

**Public Water Management Company Srbijavode**  
**European Bank for Reconstruction and Development**

## Environmental and Social Impact Assessment, Climate Change Assessment and Technical Assessment for Pambukovica Dam in Serbia

Environmental and Social Management Plan

Reference: 2025/13

Final | 12 August 2025




This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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# Abbreviations

Abbreviation	Definition
ATS	Action Tracking System
BMP	Biodiversity Management Plan
CESMP	Construction Environmental and Social Management Plan
E&S	Environmental and Social
ESCP	Erosion and Sediment Control Plan
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental & Social Management Plan
GIP	Good International Practice
H&S	Health and Safety
HSE	Health, Safety and Environment
IFC	International Finance Corporation
INNS	Invasive non-native species
ISRBC	International Sava River Basin Commission
IUCN	International Union for Conservation of Nature
KPI	Key Performance Indicator
MAFWM	Ministry of Agriculture, Forestry and Water Management
MUPC	Municipal Public Utility Company
O&M	Operation and Maintenance
OHS	Occupational Health and Safety
OHSMP	Occupational Health and Safety Management Plan
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
PR	Performance Requirements
PWMC	Public Water Management Company
RAMS	Risk Assessment Method Statement
RMMP	Resource and Material Management Plan
RS	Republic of Serbia
SEA	Strategic Environmental Assessment
SMP	Subcontractor Management Plan
SPRP	Spill Prevention and Response Plan
WEMMP	Water Environment Monitoring and Mitigation Plan
WMD	Water Management Directorate
WMP	Waste Management Plan



# 1. INTRODUCTION

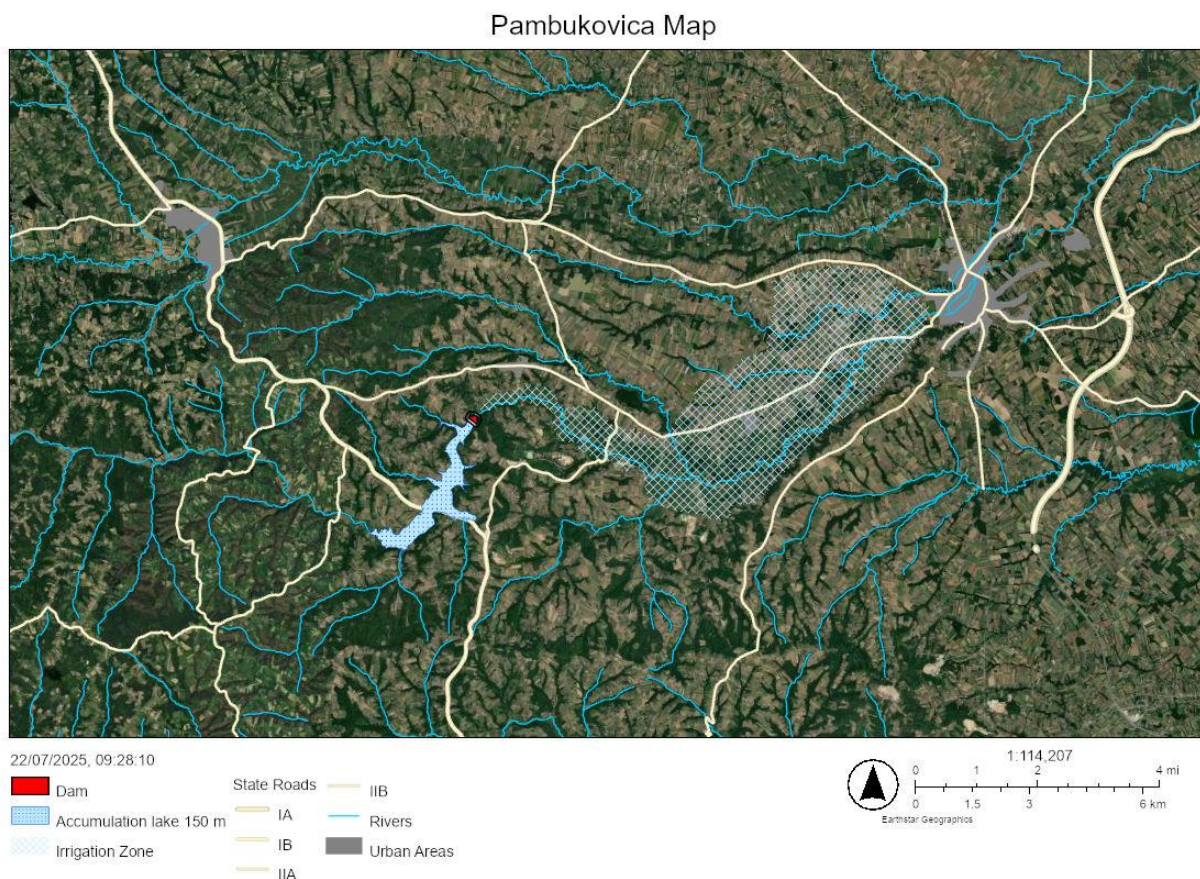
This report is the **Environmental & Social Management Plan (ESMP)** for the Pambukovica Dam. The purpose of this ESMP is to establish a robust framework for the management and implementation of mitigation and monitoring commitments specified in the Project Environmental and Social Impact Assessment (ESIA).

This ESMP is to be implemented by the Project Developer and proposed future operator, Public Water Management Company Srbijavode (“PWMC Srbijavode” or “Srbijavode”) (including any engineers employed on its behalf), and its contractor teams as set out in the roles and responsibilities presented herein.

The ESMP is a ‘live’ document that will be subject to periodic review and revised iteratively as necessary throughout the Project lifetime to address changes and issues including but not limited to: specific concerns raised by stakeholders, emerging policy requirements and changes in applicable laws and regulations, results of environmental and social (E&S) monitoring, and Project changes including progression through Project stages (design – construction – commissioning – O&M and decommissioning).

