The impacts on air quality are minor and will not significantly contribute to worsening the air pollution in Berane.	ESS1	-
Community Health and Safety	The major risks tied to Community health and Safety relate to potential traffic and road safety risks to workers, affected communities and road users during construction. These risks mainly stem from increased traffic on haulage routes from and to potential borrow and deposit areas to be used by the Contractors during construction works. Influx of workers or people providing support services into an area is not expected.	ESS4	moderate
Workers safety	Construction workers may be affected adversely due to hazardous working environments where high noise, dust, unsafe movement of machinery and other dangers related to improperly managed construction sites may be present.  Gender-Based Violence (GBV) or Sexual Exploitation and Abuse (SEA) of children, or communicable diseases are not anticipated in relation to the project.	ESS2	moderate
General population	Works surrounding the inhabited areas mostly consist of upgrading of the existing embankment; zone of works is mostly uninhabited. There are two plots in Berane, with vegetation, which are not used for agricultural production. There are 4 business entities on one of these two plots. There are two owners, one of whom is the owner of the plot and two buildings. The other owner rents out the remaining two business premises. All the people affected by the project were interviewed and referred to the situation, ie the	ESS3, ESS4	minor

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMP

Impact	Assessment of impact	ESS triggered	Impact significance
	<p>project. As it was noted, they have no objections, moreover, they express consent. Minor impacts on general agricultural activities around the project area are expected. Temporary negative impacts on potential water users downstream (e.g., irrigation, fishing, recreation) may be expected due to the change in water quality caused by increase turbidity or incidental discharges.</p>		

## 6 Environmental and social mitigation plan

### 6.1 Overview of mitigation measures during the pre-construction phase

#### 6.1.1 Land Acquisition

**Impact** - The total of two land plots will be affected by the Project, both privately owned. Both land plots will be affected only partly– one will lose 1.2% of the entire plot, and the other 9.1%. No households were identified on the affected land plots, as no one lives on these land plots. Business in the vicinity will not be affected.

**Mitigation measure** – carry out expropriation in line with the RAP prepared for this sub-project.

### 6.2 Overview of mitigation measures during the construction phase

#### 6.2.1 Site-Specific Implementation Plan

Prior to initiating works, the Contractors will be required to prepare and submit for approval the **Construction Site Organization Plan** as required by the national legislation. This Plan shall include at least:

- › The plan for execution of works inside the riverbed including OHS measures appropriated to the works executed;
- › Traffic management plan;
- › Material storage plan;
- › Construction waste management plan;
- › Emergency response plan;
- › Landscaping plan after the construction;

and other measures in line with the Decree on Content of the Construction Site Management Plan as explained in Chapter 3.3. The provisions of the CSOP will be in line with the provisions of this ESMMP. In case of differing requirements, the more stringent ones will apply. The contractor will have the ESMMP made available as a contract-binding document, and will ensure integration of the ESMMP into the CSOP.

Contractors are obligated to familiarize their workers with the E&S protection and monitoring measures put forth within the subject ESMMP document.

#### 6.2.2 Erosion of embankment slopes

**Impact** - The earthworks for the sub-project activities might cause negative impacts in form of erosion on riverbank slopes, dust and noise that can create nuisance to local people.

**Mitigation Measures** – The flood protection structures that will be constructed intend to control and stabilize stream beds and banks. During construction, the extent of proposed excavation should be restricted to the defined project area. Contractors undertaking works should adopt the best engineering practices for work in water streams to control sediment and erosion. The flow must be diverted into a properly designed and constructed channel that has been stabilized. The construction works shall be carried out in a dry season with low seasonal flows. The Contractor should re-vegetate the disturbed areas and placing of tarps after the end of construction activities. The Contractor shall stabilize the cleared areas not used for construction activities with vegetation or with the appropriate surface treatments as soon as practicable following completion of activities.

### 6.2.3 Increased generation of pollution – Supply of material

**Impact** - The project works will require purchase of materials that are required for construction of the structure including concrete, gravel, stone, fuel, etc. It is of outmost importance that the sourcing of material is from legal sources and companies that fulfill legally binding environmental requirements. In case of borrow pits being used, the remediation plan following use of such borrow pits will be part of the CSOP.

**Mitigation Measures** – During material supply ensure that material plants engaged by the Contractor possess valid environmental permits and work in conformance with the national and WB E&S requirements.

### 6.2.4 Potential air pollution - Dust

**Impact** - Possible sources of air pollution will be dust due to maintenance activities, machinery movement and other sources. Construction works involve breaking up, digging, crushing, transporting, and disposal of small quantities of excavated materials. Locally, the air quality may experience some moderate and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NOx) and sulfur oxide (SOx) from construction equipment exhausts. The dust may settle on vegetation, crops, structures and buildings.

**Mitigation Measures** - Spraying of water is the main way of suppressing and controlling dust in dry and windy conditions. If possible, works should be temporary stopped in case of extreme wind conditions. For piles of material, precautionary measures may include covering of such piles during incidences of windy weather and/or transport to and from the site. Road washing measures may also be in place, if debris generated on the roads used is further raised by additional traffic or wind.

### 6.2.5 Potential water impacts

**Impact** - While implementing the works localized impacts are expected, resulting from increased turbidity and disturbed river flow, accidental water impacts may occur during the execution of the project from site run off, spills from the equipment maintenance areas and sanitary wastewater effluent from the work camps. As for the potential pollution during operation, these are mostly limited to accidents. In such a case, procedures for action in incidental situations, as defined by the national legislation will apply.

**Mitigation Measures** - The site will establish appropriate erosion and sediment control measures (e.g., hay bales and / or silt fences) to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers. Fuel and lubricant spills can occur at the Contractor's work camp while maintaining and washing equipment and work vehicles. Should spills occur, to mitigate the problem the Contractor should use absorbing materials, such as absorbent mats/fabrics, or sand and scrape off the contaminated soils and dispose them in approved facility, in accordance with the national legislation.

In cases of increased and prolonged turbidity the work schedules shall be adjusted based on the fish spawning season or other concerns that might be raised by the local fishermen associations.

The measures foreseen under chapter 6.1.6 shall also be implemented.

### 6.2.6 Waste management

**Impact** – In case of improper handling of waste including disposal of waste materials the potential negative impacts on water and soil can be expected.