## 1.1 Project description

The Pambukovica Dam Project is a significant initiative aimed at addressing the flood protection needs of the Kolubara River basin in northwest Serbia. This region has a long history of flood occurrences, which have caused substantial damage to the population, economy, infrastructure, and natural resources. The project involves the construction of a multipurpose dam on the Ub River, approximately 21 km upstream from its confluence with the Tamnava River.



**Figure 1 Pambukovica Dam – Reservoir location with potential irrigation area**

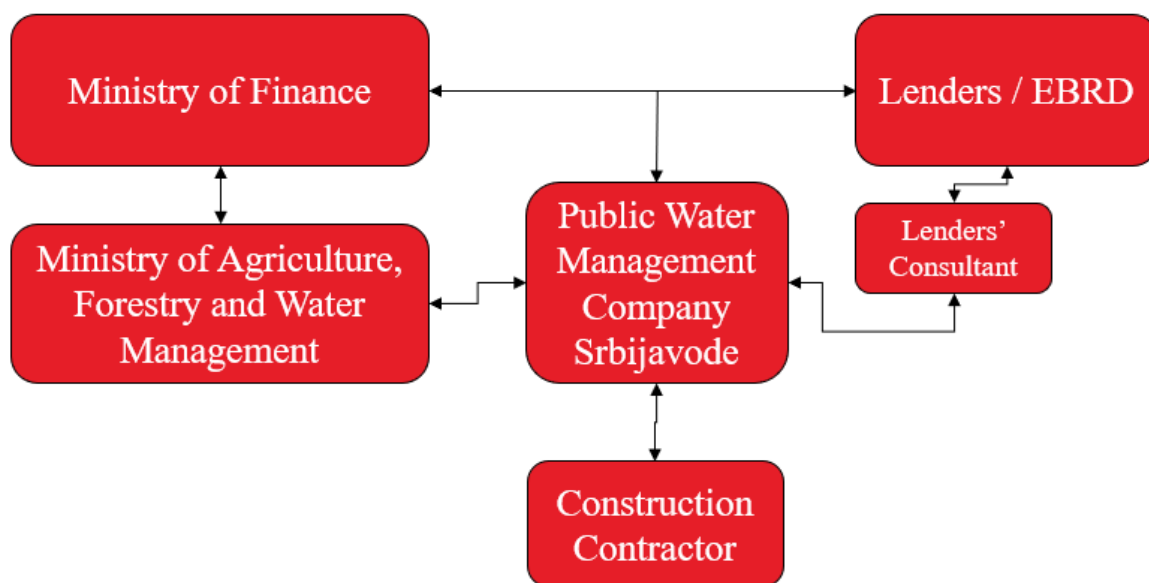
The primary purpose of the Pambukovica dam is flood protection, with secondary functions including irrigation of surrounding agricultural areas, maintaining a guaranteed ecological flow in the reservoir and downstream river, and retention of sediments. The dam is designed as a 30.5 m high earth embankment with

a total reservoir volume of 8.15 million cubic meters. The construction is planned to take two to three years, with an estimated dam lifetime of 80 years.

The construction of the dam involves several key activities, including excavation, concrete work for the spillway gallery, embankment construction, and final works such as the adaptation of the spillway gallery into the base outlet and dry gallery. The project also includes the construction of upstream sediment traps to control the amount of sediment reaching the dam reservoir.

The daily operations of the Pambukovica Dam are designed to ensure a balance between water supply, water demand, and ecological requirements. The reservoir water level is maintained at or slightly above the minimum operational level to manage floods and provide ecological flows. During high flow periods, the bottom outlet is used to control the discharge of water to prevent downstream flooding. The dam also ensures that a minimum ecological flow is maintained downstream to support aquatic ecosystems and water quality.

The European Bank for Reconstruction and Development is now considering providing finance to the Republic of Serbia, represented by the Ministry of Finance. The Loan is expected to finance the construction of a new impoundment dam and reservoir infrastructure at Pambukovica including associated works such as upstream sediment traps, road realignment etc. Proceeds of the loan will also finance project implementation support, supervision of works and front-end fee. The Project will be implemented by the Public Water Management Company Srbijavode, the national body responsible for water management, including water use and protection from pollution. It is also responsible for management of risks associated with water bodies (such as flood risk). Srbijavode operates under the Water Management Directorate, which in turn is an administrative authority of the Ministry of Agriculture, Forestry and Water Management.



**Figure 2 Key Parties in the Dam Construction Project**

Srbijavode will select a Design and Build Contractor (Yellow FIDIC) for the construction of the Project in accordance with E&S Requirements.

All these requirements need to be cascaded down from Srbijavode to the Contractor through procurement and included in the contract.

In such case the Contractor will be responsible delivering E&S Commitments of the Project, however ultimate responsibility will be with Srbijavode. Srbijavode will operate the Project. Srbijavode are expected to use smaller scale contractors for specific works during operations on maintenance, security, cleaning etc.

## 1.2 Objectives of the ESMP

The ESMP is a Project-specific source document detailing the environmental, social protection and health & safety requirements to mitigate and minimize the adverse impacts. The ESMP's objective is to ensure that the environmental requirement, social commitments, and health and safety risks associated with the Project are effectively managed during construction and operational phases of the Project. The specific objectives of the ESMP are:

- To provide an institutional mechanism with well-defined roles and responsibilities for ensuring that measures identified in the ESIA Report are implemented.
- To minimise any adverse environmental, social and health and safety impacts resulting from the Project activities by implementing all suggested mitigation measures and control technologies, safeguards identified through the ESIA process.
- To prevent or compensate for any loss of the affected persons.
- To conduct Project activities in accordance with relevant Serbian Laws and the international guidelines (Project Standards).
- Enhance positive environmental and social outcomes.
- Provide a Project monitoring program for effective implementation of the mitigation measures.
- Ensure that all stakeholders concerns are addressed.



## 2. PROJECT REQUIREMENTS, REGULATIONS AND STANDARDS

Public Water Management Company Srbijavode and its construction and O&M contractors are required to meet a number of key Environmental, Social, Health and Safety (ESHS) requirements, regulations and standards as outlined below. This ESMP is intended to support transposition of these standards into Project implementation. In cases where the Project requirements, regulations and standards are inconsistent or conflicting, Srbijavode and its contractors are committed to applying the most stringent requirement.

### 2.1 Legislation, standards and guidelines

Laws
Law on Strategic Environmental Impact Assessment (Official Gazette of RS, no. 135/2004, 88/2010 and 94/2024)
Law on Environmental Impact Assessment (Official Gazette of RS, No. 135/2004, 36/2010 and 94/2024)
Law on Environmental Protection ("Official Gazette of the RS", no. 135/2004, 36/2009, 36/, 72/2009, 43/2011, 14/2016, 76/2018, 95 /2018, 95/2018 and 94/2024)
Law on Planning and Construction (Official Gazette of RS, no. 72/2009, 81/2009, 64/2010, 24/2011, 121/2012, 42/2013, 50/2013, 98/2013, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019, 9/2020, 52/2021 and 62/2023)
Law on Nature Protect ("Official Gazette of RS ", br. 36/2009, 88/2010, 91/2010, 14/2016, 95/2018 and 71/2021).
Law on Nature Conservation ("Official Gazette of RS", no. 36/2009, 88/2010, 91/2010 - amended, 14/2016, 95/2018 - other laws and 71/2021.)
Law on Forests ("Official Gazette of RS", No. 30/10, 93/12, 89/15 and 95/18)
Law on Air Protection ("Official Gazette of RS", No. 36/09, 10/13 and 26/2021)
Law on Environmental Noise Protection ("Official Gazette of RS", No. 36/09, 88/10 and 96/2021)
Law on Soil Protection ("Official Gazette of RS", 112/15)
Law on Waste Management ("Official Gazette of RS", No. 36/09, 88/10, 14/16, 95/18 and 35/2023)
Law on Packaging and Packaging Waste ("Official Gazette of RS", No. 36/09 and 95/18)
Law on Explosive Substances, Flammable Liquids and Gases ("Official Gazette of the SRS", No. 44/77, 45/85 and 18/89 and "Official Gazette of he RS", No. 53/93, 67/93, 48/94, 101/05 and 54/15)
Law on Waters (Official Gazette of the RS, No. 31/2019)
Law on the Spatial Plan of the RS from 2010 to 2020 ("Official Gazette of the RS", No. 88/10)
Law on Cultural Heritage ("Official Gazette of the RS", 71/94, 52/11 and 99/11)
Law on Occupational Safety and Health ("Official Gazette of RS", No. 101/05, 91/15, 113/17 and 35/2023)
Labour Law (Official Gazette of the RS No. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017, 113/2017, 95/2018)
Law on Amicable Resolution of Labour Disputes (Official Gazette of the RS No. 125/2004, 104/2009, 50/2018)
Law on Socio-economic Council (Official Gazette of the RS No. 125/2004)
Law on the Prevention of Harassment at Work (Official Gazette of the RS No. 36/10)
Law on Strikes (Official Gazette of the FRY No. 29/96 and of RS No. 101/2005, 103/2012)
Law on Employment and Unemployment Insurance (Official Gazette of the RS No. 36/2009, 88/2010, 38/2015, 113/2017 and 49/2021)
Pension and Disability Insurance Law (Official Gazette of the RS No. 34/2003, 64/2004, 84/2004, 85/2005, 101/2005, 63/2006, 05/2009, 107/2009, 101/2010, 93/2012, 62/2013, 108/2013, 75/2014, 142/2014, 73/2018, 46/2019, 86/2019, 62/2021, 125/2022, 138/2022, 76/2023 and 94/2024)
Law on Preventing Discrimination Against Persons with Disabilities (Official Gazette of the RS No. 33/2006, 13/2016)
Anti-discrimination Law (Official Gazette of the RS, No. 22/2009 and 52/2021)
Law on Gender Equality (Official Gazette of the RS No. 104/2009 and 52/2021)