**Mitigation measure** - The Contractor should also manage waste properly to prevent water pollution. The Contractor shall produce the Construction Waste Management Plan for the Project. Mitigation measures should, among other requirement, contain contractor obligations to:

- › Locate the communal waste disposal containers inside the construction camp, min 500 m away from the residential area so that people are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste disposal places. All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites by local waste collection company.
- › All special waste categories should be handled in cooperation with licensed waste operators. Special waste categories should be segregated on site, particularly paying attention to separate hazardous and non-hazardous waste categories.
- › In case oil and grease are trapped for reuse in a minimum 60cm thick lined pit, care shall be taken to ensure that the pit should be located at the lowest end of the site and away from the residential areas.
- › In case of filling of low-lying areas with wastes, it needs to be ensured that the level matches with the surrounding areas. In this case care should be taken that these low lying areas are not used for rainwater storage.

### 6.2.7 Equipment maintenance and fueling

**Impact** - equipment maintenance and fueling may cause contamination of soils and watercourses, including groundwater, if storage or handling of lubricants, fuels and solvents (either new or waste) is improper or careless.

**Mitigation Measures** - To avoid damage to natural environment there is a need to ensure proper handling of lubricants, fuels and solvents while maintaining the equipment. Oil and other lubricant drums should be stored in a clean, cool and dry environment (possibly with consistent temperature), on proper storage racks using the first-in/first-out (FIFO) method to maintain a good stock rotation. On-site refueling of vehicles shall be forbidden.

### 6.2.8 Occupational Health and Safety

**Impacts** - Construction workers may be affected adversely due to hazardous working environments where high noise, dust, unsafe movement of machinery etc. may be present.

**Mitigation Measures** - The Contractor shall instruct his workers in health and safety matters and require from the workers to use the provided personal safety equipment. Contractor has to ensure that all operators of heavy or dangerous machinery are properly trained/certified, and also insured. He will have to provide first aid facilities, rapid availability of trained paramedical personnel, and emergency transport to nearest hospital with accident and emergency facilities. OHS indicators shall be developed and used in monitoring and evaluation of health and safety performance. The World Bank General EHS Guidance for OHS can be used to create appropriate monitoring program<sup>7</sup>. The work of contractor will be supervised by OHS supervision engineer.

### 6.2.9 Noise

**Impact** - Noise caused by the repair / reconstruction works will have only a temporary impact. Although temporary and mostly moderate, noise impacts in the vicinity of residential areas may cause negative health impact, if not mitigated.

**Mitigation Measures** – There is no sensitive receivers in the close proximity of the construction site. Still if the local communities raise the issue of noise disturbance appropriate mitigation measure shall be applied such as limiting the working hours, paying attention not to operate several noisy machines at the same time,

<sup>7</sup> <https://documents1.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General-EHS-Guidelines.pdf>

and if possible, isolate noisy machines in a technically possible way (e.g., use acoustical silencers in intake and exhaust systems). For workers, personal hearing protective equipment shall be used.

#### 6.2.10 Labor risk

**Impacts** – According to the LMP, the key labor risks would be associated with health and safety risks related to the construction activities of sub-projects, such as exposure to physical hazards during construction activities: works on river banks with high speed currents, use of heavy equipment, trip and fall hazards, exposure to hazardous materials and electrical hazards from the use of tools and machinery. Since the construction activities will involve hazardous work, persons under the age of 18 will not be employed by the Project.

It is expected that **direct workers** (PIU and external consultants) within the framework of the Project would perform office operations primarily, in addition to occasional visits to sub-project locations on the part of the consultants, so that the risks upon the health and safety of those workers are minimal or negligible. The risks in relation to work in civil service and consultant business are, in general, very small in Montenegro (for example, irregular payment of compensation for work, informal labor or labor of minors are not practiced).

It is anticipated that the workers (**contracted workers**) will be exposed to occupational health and safety hazards, primarily including but not limited to:

- working at height;
- working in/near water;
- excavations hazards;
- lifting heavy materials;
- chain saws and treefall during timber cutting;
- exposure to dust and odour;
- working on steep and treacherous terrain;
- working near or on roads with live traffic;
- electrical works.

No other labor risks are considered to be significant. The Project is assessed as low on gender-based violence (GBV) risk.

**Mitigation Measures** – Establishment of a worker specific grievance mechanism for project workers. The project worker is entitled to give suggestions, remarks and information regarding health and safety at work. The project workers should be informed on available grievance mechanisms upon their employment or engagement. Contracted parties should demonstrate their willingness to implement these mechanisms, even if such requirement is not prescribed by any law of the domicile country. The contractor shall also implement requirements from the Labor Management Plan. The Contractors will need to include implementation costs of the LMP in their budget for the implementation of the Project.

#### 6.2.11 Chance finds

**Impact** - Possibility of chance finds in particular for cultural, historical or even natural sensitive issues that may be found during the construction works.

**Mitigation Measures** – In case of chance finds, the construction works shall be stopped, the site or findings shall be prevented of any damage, destruction and unauthorized access by others, and the responsible authority and the Bank team shall be notified. The procedure defined in the *Law on the protection of cultural heritage (Official Gazette of Montenegro, No. 49/10)* shall be followed.

### 6.3 Environmental and social mitigation plan

Table 6-1 Mitigation Plan

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
<b>Permits and tender documents preparation</b>				
<b>Pre-construction (Planning/Designing)</b>	Land acquisition	<ul style="list-style-type: none"> <li>› Carry out the public consultation for the Draft Resettlement Action Plan (RAP) prepared, in April 2022, in line with the WB requirements</li> <li>› Develop expropriation study in line with Final RAP and national regulations</li> <li>› Finalize land acquisition activities in line with the expropriation study which will include all requirements from the RAP</li> </ul>	› Yet to be calculated in the expropriation study	› MAFWM/PIU
<b>Pre-construction (Planning/Designing)</b>	Tender documents prepared without access to or use of this ESMMP and other framework documents produced in line with the WB E&S requirements.	<ul style="list-style-type: none"> <li>› Tender documents should include copy of the mitigation and monitoring plan, which shall be included in the safeguard clauses of the technical specifications in the contract and commitment to comply with lender requirements</li> <li>› Tender documents should include requirements for contractors from the Labor Management Procedure (LMP)</li> <li>› Tender documents should include requirements for contractors from the Stakeholder Engagement Plan (SEP)</li> <li>› Compliance with OHS regulation and this ESMMP should be clearly stated in the tendering documents.</li> </ul>	› Included in the tendering procedure	› MAFWM/PIU
<b>Pre-construction (Planning/Designing)</b>	Incompliance with relevant environmental and construction related legislation	<ul style="list-style-type: none"> <li>› Acquire construction permit</li> <li>› Obtain water consent</li> </ul>	› No cost	› MAFWM
<b>Pre-construction (Planning/Designing)</b>	Potential damages to the existing infrastructure and facilities, especially underground installations which would cause obstacles in the provision of services to consumers, as well as chance finds	<ul style="list-style-type: none"> <li>› Precisely situate the position of infrastructure facilities and underground installations at the location of works in cooperation with the relevant institutions.</li> <li>› Obtain relevant Opinions/Approvals related to communal infrastructure from responsible local or national institutions, including those related to cultural heritage chance finds</li> </ul>	› No cost	› MAFWM
<b>General Site Conditions and Safety Notifications</b>				
<b>Construction</b>	Notification of public and overall site safety	<ul style="list-style-type: none"> <li>› Prepare the Construction Site Organization Plan. The Plan shall include methodology for safety execution of works inside the river bed.</li> <li>› The local construction and environment inspectorates and communities have been notified of upcoming activities</li> </ul>	› Included in the Technical Design, bill of quantities	› Construction contractor to prepare

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
		<ul style="list-style-type: none"> <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>› The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring 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 contact numbers</li> <li>› Provide on-site medical services and supplies for any emergency, through institutional and administrative arrangements with the local health unit</li> <li>› Provide portable water &amp; sanitary facilities for construction workers</li> </ul>		<ul style="list-style-type: none"> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
		<b>Material supply</b>		
<b>Construction</b>	Unsustainable extraction of resources	<ul style="list-style-type: none"> <li>› During material supply ensure that material plants engaged by the Contractor possess valid environmental permits and work in conformance with the national and WB E&amp;S requirements.</li> <li>› In case of borrow pits being used, the remediation plan following use of such borrow pits will be part of the CSOP. The Contractor is to implement remediation plan once the exploitation is over.</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the Technical Design, bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Material spillage during transport	<ul style="list-style-type: none"> <li>› All trucks are to be covered</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the Technical Design, bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
		<b>Traffic and pedestrian safety</b>		

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
<b>Construction</b>	Increased traffic due to heavy equipment/vehicle movement/works in vicinity of main/local roads	<ul style="list-style-type: none"> <li>› Develop Traffic Management Plan if machinery access will impact the existing local traffic or the construction site will block passage / transport of vehicles and people</li> <li>› Designate an alternate route for pedestrian and/or vehicles in coordination with the Municipal Authorities or provide safe passageway through the construction site</li> <li>› Schedule vehicle movement during lean daytime traffic hours.</li> <li>› Provide traffic aides/flagmen, traffic signs to help ensure the free and safe flow of traffic</li> <li>› Maintain &amp; Repair temporary alternative route of vehicles &amp; pedestrians</li> </ul>	› Included in the bill of quantities	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Limited public access to and through the construction area			
<b>Construction site</b>				
<b>Construction</b>	Potential water and soil pollution from improper material storage, management and usage	<ul style="list-style-type: none"> <li>› Identify storage areas in the Construction Site Organization Plan</li> <li>› Construct and cover material storage areas</li> <li>› Oil and other lubricant drums should be stored in a clean, cool and dry environment (possibly with consistent temperature), on proper storage racks using the first-in/first-out (FIFO) method to maintain a good stock rotation.</li> <li>› On-site refueling of vehicles shall be forbidden.</li> <li>› Isolate concrete works from watercourse by using sealed formwork or covers.</li> </ul>	› Included in the bill of quantities	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Water and soil pollution from improper handling of waste including disposal of waste materials	<ul style="list-style-type: none"> <li>› Develop Construction Waste Management Plan</li> <li>› Typical containers for solid Communal waste are placed at the construction site locations at least 500m from closest houses;</li> <li>› Acceptance of collected Communal waste and its disposal by authorized institutions;</li> <li>› Hazardous waste fractions (used waste oils, oiled packaging, bitumen agents waste, waste transformer oils, waste asbestos-cement pipes etc.) are separately collected into typical containers or metal barrels; they are to be delivered to entities authorized for hazardous waste management. Apply additional measures for storage of hazardous wastes (such as use of secondary containment, access restriction, provision of PPE etc.) as necessary to prevent harm to construction staff, environment and public.</li> <li>› Re-usage and recycle of waste whenever possible.</li> </ul>	› Included in the bill of quantities	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
		<ul style="list-style-type: none"> <li>&gt; It is prohibited to burn waste in the open and at the location.</li> <li>&gt; Use and labelling of designated waste collection containers and temporary disposal areas for different kind of wastes</li> <li>&gt; Ensure that the waste is finally disposed in cooperation with licensed waste operators. The Contracts with licensed waste operators shall be signed and any waste transfer shall be recorded.</li> </ul>		
<b>Construction</b>	Potential contamination of soil and water from improper maintenance and fueling of equipment	<ul style="list-style-type: none"> <li>&gt; No washing of trucks and equipment is allowed in the construction site</li> <li>&gt; On-site refueling of vehicles shall be forbidden.</li> <li>&gt; Provide absorbing material in case of fuel spills. Used oiled materials and agents should be managed in line with the Construction Waste Management Plan.</li> <li>&gt;</li> </ul>	> Included in the bill of quantities	<ul style="list-style-type: none"> <li>&gt; Construction contractor to implement</li> <li>&gt; Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Potential pollution of soil and water due to the discharge of waste sanitary waters from the construction site	<ul style="list-style-type: none"> <li>&gt; Installation of ecological toilettes for workers</li> <li>&gt; Engage the licensed company for regular emptying and maintenance of ecological toilettes</li> </ul>	> Included in the bill of quantities	<ul style="list-style-type: none"> <li>&gt; Construction contractor to implement</li> <li>&gt; Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Community Health and Safety: Population at increased risks of traffic accidents and from unauthorized access to the construction site.	<ul style="list-style-type: none"> <li>&gt; Implement traffic management measures from the Traffic Management Plan that is part of the Construction Site Management Plan.</li> <li>&gt; Assure adequate warning signs, lighting, protective fencing etc.</li> <li>&gt; Clean construction waste from the construction site both in the construction phase and after works completion, when closing the construction site.</li> <li>&gt; Establish cooperation with local health care institutions for any emergency needs related to injuries on the construction site.</li> <li>&gt; Include appropriate measures in the Construction Site Organization Plan.</li> <li>&gt; Implementation of SEP, in particular the provisions on providing timely information to citizens through the media about upcoming</li> </ul>	> Included in the bill of quantities	<ul style="list-style-type: none"> <li>&gt; Construction contractor to implement</li> <li>&gt; Engineering Supervision to control on behalf of MAFWM</li> </ul>