Expropriation Law (Official Gazette of the RS, No. 53/95, 16/2001, 20/2009, 55/2013, 106/2016)
Law on General Administrative Procedure (Official Gazette of the RS No. 18/2016, 95/2018 and 2/2023)
Law of Contracts and Torts (Official Gazette of the RS, No. 29/78, 38/85, 45/89, 57/89, 31/93, 1/2003, 18/2020)
Law on the approval of the agreement on the conservation of bat populations in Europe ("Official Gazette of RS - International Agreements", No. 13/2018)
Law on Agricultural Land (Official Gazette of the RS, No. 62/2006, 65/2008, 41/2009, 112/2015, 80/2017 and 95/2018)
Law on Public Information and the Media (Official Gazette of the RS, No. 83/2014, 58/2015, 12/2016 and 92/2023)
Law on Energy ("Official Gazette of RS", no. 145/2014, 95/2018, 40/2021, 35/2023, 62/2023 and 94/2024)
Law on the Fundamentals of Property Relations ("Official Journal of the SFRY" No 6/80, 36/90, FRY No. 29/96 and RS No. 115/05)
Law on Plant Health ("Official Gazette of RS", No. 41/09 and 17/19)
Law on Territorial Organization (Official Gazette of RS No. 129/2007, 18/2016, 47/2018 and 9/2020)
Law on Local Self Government (Official Gazette of RS, No. 129/2007 83/2014, 101/2016, 47/2018 and 111/2021)
Law on Free Access to Information of Public Importance (Official Gazette of the RS, No.120/2004, 54/2007, 36/2010 and 105/2021)
Law on Disaster Risk Reduction and Emergency Management ("Official Gazette of RS", No. 87/18)
Law on Fire Protection ("Official Gazette of RS", No. 111/09, 20/15, 87/18, and 87/18)
Law on Mining and Geological Exploration ("Official Gazette of the Republic of Serbia", no. 101/2015, 95/2018 - other law, and 40/2021)
Law on Chemicals ("Official Gazette of RS", No. 36/09, 88/10, 92/11, 93/12, and 25/15)
Law on Road Traffic Safety ("Official Gazette of the Republic of Serbia", No. 41/2009, 53/2010, 101/2011, 32/2013 - decision of the Constitutional Court, 55/2014, 96/2015 - other law, 9/2016 - decision of the Constitutional Court, 24/2018, 101/2018, 81/41/ 87/2018, 23/2019, 128/2020 - other law, 76/2023 and 19/2025)
Law on Obligatory Social Insurance Contributions (Official Gazette of the RS No. 84/2004, 61/2005, 62/2006, 5/2009, 52/2011, 101/2011, 7/2012, 8/2013, 47/2013, 108/2013, 6/2014, 57/2014, 68/2014, 5/2015, 5/2016, 7/2017, 113/2017, 7/2018, 95/2018, 4/2019, 86/2019, 5/2020 153/2020, 6/2021., 44/2021, 118/2021, 10/2022, 138/2022, 6/2023, 92/2023, 6/2024, 94/2024 and 8/2025)
<b>Directives</b>
SEA Directive – Strategic Environmental Assessment (Directive 2001/42/EC)
EIA Directive – Environmental Impact Assessment (Directive 2014/52/EU)
Water Framework Directive 2000/60/EC
Waste Framework Directive 2008/98/EC
Annex II and IV of EU Habitats Directive (for Bats, Amphibians, Fish, Aquatic Macroinvertebrates)
Annex IV of EU Habitats Directive (for Reptiles)
Directive 2008/50/EC on ambient air quality and cleaner air for Europe.
Directive 1989/654/EEC on minimum safety and health requirements for the workplace.
Directive 1992/57/EEC on the implementation of minimum safety and health requirements at temporary and mobile work sites
Directive relating to the assessment and management of environmental noise (Directive 2002/49/EC)
Conservation of natural habitats and of wild fauna and flora (Habitat Directive 92/43 EEC)
Framework Directive on Safety and Health at Work (Directive 89/391 EEC)
Directive 2006/54/EC on equal treatment of men and women in occupational social security schemes
Directive 2000/43/EC against discrimination on grounds of race and ethnic origin
Directive 2000/78/EC against discrimination at work on grounds of religion or belief, disability, age or sexual orientation
Directive 83/391/EEC Guidance on risk assessment at work.

Directive 2004/113/EC on equal treatment between men and women in the access to and supply of good and services
Proposal for a Directive of the European Parliament on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937
Directive for road safety management (EC 2019/1936, amendment of EC 2008/96)
Directive 2009/147/EC on the conservation of wild birds
Floods Directive (2007/60/EC)
The Environmental Liability Directive (2004/35/EC)
<b>International Standards and Guidelines</b>
European Bank for Reconstruction and Development Environmental and Social Policy 2019
International Commission on Large Dams (ICOLD) Guidelines
Environmental and Social Performance Standards (World Bank, 2018)
International Finance Corporation (IFC) Performance Standards (2012)
IFC Performance Standards on Environmental and Social Sustainability (2012)
EPs (EP4) (2020)
IFC General Environmental, Health and Safety Guidelines (2007)
The Espoo Convention
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention, 1979)
IUCN Global List of Threatened Species at Global Level (2019)
IUCN Red List of Threatened Species in Europe (2019)
World Bank's Operational Manual, BP4.37 – Safety of Dams
International Commission on Large Dams (ICOLD), Dam Safety Management, 2017
United States Federal Dam Safety Commission (US FDSC): FEMA 64 guide for preparation of EPPs for dams, 2013
Global Analysis of Regulatory Frameworks for the Safety of Dams and Downstream Communities, the World Bank, 2020
Canadian Dam Association Guidelines for Public Safety Around Dams, 2011.
IFC Good Practice Handbook 'Environmental Flows for Hydropower Projects: Guidance for the Private Sector in Emerging Markets' (2018)
Canadian Dam Association Guidelines for Public Safety Around Dams (2011)
EBRD Green Economy Transition Technical Guide (2022)
EBRD Paris Agreement alignment methodology
Guidance on climate risk assessment from EUFIWACC, JASPERS and industry-led best practice guidance including the International Hydropower Association
<b>Other relevant regulation</b>
Regulation on Determining the List of Projects for Which an Environmental Impact Assessment is Mandatory and the List of Projects for Which an Environmental Impact Assessment May be Required ("Official Gazette of RS", No. 114/08);
Regulation on Emission Limit Values for Pollutants in Waters and Deadlines for Achieving Them ("Official Gazette of RS", No. 67/11, 48/12, and 1/16);
Regulation on Limit Values for Pollutants in Surface and Ground Waters and Sediments and Deadlines for Achieving Them ("Official Gazette of RS", No. 50/12)
Regulation on Limit Values for Priority and Priority Hazardous Substances Polluting Surface Waters and Deadlines for Achieving Them ("Official Gazette of RS", No. 24/14);
Regulation on Water Classification ("Official Gazette of SFRY", No. 5/68);
Regulation on Classification of Watercourses ("Official Gazette of SFRY", No. 5/68)

Regulation on Noise Indicators, Limit Values, Methods for Assessing Noise Indicators, Disturbance, and Harmful Effects of Noise in the Environment ("Official Gazette of RS", No. 75/10);
Regulation on Limit Values for Pollutants, Harmful, and Dangerous Substances in Soil ("Official Gazette of RS", No. 30/18 and 64/19);
Regulation on Systematic Monitoring of Soil Condition and Quality ("Official Gazette of RS", No. 73/19);
Regulation on Air Quality Monitoring Conditions and Requirements ("Official Gazette of RS, No. 11/10, 75/10, and 63/13);
Regulation on Products that Become Special Waste Streams After Use, the Form for Daily Records of Quantity and Type of Produced and Imported Products and Annual Report, Method and Deadlines for Submitting Annual Reports, Payment Obligations, Calculation Criteria, Amount, and Method of Calculation and Payment of Fees ("Official Gazette of RS", No. 54/10, 86/11, 15/12, 41/13, 3/14, 81/2014, 31/2015, 44/2016, 43/2017, 45/2018, 67/2018, and 95/2018);
Regulation on Classification of Facilities, Activities, and Land into Fire Risk Categories ("Official Gazette of RS", No. 76/10);
Regulation on Control of Use and Trade of Wild Flora and Fauna ("Official Gazette of RS", No. 31/05, 45/05, 22/07, 38/08, 9/10, 69/11, and 95/18 law);
Regulation on Ecological Network ("Official Gazette of RS", No. 102/10);
Regulation on Protection Regimes ("Official Gazette of RS", No. 31/12);
Regulation on Determining Locations for Meteorological and Hydrological Stations of State Networks and Protection Zones Around These Stations, as well as Types of Restrictions That Can Be Imposed in Protection Zones ("Official Gazette of RS", No. 34/13);
Regulation (EU) 2020/852 (Taxonomy) on the establishment of a framework to facilitate sustainable investment including date of entry into force and its implementing and delegated acts;
Rulebook on the Content of the Environmental Impact Assessment Study ("Official Gazette of RS", No. 69/05);
Rulebook on the Type and Quantity of Hazardous Substances Based on Which the Accident Prevention Plan is Prepared ("Official Gazette of RS", No. 34/19);
Rulebook on the Content of the Accident Prevention Policy and the Content and Methodology for Preparing the Safety Report and Accident Prevention Plan ("Official Gazette of RS", No. 41/10)
Rulebook on the Content of Information on Hazards, Measures, and Procedures in Case of Accidents (Official Gazette of RS", No. 18/12)
Rulebook on Machine Safety ("Official Gazette of RS", No. 58/16)
Rulebook on Technical and Other Requirements for Liquid Fuels of Petroleum Origin ("Official Gazette of RS", No. 111/15, 106/16, 60/17, 117/17, 120/17, 50/18, 101/18, and 93/19)
Rulebook on Technical Norms for Fire Protection of Industrial Facilities (Official Gazette of RS", No. 1/18)
Rulebook on Technical Norms for Fire Hydrant Network Installations (Official Gazette of RS", No. 3/18)
Rulebook on Preventive Measures for Safe and Healthy Work with Work Equipment ("Official Gazette of RS", No. 23/09, 123/12, 102/15, and 101/18)
Rulebook on Technical Norms for Low Voltage Electrical Installations ("Official Gazette of SFRJ", No. 53/88 and 54/88, and "Official Gazette of SRJ", No. 28/95)
Rulebook on Technical Norms for Protection of Facilities from Atmospheric Discharges ("Official Gazette of SRJ", No. 11/96)
Rulebook on the Method and Conditions for Measuring and Testing the Quality of Wastewater and the Content of Measurement Reports ("Official Gazette of RS", No. 33/16)
Rulebook on Reference Conditions for Types of Surface Waters ("Official Gazette of RS", No. 67/11)
Rulebook on Parameters of Ecological and Chemical Status of Surface Waters and Parameters of Chemical and Quantitative Status of Groundwater ("Official Gazette of RS", No. 74/11)
Rulebook on Hazardous Substances in Waters ("Official Gazette of SFRJ", No. 31/82)
Rulebook on Hazardous Substances that Must Not be Discharged into Waters ("Official Gazette of SFRJ", No. 3/66 and 7/66)
Rulebook on the Hygienic Safety of Drinking Water ("Official Gazette of SRJ", No. 42/98 and 44/99, and "Official Gazette of RS", No. 28/19)