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
		construction works, expected duration of the works, alternative routes, etc.		
<b>Construction</b>	Possibility of encountering an archaeological site	<p>In case of any findings the Contractor shall cease with works momentarily and proceed as indicated in the Montenegro national legislation Law on the protection of cultural heritage (Official Gazette of Montenegro, No. 49/10). The random discoverer (investor) shall:</p> <ul style="list-style-type: none"> <li>› Stop the works and provide the site, or findings of any damage, destruction and unauthorized access by others;</li> <li>› Report the finding to the authority, the nearest public institution for protection of cultural heritage goods, the authority in charge of police affairs or the administration body competent for maritime safety;</li> <li>› Preserve discovered assets at the location of finding in the state in which they were found until the arrival the authorized persons of the entities referred previously.</li> <li>› Disclose and communicate all relevant information regarding the location and position of the findings at the time of detection and the circumstances under which they were discovered to the competent authorities.</li> </ul>	› Included in the bill of quantities	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Workers safety	<ul style="list-style-type: none"> <li>› Develop OHS management plan appropriate to the level of the construction activities and ensure its implementation. The plan shall include measures to ensure safety of workers working the in the river bed, as well we use of protective equipment appropriate to the works conducted.</li> <li>› Provide OHS training for workers and demand from all workers to abide by the Protection at work measures;</li> <li>› Provide protective equipment;</li> <li>› Install warning signs at the construction site.</li> <li>› Develop OHS indicators and use them for monitoring and evaluation of health and safety performance.</li> <li>› The Supervision Engineering contractor to employ the OHS supervision engineer to oversight the construction works</li> </ul>	› Included in the bill of quantities	<ul style="list-style-type: none"> <li>› Construction contractor to prepare</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Increase noise due to the construction activities	<ul style="list-style-type: none"> <li>› Observe law-defined working hours at the construction site.</li> <li>› Avoid night-time construction using heavy machinery, from 22:00 to 6:00 near residential areas.</li> </ul>	› Included in the bill of quantities	› Construction contractor to implement

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
		<ul style="list-style-type: none"> <li>› Good maintenance and proper operation of construction machinery to minimize noise generation.</li> <li>› Where possible, ensure non-mechanized construction to reduce the use of machinery</li> <li>› Ensure mufflers for heavy machinery</li> <li>› Do not to operate several noisy machines at the same time</li> <li>› If possible, isolate noisy machines in a technically possible way (e.g., use acoustical silencers in intake and exhaust systems)</li> </ul>		<ul style="list-style-type: none"> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Communication with stakeholders	<ul style="list-style-type: none"> <li>› Implement communication methods described in Stakeholder Engagement Plan.</li> <li>› Establish Grievance Mechanism in line with requirements of Stakeholder Engagement Plan.</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Labor risks	<ul style="list-style-type: none"> <li>› Implement requirements from the Labor Management Procedure (LMP)</li> <li>› Workers may raise their concerns (safety, discontent, maltreatment or else) through the Grievance Mechanism</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Emissions of dust from the construction activities and any temporary spoil storage site	<ul style="list-style-type: none"> <li>› Avoid construction during high wind</li> <li>› Compact deposited earth material.</li> <li>› For piles of material, cover such piles during incidences of windy weather and/or transport to and from the site.</li> <li>› Sprinkle dust sources with water in order to reduce impacts on the surrounding population and vegetation.</li> <li>› Perform road washing measures if debris generated on the roads used is further raised by additional traffic or wind.</li> <li>› Control the speed of vehicles in order to reduce dust rising.</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Emission of gases and particles from vehicles, mechanization and generators	<ul style="list-style-type: none"> <li>› Regular equipment maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the, bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> </ul>

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
		<ul style="list-style-type: none"> <li>› The contractor is obliged to submit evidence of vehicle roadworthiness in line with the regulations on hazardous gases emission.</li> </ul>		<ul style="list-style-type: none"> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Increased water turbidity as a consequence of the works which may have negative impact on biodiversity in the Lim river.	<ul style="list-style-type: none"> <li>› Construction works should be executed in a way that surfaces and natural contents outside the project are not damaged and that works are performed so that watercourses are not unnecessarily made tumid and watercourses discontinued.</li> <li>› Works should be executed in low water season when minimum flow is observed in the Lim river.</li> <li>› The Contractor will be responsible to establish the construction works to avoid the period of the fish spawning</li> <li>› In cases of increased and prolonged turbidity the work schedules shall be adjusted based on the fish spawning season or other concerns that might be raised by the local fishermen associations.</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Construction</b>	Construction surplus material after the closure of construction sites	<ul style="list-style-type: none"> <li>› Address this issue in the Construction Waste Management Plan</li> <li>› All shivers and material that remain after the closure of temporary construction sites are to be removed from the location and reused/recycled where possible.</li> <li>› All remains are to be disposed of in a manner that will not be harmful to environment; this is to be done by companies that have permits to perform such works</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>› Construction contractor to implement</li> <li>› Engineering Supervision to control on behalf of MAFWM</li> </ul>
<b>Operation and maintenance</b>				
<b>Operation and maintenance</b>	Regular inspection of the flood protection structure	<ul style="list-style-type: none"> <li>› Organize the flood control team and perform at least twice a year the detailed inspections of the flood protection structure. Identify potential issues and prioritize for repair.</li> </ul>	<ul style="list-style-type: none"> <li>› Included in the regular activities of the administration</li> </ul>	<ul style="list-style-type: none"> <li>› Owner of flood protection structures</li> </ul>
<b>Operation and maintenance</b>	Improper management of waste from maintenance activities (grass and woody vegetation as well as other types of waste generated)	<ul style="list-style-type: none"> <li>› Waste collection and disposal pathways and sites will be identified for all major waste types expected from maintenance activities.</li> <li>› All waste will be collected and disposed properly by licensed collectors</li> <li>› No open burning of wastes/removed vegetation on or off site</li> </ul>	<ul style="list-style-type: none"> <li>› N/A</li> </ul>	<ul style="list-style-type: none"> <li>› Contractor for maintenance</li> <li>› Owner of flood protection structures</li> </ul>

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMMP

Phase	Possible Impact	Mitigation measures	Cost of mitigation (if substantial)	Institutional responsibility
<b>Operation and maintenance</b>	Repair of structural damage to regain functionality of the embankments	<ul style="list-style-type: none"> <li>&gt; Implement the same measures as described under heading “Construction “</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Included in the bill of quantities</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Construction contractor to implement</li> <li>&gt; Engineering Supervision to control on behalf of owner of flood protection structures</li> </ul>

## **7 Environmental and social monitoring plan**

MAFWM/PIU will monitor overall environmental performance during project implementation by engaging the licensed engineering supervision company. Monitoring is a tool to assess environmental conditions and trends, support policy development and its implementation, and develop information for reporting to national policymakers, international forums and the public. The monitoring program refers to construction phase and deals with the natural and social parameters. The characterization of impacts chapter defines how important is the evaluation of mitigation measures caused by the construction works or wrong implementation of mitigation measures.

The Contractor environmental monitoring includes continuous and periodic observations, the recording, archiving and management of data for environmental and social protection and the reporting of the results to the management and to the affected parties and the general public as sets of primary, calculated or aggregated data and general information in monthly reports. Monitoring costs are included in contingencies costs and are the matter of the agreement between the MAFWM and the Contractor.

The following table presents the monitoring activities and responsibilities over the implementation of monitoring responsibilities during execution of this sub-project.

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMP

Table 7-1 Monitoring of environmental and social impacts

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
<b>Pre-construction phase</b>	Obtaining all the necessary permits (Water Management Acts, Construction related permits)	Administrative office of the PIU	Insight in the administration files	Before the start of the works	-	PIU	
<b>Pre-construction phase</b>	Land acquisition carried out in line with the RAP and Expropriation Study developed for this project	Administrative office of the PIU	Visual insight in the files	Before the start of the works	-	PIU	
<b>Pre-construction phase</b>	Include into Employers Requirement (tender documents) the obligation for Contractors to implement Environmental and Social Management Plan, Labor Management Procedure and Stakeholder Engagement Plan.	Administrative office of the PIU	Insight in the Employers Requirements/ tender documents	Before publishing the tender dossier	-	PIU	
<b>Construction phase</b>	Quality of the Construction Site Organization Plan	On the construction site	Visual insight in the files Visual observation of the site	Visual insight in the files	-	PIU through Engineering Supervision	
<b>Construction phase</b>	Level of dust (amounts of sediment particles and airborne particles)	Working area used by the excavation and earth moving machinery	Measurement devices Visual inspection, check vehicle and	If needed (will be decided upon visual inspection)	-	Construction contractor Supervisor Engineer	

West Balkans Drina River Basin Management Project (WBDRB)

Preparation of the preliminary design for the Flood protection, rehabilitation and irrigation of Lim River Basin (with Grncar River) with the aim of mitigating the impact of climate change and sustainable use of natural resources and (ii) Assessment of climate change impacts on groundwater in Drina River Basin in Montenegro – MNE-WBDRB-TF0A2318-TF0A2321-QCBS-CS-17-2.b.1.3.2. Task 3 – ESMP

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
	Exhaust emissions from vehicles and equipment	and/or at entry and exit points	equipment service history	Upon complaints from local community			
<b>Construction phase</b>	Noise from construction works	Working area	Measurement devices Observation	Upon complaints from local community	USD 500	Construction contractor Supervisor Engineer	
<b>Construction phase</b>	Surface water pollution: total suspended solids and mineral oils	Downstream of the works	Visual inspections and laboratory testing of nearby water streams if needed	In case of pollution accidents or upon complaints from local community	USD 500	Construction contractor Supervisor Engineer	
<b>Construction phase</b>	Construction waste generation and management	Working site	Visual inspection, disposal records in line with Construction Waste Management Plan	Monthly during the execution of the works, as appropriate. Amount and disposal records internal reports will be made daily and monthly	Included in bid price	Construction contractor	

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
Post-construction	Stability and functionality of flood protection structures	On and around the flood protection structure	Visual observation	2 times per year	-	Owner of the flood protection structure	

Table 7-2 Monitoring of social impacts

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
Construction phase	Community Health, Safety and Security	At the construction site	<ul style="list-style-type: none"> <li>› Visual inspection of the construction site organization</li> <li>› Records of complaints from residents through the grievance mechanism</li> </ul>	Monthly	Included in Construction and design/ supervision cost	Engineering Supervision of behalf of MAFWM	

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
Construction phase	Occupational Health and Safety of Workers	At the construction site	<ul style="list-style-type: none"> <li>› Visual observation of the compliance of respecting of health and safety working conditions, approved by permits and required by Montenegrin legislation.</li> <li>› Visual observation of the compliance with respect to Construction Site Organization Plan</li> <li>› Record of accidents in work</li> </ul>	Daily	Included in Construction and design/ supervision cost	Engineering Supervision of behalf of MAFWM	
Construction phase	Access	All sites where infrastructure and settlements/assets will be affected	<ul style="list-style-type: none"> <li>› Observing and evaluation of infrastructure net (access roads, telecommunication, electrical net irrigation draining systems, in relation with interventions during construction phase</li> </ul>	Daily	Included in Construction and design/ supervision cost	Engineering Supervision of behalf of MAFWM	

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
			<ul style="list-style-type: none"> <li>› Recording issues and restoration time, for repairing of damaged infrastructure</li> <li>› Observe and evaluate functioning of temporary infrastructure, till the end of works and install of existing infrastructure at last in the same conditions as prior construction works</li> <li>› Record local community compliance and represent it at contractor and local/national relevant authorities</li> </ul>				
<b>Construction phase</b>	Workforce related impacts and Issues	Working sites and campus	<ul style="list-style-type: none"> <li>› Evaluate the working contracts, social and health insurance, are regulated in respect with Montenegrin legislation and much with ESS.</li> </ul>	Daily	Included in Construction and design/ supervision cost.	Engineering Supervision of behalf of MAFWM	

Project Phase/Activities	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored/ type of monitoring equipment?	When the parameter should be monitored (frequency of measurement of continuous)?	Monitoring cost/ what is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments
			<ul style="list-style-type: none"> <li>› Observe and record any discrepancy on working hours, holidays, medical reports with working contracts and legislation</li> </ul>				
<b>Construction phase</b>	Cultural Heritage	Chance finds	<ul style="list-style-type: none"> <li>› Observe and report any chance finds, and monitor their related procedures according to national/local related legislation and approved procedures.</li> <li>› Record any chance finds and report on its management procedures.</li> </ul>	<ul style="list-style-type: none"> <li>› Daily monitoring of impacts in cultural, religious and heritage sites or objects</li> <li>› Frequent observing, recording and informing on chance finds and their management</li> </ul>	Included in Construction and design/ supervision cost,	Contractor Engineering Supervision	

## **8 Implementation arrangements**

### **8.1 Roles and responsibilities**

The main responsible party involved in the implementation and monitoring of the ESMMP is the MAFWM and the PIU unit organized within it.