Rulebook on Permissible Quantities of Hazardous and Harmful Substances in Soil and Irrigation Water and Methods for Their Testing ("Official Gazette of RS", No. 23/94)
Rulebook on Methods for Measuring Noise, Content, and Scope of Noise Measurement Reports ("Official Gazette of RS", No. 72/10)
Rulebook on Exposure Limits to Non-Ionizing Radiation ("Official Gazette of RS", No. 104/09)
Rulebook on the List of Electrical and Electronic Products, Measures for Prohibition and Restrictions on the Use of Electrical and Electronic Equipment Containing Hazardous Substances, and the Method and Procedure for Managing Waste from Electrical and Electronic Products ("Official Gazette of RS", No. 99/10)
Rulebook on Categories, Testing, and Classification of Waste ("Official Gazette of RS", No. 56/10 and 93/19)
Rulebook on Storage, Packaging, and Labeling of Hazardous Waste ("Official Gazette of RS", No. 92/10)
Rulebook on the Form of the Waste Movement Document and Instructions for Its Completion ("Official Gazette of RS", No. 114/13)
Rulebook on the Form of the Hazardous Waste Movement Document, the Form for Prior Notification, Its Submission Method, and Instructions for Filling Them Out ("Official Gazette of RS", No. 17/17)
Rulebook on the Form for Daily Records and Annual Reports on Waste with Instructions for Completing Them ("Official Gazette of RS", No. 7/20)
Rulebook on the Form for Requesting a Permit for Treatment, Storage, Reuse, and Disposal of Waste ("Official Gazette of RS", No. 38/18)
Rulebook on Conditions and Methods for Collection, Transport, Storage, and Treatment of Waste Used as Secondary Raw Material or for Energy Recovery ("Official Gazette of RS", No. 98/10)
Rulebook on Conditions, Methods, and Procedures for Managing Waste Oils ("Official Gazette of RS", No. 71/10)
Rulebook on Criteria for Identifying Habitat Types, Types of Habitats, Sensitive, Endangered, Rare, and Priority Habitats for Protection and Measures for Their Preservation ("Official Gazette of RS", No. 35/10)
Rulebook on the Declaration and Protection of Strictly Protected and Protected Wild Species of Plants, Animals, and Fungi ("Official Gazette of RS", No. 5/10, 47/11, 32/16, and 98/16)
Rulebook on Lists of Harmful Organisms and Lists of Plants, Plant Products, and Prescribed Facilities ("Official Gazette of RS", No. 7/10, 22/12, and 57/15)
Rulebook on Criteria for Assessment and Procedure for Categorizing Protected Areas ("Official Gazette of RS", No. 97/15)
Rulebook on the Application of Hydrological Measurement and Observation Methods ("Official Gazette of RS", No. 20/13)
Rulebook on Conditions for Establishing Supplementary Networks of Meteorological and Hydrological Stations ("Official Gazette of RS", No. 30/14);
Strategy for Biodiversity of the Republic of Serbia for the Period 2011-2018 ("Official Gazette of RS", No. 13/11)
Waste Management Strategy for the Period 2010-2019 ("Official Gazette of RS", No. 29/10);
Detailed Regulation Plan for "Pambukovica Dam on the River Ub" ("Official Gazette of the Municipality of Ub", No. 30/16)
Detailed Regulation Plan for the Dam and Multipurpose Accumulation "Pambukovica" on the River Ub in the Territory of the City of Valjevo for the Area of K.O. Gola Glava ("Official Gazette of the City of Valjevo", No. 4/17)
Spatial Plan of the Municipality of Ub ("Official Gazette of the Municipality of Ub", No. 13/12)
General Regulation Plan "Ub 2025" ("Official Gazette of the Municipality of Ub", No. 16/12, 15/14, and 5/17)
Decree on Establishing the List of Projects Subject to Impact Assessment and the List of Projects that May Require Environmental Impact Assessment ("Official Gazette of RS" no 114/08)
Decree on Proclamation and Protection of Strictly Protected and Protected Wild Species of Plants, Animals, and Fungi ("Official Gazette of the Republic of Serbia", No. 5/2010, 47/2011, 32/2016, 98/2016)
Regulation on Emission Limit Values for Pollutants in Air from Stationary Pollution Sources, Excluding Combustion Plants ("Official Gazette of the RS", No. 111/15 and 83/21)
Rulebook on Waste Categories, Testing and Classification ("Official Gazette of RS", Nos. 56/10 and 93/10)
Regulation on Technical and Other Requirements for Cement ("Official Gazette of RS", No. 55/06)
Regulation on Safety and Health at Work on Temporary or Mobile Construction Sites



Danube River Basin Management Plan (International Commission for the Protection of the Danube River – ICPDR; Published: 2021)
Sava River Basin Management Plan (International Sava River Basin Commission – ISRBC; Published: 2022)
Outline on Sava Sediment Management Plan (International Sava River Basin Commission – ISRBC; Outline prepared: 2018)

## 2.2 Serbian Environmental Impact Assessment (EIA) Report

An Environmental Impact Assessment (EIA) was issued in May 2020 and approved by the Ministry of Environmental Protection in June 2020. The EIA provides a detailed analysis of the baseline environmental conditions and evaluates the potential impacts on various environmental components such as water quality, air quality, noise levels, biodiversity, and land use. It also assesses the social impacts on local communities, including potential displacement and changes in livelihoods.

The Decision on Approval issued by the Ministry of Environmental Protection stipulates that the project holder is obliged, during the implementation of the project, to act in accordance with the conditions of all competent authorities and organizations, as well as to fully implement the environmental protection measures and the environmental impact monitoring program, as defined in the Environmental Impact Assessment (in chapters 8 and 9).

The following are the conditions that Srbijavode must comply on the Project:

- Location Conditions: Issued by the Ministry of Construction, Transport, and Infrastructure for the construction of the Pambukovica dam with a multipurpose reservoir.
- Nature Protection Conditions: Issued by the Institute for Nature Conservation of Serbia for the location conditions for the construction of the Pambukovica dam on the Ub river, in the municipality of Ub and the city of Valjevo.
- Conditions for Preservation, Maintenance, and Use: For the development of the detailed regulation plan for the Pambukovica dam on the Ub river, issued by the Institute for the Protection of Cultural Monuments Valjevo.
- Water Conditions: Issued by the Republic Directorate for Water of the Ministry of Agriculture, Forestry, and Water Management.
- Technical Conditions: Issued by MUPC "Đunis" Ub, including the presentation of wells in the accumulation zone "Pambukovica".
- Design Conditions: Issued by the Ministry of Construction, Transport, and Infrastructure.
- Conditions for the Development of the Detailed Regulation Plan: Issued by the Public Enterprise Elektromreža Srbije.
- Design Conditions: Issued by the Public Enterprise Elektroprivreda Srbije, Branch Elektrodistribucija Valjevo.
- Technical Conditions Notification: Issued by Telekom Srbija.
- Conditions Notification: Issued by the Ministry of Internal Affairs, Sector for Emergency Situations, Valjevo.
- Technical Documentation Notification: Issued by the Ministry of Defense, Sector for Material Resources, Infrastructure Directorate

Results of this EIA study has been incorporated into Environmental and Social Impact Assessment Report, this ESMP and other supplementary E&S plans and procedures.

During the project implementation, the Ministry of Environmental Protection may conduct inspection visits to verify compliance with the prescribed measures and the proper implementation of the monitoring programme. "Srbijavode" are obligated to ensure the availability of all necessary documentation, including laboratory reports and other relevant records, during inspections carried out by the Ministry.

## 3. ORGANISATIONAL STRUCTURE

### 3.1 PWMC Srbijavode ESHS Roles and Responsibilities

Srbijavode is responsible for ensuring that Project ESHS mitigation measures, including the provisions of this ESMP, are implemented by all project parties. This role will include the on-going management of ESHS impacts, monitoring of contractor performance as well as development of mechanisms for dealing with environmental and social issues, and health and safety concerns. Srbijavode will also ensure that the activities of its contractors (and any subcontractors) are conducted in accordance with good practice measures, implementation of which will be required through contractual documentation. Srbijavode will establish an appropriate organizational structure, responsibilities, and practices and will ensure the resources necessary for the ESHS management during the Project execution.

Table below presents proposal for the Srbijavode ESHS team composition which shall ensure effective implementation of the Project. It is worth noting, that individual positions may combine multiple roles or responsibilities as appropriate. Responsibilities, where applicable, are divided into construction (C), operation (O) and where there is overlap into construction/operation (C/O).

**Table 1 Srbijavode ESHS Roles and Responsibilities**

Role	Responsibility
Senior Management	<ul style="list-style-type: none"> <li>Overall accountability for the Project including delivery in line with applicable national and international standards.</li> <li>Ensures allocation of sufficient resources for the ESMP implementation including for ESHS organization, permitting, training, equipment and qualified personnel.</li> <li>Ultimate responsibility for ensuring implementation of required corrective actions including in response to identified ESHS non-compliances or incidents.</li> <li>Ensures periodical review of the ESMP effectiveness in line with the provisions of this plan.</li> </ul>
Occupational Health & Safety (OHS) Manager	<p>A qualified professional with experience in occupational health and safety on internationally financed construction projects. Duties performed both at corporate and site level.</p> <p><b>Responsibilities during Construction and Operation:</b></p> <ul style="list-style-type: none"> <li>Informs the internal Project team and Contractors about OHS responsibilities as defined in this ESMP and in relevant OHS Management Plans, and ensures that these are understood and implemented at all stages.</li> <li>Ensures that OHS risks are systematically identified, assessed, and managed.</li> <li>Oversees the OHS performance of Contractors, including delivery of training, conducting audits, and implementation of corrective actions.</li> <li>Coordinates incident reporting and investigation processes related to health and safety.</li> <li>Ensures that all site activities comply with applicable OHS legislation and good international practices.</li> </ul>
Environmental Manager	<p>A qualified professional with experience in environmental management of internationally financed construction projects. Duties performed both at corporate and site level.</p> <p><b>Responsibilities during Construction and Operation:</b></p> <ul style="list-style-type: none"> <li>Informs the internal Project team and Contractors about environmental responsibilities as defined in this ESMP and relevant environmental topic-specific Management Plans, ensuring understanding and implementation.</li> <li>Ensures that environmental risks and impacts are systematically identified and addressed.</li> <li>Monitors Contractors' environmental performance, including review of monitoring reports, site inspections, and coordination of corrective actions.</li> <li>Manages and reviews environmental inputs from the Engineer, and assesses their monitoring findings.</li> <li>Manages the budget allocated to the environmental team.</li> <li>Leads the review and acceptance process for Contractors' Environmental Management Plans.</li> <li>Provides support to field teams for implementation of the environmental and social requirements of the ESMP and the broader ESMS.</li> </ul>

Role	Responsibility
Biodiversity Specialist	<ul style="list-style-type: none"> <li>Ensures that biodiversity conservation measures are implemented throughout the dam and irrigation zone project lifecycle, particularly during excavation and construction phases.</li> <li>Monitors and documents all biodiversity-related activities, including species relocation and habitat protection.</li> <li>Conducts biodiversity impact assessments and ensures compliance with national and international conservation laws and guidelines.</li> <li>Coordinates with nature protection authorities and reports on any biodiversity-related issues that arise during construction.</li> </ul>
Social Manager	<ul style="list-style-type: none"> <li>Appropriately qualified professional familiar with the national legislation as well as EBRD requirements</li> <li>Ensures tender documents for Contractor, Supervising Engineer and other consultants include requirements to align with mitigation actions outlined in the ESIA package – labour, community safety, damage to private and public property, stakeholder engagement and grievance redress</li> <li>Coordinates activities of Land Acquisition Manager and Stakeholder Engagement Manager</li> <li>Manages the review and acceptance of Contractors' ESHS Management Plans</li> </ul>
Land Acquisition Manager	<ul style="list-style-type: none"> <li>Appropriately qualified professional familiar with the land acquisition process under national legislation and familiar with EBRD requirements</li> <li>Cooperates with Municipalities Ub and Valjevo regarding the expropriation process</li> <li>Coordinates with the tax authority on land market price</li> <li>Ensures that actions from the Land Acquisition Corrective Action Plan and Livelihood Restoration Plan are implemented</li> <li>Represents Srbija Vode in any disputes in the expropriation process or any disputes regarding damage to private property (during construction stage)</li> <li>Monitoring of Contractors' performance related to temporary land acquisition.</li> </ul>
Stakeholder engagement and Grievance Manager	<ul style="list-style-type: none"> <li>Appropriately qualified professional familiar with stakeholder engagement requirements associated with internationally financed projects.</li> <li>Performing duties both at corporate level and on site.</li> <li>Coordinates implementation of the Stakeholder Engagement Plan</li> <li>Monitors implementation of actions from SEP by third parties (contractors, municipalities, government agencies, courts)</li> <li>Provides timely information to communities on all Project works through regular meetings with stakeholders and ensures that long term relationships are not negatively impacted.</li> <li>Provides information on potential issues and developments with local communities and stakeholders and contributes to implementing specific measures to prevent and mitigate risks.</li> <li>Identifies key stakeholders, requiring engagement in the frame of stakeholder engagement processes/activities and updates regularly the stakeholder mapping in response to stakeholders activities and their relationship with the Project.</li> <li>Ensures that stakeholder engagement activities are documented and records are kept on file.</li> <li>Responsible for the project general information disclosure, mass media coverage/press releases</li> <li>Coordinates and manages implementation of the project Grievance Mechanism.</li> <li>Collects Grievances and provided feedback to parties who submitted the grievances.</li> <li>Facilitate communication between responsible entities (SrbijaVode, Contractor, municipality, etc.) and the persons with grievances to ensure satisfactory resolution of grievance.</li> <li>Maintains the Grievance register.</li> <li>Reports on grievance mechanism implementation to Social Manager</li> </ul>
Cultural Heritage Expert	<ul style="list-style-type: none"> <li>A qualified professional with a background in anthropology and/or archaeology, responsible for providing expert input related to cultural heritage management during the project lifecycle.</li> <li>Advises on identification, documentation, and protection of cultural heritage sites within the project area.</li> <li>Provides oversight and technical guidance for the implementation of the Cultural Heritage Management Plan and Chance Finds Procedure.</li> <li>Reviews and approves contractor procedures and training materials related to cultural heritage.</li> </ul>