The PIU shall ensure that the requirements of the site-specific ESMMP are included in employer's requirements that are part of the tender documents as well as the contract later on. Within its usual monitoring activities, the PIU shall perform monitoring (including on-site monitoring, as needed) to ensure that Contractors comply with their contractual obligations. The PIU shall establish and maintain records on dissemination of information and engagement of all stakeholders in accordance with the SEP.

For the purposes of implementing the obligations contained herein, the MAFWM/PIU shall appoint an Environmental and Social Expert (ESE) for the Project. The ESE shall be the responsible person for ensuring that the provisions of the ESMMP are complied with during the life of the contract. The ESE will be responsible for issuing instructions to the Contractor and where environmental considerations call for action to be taken. The ESE shall submit regular written reports to MAFWM, but not less frequently than once a month.

It is the responsibility of the Contractor to ensure the proper execution of works and labor management compliance, according to measures prescribed in this ESMMP and the LMP, and in line with national and international standards. The PIU will report on a regular basis to WB on Project screening, approval and monitoring results.

The Contractor should nominate the Environmental and Social Advisor (ESA) for the Project. The ESA will be site-based and shall be the responsible person for implementing the environmental provisions of the construction contract. ESA should have relevant education background in engineering and environment protection. Its responsibilities will entail:

- › Reporting structures.
- › Actions to be taken to ensure compliance.
- › Overall implementation of this ESMMP in all stages/phases of the Project.
- › Documenting the environmental policy and strategy.
- › All the aspects which require action under the other core elements and sub-elements of the ESMMP.
- › All official communication and reporting lines including instructions, directives and information shall be channeled according to the organization structure.

### **8.2 Implementation schedule**

Implementation schedule, timing, frequency, duration of mitigation measures and monitoring is defined taking into account the maximum period planned for the construction, i.e., 18 months.

### **8.3 Environment and Health Training and Awareness**

A training needs analysis shall be conducted by the ESE to identify the appropriate environmental and OHS training programs. The training should, as a minimum, be focused on presenting this ESMMP and include the following topics:

- › The importance of conformance with all environmental policies.
- › The significant environmental impacts, actual or potential, as a result of their work activities.
- › The environmental benefits of improved personal performance.
- › Their roles and responsibilities in achieving conformance with the environmental policy and procedures,
- › The mitigation measures required to be implemented when carrying out their work activities.
- › Details of, and encouragement to, minimize the production of waste and re-use, recover and recycle waste where possible.
- › Procedures to be followed if any chance find encountered.
- › Details regarding fauna and flora of special concern in the Lim river and the procedures to be followed to protect them.
- › Information within the Project LMP and related documents, including significant Project aspects, impacts and controls
- › OHS issues for the high risk construction activities (work in the river bed).

### **8.4 Emergency Preparedness**

Before the construction start, the Contractor shall compile environmental emergency procedures in the Construction Site Organization Plan. The procedures shall be maintained to ensure that there will be an appropriate response to unexpected or accidental actions or incidents that will cause environmental impacts, throughout the life cycle of the Project. The Contractor shall comply with the emergency preparedness and incident and accident-reporting requirements.

### **8.5 Stakeholder Engagement**

The MAFWM, that is the PIU, will implement the Stakeholder Engagement Plan (SEP) prepared for this Program in line with ESS 10 to provide ongoing information to the affected Stakeholders and general public about the key relevant environmental and social aspects throughout the project execution.

Stakeholder engagement activities need to provide specific stakeholder groups with relevant information and opportunities to voice their views on topics that matter to them. The stakeholder engagement activities are adapted to the three main project stages:

1. RAP preparation, implementation and project design;
2. Construction;
3. Post-construction and Operation phase.

The proposed strategy for consultation is given in the SEP.

The PIU will set up a grievance procedure which provides stakeholders with a way to formally register any complaints/ grievances to the MAFWM about any part of the process of the Project implementation.

The Construction Contractor will also be required to give a “quick and realistic response” procedure, to react as efficiently as possible to stakeholder concerns, without necessarily having to first go through the formal grievance process with MAFWM. Any complaint received by the Contractor shall also be recorded in the grievance register.

Any grievance can be brought to the attention of the PIU by filling the grievance form in hard copy or on-line, or in any other format as chosen by the grievant.

PIU will collect and process all grievances directly or through the contractor or local government offices. The monthly social monitoring reports to the WB shall be submitted through the PIU.

Any type of grievance can be submitted by mail, fax, phone, e-mail or in person using the below access details:

*Attention: Mr. Željko Furtula, General Director of Directorate for Water Management*

*Government of Montenegro, Ministry of Agriculture, Forestry and Water Management*

*Address: Rimski Trg 46, 81000 Podgorica/Montenegro*

*Tel: + 382 20 482 108 , E-mail: zeljko.furtula@mpsv.gov.me*

The Grievance Procedure will be updated as appropriate during the course of project implementation and subsequent operational stage.

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. Addresses to send complaints:

*Email: [grievances@worldbank.org](mailto:grievances@worldbank.org)*

*Fax: +1-202-614-7313*

*Mail address:*

*The World Bank Grievance Redress Service (GRS)*

*MSN MC 10-1018, 1818 H St NW*

*Washington, DC 20433, USA*

## **8.6 Workers Grievance Mechanism**

A Labour's Grievance Mechanism in compliance with ESS2 will be provided for **all direct workers and contracted workers** to raise workplace concerns. Grievance Form for Workers is provided in Chapter 9 of the LMP developed for this Program. The PIU will ensure that the responsible Directorates respond to complaints within 30 days from the date of their acceptance. If MAFWM is not able to address the particular issue raised through the grievance mechanism or if action is not required, the complainants have the opportunity to seek legal remedies in accordance with the laws and regulations of the Republic of Montenegro. The PIU will also ensure that Contractors have grievance mechanism set in place in line with LPM.