Role	Responsibility
	<ul style="list-style-type: none"> <li>Liaises with relevant cultural heritage authorities and ensures alignment with national legislation and good international industry practice.</li> <li>Supports reporting and resolution of any chance finds or cultural heritage impacts during construction.</li> </ul>

The Srbijavode E&S management team mentioned above will lead all parties in the Project in terms of E&S implementation and ensure that the Project has been constructed and operated in accordance with Applicable Standards. Day by day E&S site monitoring will be carried out by PWMC Srbijavode, under their full responsibility. If Srbijavode decides to engage a third party (e.g. an Engineer) to support these activities, such tasks will be delegated under the direct supervision and responsibility of Srbijavode.

### 3.2 The Contractor

The Contractor will be responsible for delivery of all relevant E&S Commitments in accordance with E&S Requirements of the Project. They will establish an E&S Team including all experts listed below:

**Table 2 Contractor organization – Role and Responsibilities**

Role	Responsibility
Senior Management	<ul style="list-style-type: none"> <li>Provides overall direction and leadership for the project, ensuring alignment with project goals and stakeholder expectations.</li> <li>Approves strategic decisions regarding environmental, social, and safety performance for the dam and irrigation zone project.</li> <li>Ensures adequate resources (financial, human, technical) are allocated to meet ESHS, cultural, and social requirements.</li> <li>Oversees coordination between various teams and stakeholders, including local authorities and international financiers.</li> <li>Ensures compliance with applicable national and international laws and standards throughout the project's lifecycle.</li> </ul>
Health, Safety and Environment Manager	<ul style="list-style-type: none"> <li>Oversees the implementation of the Health, Safety, and Environment (HSE) management systems and ensures compliance with environmental and safety regulations during dam and irrigation zone construction.</li> <li>Responsible for the development and enforcement of HSE procedures and policies for construction, operation, and closure stages of the dam and irrigation project.</li> <li>Ensures risk assessments are conducted regularly, and safety measures are in place for workers and local communities.</li> <li>Monitors the effectiveness of safety training programs and ensures all site personnel are adequately trained.</li> <li>Reports on HSE performance to senior management and external regulators.</li> </ul>
Social Manager	<ul style="list-style-type: none"> <li>Oversees the social aspects of the project, ensuring that labour management, community engagement, stakeholder concerns, temporary land acquisition and social impacts are addressed effectively.</li> <li>Develops and manages the implementation of the Labour Management Plan with local employment strategy</li> <li>Manages the implementation of the Stakeholder Engagement Plan, with a focus on local communities affected by the construction of the dam and irrigation zone.</li> <li>Manages the grievance redress mechanism and ensures issues raised by local communities are addressed promptly and fairly.</li> <li>Works closely with Community Communication Manager to ensure that affected communities receive proper compensation and assistance.</li> </ul>
Community Liaison Officer	<ul style="list-style-type: none"> <li>Develops and implements communication strategies to ensure clear and effective information sharing with local communities regarding project progress, impacts, and mitigation measures.</li> <li>Maintains communication channels (e.g., information points, online platforms) for community updates and addressing concerns.</li> <li>Organizes meetings and consultations to inform communities about key stages of construction.</li> </ul>

Role	Responsibility
	<ul style="list-style-type: none"> <li>Coordinates grievance management and ensures issues raised by local communities are addressed promptly and fairly.</li> <li>Maintains the Grievance Register</li> <li>Works with the Social Manager to align communication with broader social goals, including compensation and assistance programs.</li> <li>Reports on communication activities and community engagement, including feedback from local residents.</li> </ul>
Biodiversity Specialist	<p>A qualified expert engaged on a part-time or as-needed basis to support biodiversity-related mitigation activities during construction.</p> <ul style="list-style-type: none"> <li>Responsibilities:</li> <li>Supports implementation of biodiversity conservation measures on-site, in line with the Biodiversity Management Plan and habitat-specific guidelines provided by Srbijavode.</li> <li>Assists in monitoring site activities that may affect biodiversity, particularly during vegetation clearance, excavation, and other relevant phases.</li> <li>Reports any biodiversity-related incidents to the Contractor's ESHS Manager and coordinates with Srbijavode's Biodiversity Specialist when needed.</li> <li>Ensures that all species relocation and habitat protection measures assigned to the Contractor are followed and documented.</li> </