## **8.7 Monitoring**

A formal Project monitoring needs to be conducted on a regular basis in which the monthly internal audit reports written by the ESE and based on frequent inspections and interactions with the ESA based on the latter's daily reports, audit reports by the independent external auditor will be reviewed. The purpose of the review is to critically examine the effectiveness of the ESMP and its implementation and to decide on potential modifications to the ESMP as and when necessary. The process of management review is in keeping with the principle of continual improvement.

## **8.8 Capacity Strengthening and Training**

Through SDIP project implementation relevant national agencies will familiarize themselves with WB Environmental and Social Standards through consultations and public presentations, as well as with good practices in their purposeful implementation.

Engaged Contractors will be obliged to familiarize their workers and staff engaged on Sub-Projects implementation with the Environmental and Social Standards, increasing awareness and knowledge.

## **9 Cost of Implementing the ESMMP**

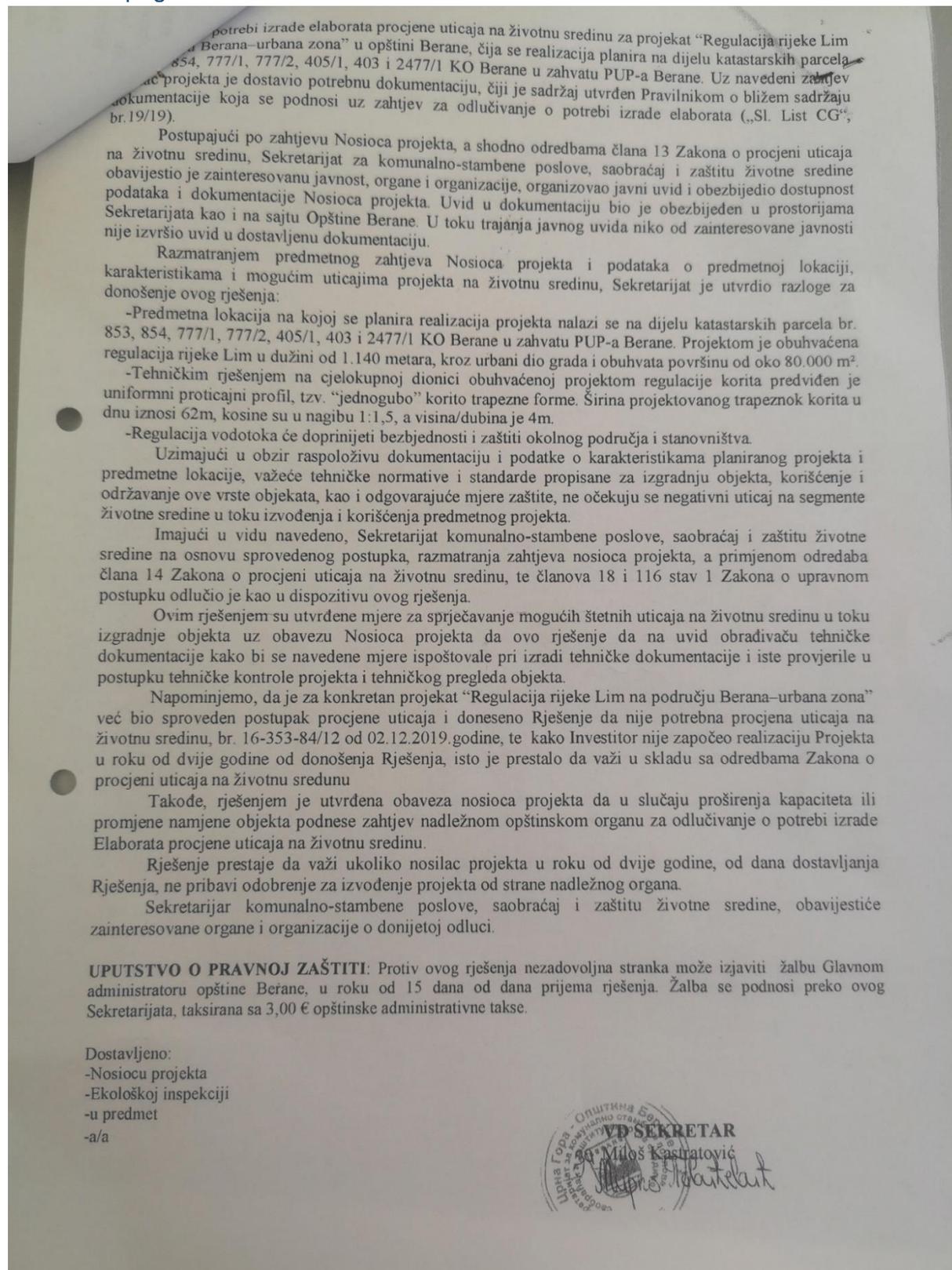
This ESMMP refers to the construction of flood protection structure on river Lim. The main impacts are identified in the construction phase. Since the nature of the project is as such that it entails standard construction activities, all mitigation measures refer to good construction practices and will be implemented into the project design. Therefore, the associated costs will be included in the cost of overall project implementation. Potential bidders are to prepare their bill of quantities referring to the ESMMP given in Chapter 6.2 and Chapter 7.

## **10 Public consultations and public disclosure of the ESMP**

The ESMP shall be publicly disclosed in line with the requirement of Stakeholder Engagement Plan developed for this project.

*Note: This chapter will be finalized after the public consultations' procedure is over.*

## Annex 1. Scoping Decision



## Annex 2. Water Requirements

	<p>Crna Gora Uprava za vode</p>	<p>Adresa: Bulevar Revolucije 24 81000 Podgorica, Crna Gora tel: +382 20 224 593 fax: +382 20 224 594 <a href="http://www.upravazavode.gov.me">www.upravazavode.gov.me</a></p>
<p>Br:060-327/22-02011-47</p>		<p>31.03.2022.</p>
<p>Uprava za vode, na osnovu čl. 114 i 115 Zakona o vodama ("Sl. list RCG", br. 27/07, "Sl. list CG", br. 73/10, 32/11, 47/11, 48/15, 52/16, 55/16, 2/17, 80/17 i 84/18) i čl. 18 Zakona o upravnom postupku ("Sl. list CG", br. 56/14, 20/15, 40/16 i 37/17), rješavajući po zahtjevu Opštine Berane – Sekretarijat za planiranje i uređenje prostora, br. 07-332/22-118 od 14.03.2022. godine, a u ime podnosioca zahtjeva Ministarstva poljoprivrede i ruralnog razvoja, radi produženja rješenja o utvrđivanju vodnih uslova za izradu tehničke dokumentacije za regulaciju rijeke Lim koja se proteže od nizvodnog kraja koji je oko 400m nizvodno od fabrike celuloze na desnoj obali do uliva potoka Bijedanaj i od uliva Kaludarske rijeke do klisure kod sela Trepča, donosi</p>		
<p><b>RJEŠENJE</b> o utvrđivanju vodnih uslova</p>		
<p><b>UTVRĐUJU SE OPŠTINI BERANE - Sekretarijat za planiranje i uređenje prostora u postupku izrade Glavnog projekta regulacije rijeke Lim koja se proteže od nizvodnog kraja koji je oko 400m nizvodno od fabrike celuloze na desnoj obali do uliva potoka Bijedanaj i od uliva Kaludarske rijeke do klisure kod sela Trepča, Opština Berane, sljedeći vodni uslovi:</b></p>		
<ol style="list-style-type: none"><li>1. Glavni projekat uraditi u skladu sa važećim tehničkim i zakonskim normativima za ovu vrstu radova.</li><li>2. Tehnička dokumentacija treba da sadrži:<ul style="list-style-type: none"><li>▪ opšte podatke o planiranim regulacionim radovima (lokacija, položaj, dužina, tip, karakteristične kote elemenata prirodnog i planiranog regulisanog korita, karakteristične proticaje, ostale objekte na regulisanoj dionici rijeke);</li><li>▪ preglednu situaciju lokacije u pogodnoj razmjeri;</li><li>▪ podloge za projektovanje sa prikazom postojećeg stanja u pogodnoj razmjeri (geodetske, hidrološke, hidro-geološke);</li><li>▪ tehničke uslove izvođenja radova;</li><li>▪ predmjer i predračun radova.</li></ul></li><li>3. Tehničke karakteristike projektovanog rešenja za regulaciju korita rijeke Lim na naznačenom potezu, moraju biti takve da zadovoljavaju sledeće uslove:<ul style="list-style-type: none"><li>▪ utvrditi osnovne mjere odbrane od velikih voda rijeke Lim kojim će se definisati način zaštite obala, priobalnog zemljišta i objekata na identifikovanom potezu;</li><li>▪ spriječiti meandriranja korita rijeke Lim na predmetnom potezu;</li><li>▪ definisati uslove i mogućnost upotrebe raspoloživog materijala u svrhu formiranja obaloutvrda i nasipa za zaštitu od poplavnih talasa;</li><li>▪ definisati neophodne periodične mjere održavanja korita rijeke Lim kojim bi se održavala protočna moć korita;</li></ul></li></ol>		

- primijeniti mjere zaštite voda i zaštite od štetnog dejstva voda i očuvati prirodni režim podzemnih i površinskih voda, imajući u vidu aspekt zaštite velikog broja izvora u neposrednom okruženju, kao i nesmetanog protoka na pritokama i
  - obezbijediti tehničko rješenje regulacije rijeke Lim, u obimu koji će obezbijediti hidrauličnu protočnost i stabilnost rječnog korita.
4. Rok važenja ovog rješenja je godinu dana od dana izdavanja istog. Investitor je u obavezi u naznačenom roku podnijeti uredan zahtjev za izdavanje vodne saglasnosti, u skladu sa čl. 118 i 119 Zakona o vodama. Uz zahtjev se prilaže Glavni projekat i Izvještaj o tehničkoj kontroli (reviziji) Glavnog projekta.

### O b r a z l o ž e n j e

Upravi za vode obratila se Opština Berane - Sekretarijat za planiranje i uređenje prostora, br. 07-332/22-118 od 14.03.2022. godine, a u ime podnosioca zahtjeva Ministarstva poljoprivrede i ruralnog razvoja, radi produženja rješenja o utvrđivanju vodnih uslova za izradu tehničke dokumentacije za regulaciju rijeke Lim koja se proteže od nizvodnog kraja koji je oko 400m nizvodno od fabrike celuloze na desnoj obali do uliva potoka Bijedanaj i od uliva Kaludarske rijeke do klisure kod sela Trepča.

Uz predmetni zahtjev dostavljena je sljedeća dokumentacija:

- Urbanističko - tehnički uslovi za izradu tehničke dokumentacije za izgradnju - regulaciju rijeke Lim koja se proteže od nizvodnog kraja koji je oko 400m nizvodno od fabrike celuloze na desnoj obali do uliva potoka Bijedanaj i od uliva Kaludarske rijeke do klisure prostora br. 07-351-298/6 od 09.09.2019. godine.
- Rješenje - vodni uslovi Uprave za vode br. 060-327/19-02011-177 od 03.09.2019. godine.

Kako su vodni uslovi br. 060-327/19-02011-177 od 03.09.2019. godine istekli, jer u roku od godinu dana od njihovog izdavanja nije podnijen uredan zahtjev za izdavanje vodne saglasnosti, to se podnosilac zahtjeva obratio ovoj upravi zahtjevom za produženje rješenja o utvrđivanju vodnih uslova. Rješavajući po predmetnom zahtjevu i uvida u spise predmeta utvrđeno je da je zbog složenosti rješenja potrebno propisati vodne uslove za izradu projektne dokumentacije na nivou Glavnog projekta u skladu sa čl. 114 i 115 Zakona o vodama.

Na osnovu izloženog riješeno je kao u dispozitivu ovog rješenja.

Za donošenje ovog rješenja podnosilac zahtjeva oslobođen je plaćanja administrativne takse u skladu sa Zakonom o planiranju prostora i izgradnji objekata.

**Uputstvo o pravnoj zaštiti:** Protiv ovog rješenja može se izjaviti žalba Ministarstvu poljoprivrede, šumarstva i vodoprivrede, u roku od 15 dana od dana prijema rješenja. Žalba se predaje preko Uprave za vode, neposredno ili putem pošte.

Vesna Bajović  
V.D. DIREKTORICA

**Dostavljeno:**

- Podnosiocu zahtjeva;
- Inspektoru za vode;
- Sužbi uprave;
- a/a.

Obradila: Nataša Rakočević, Samostalna savjetnica I

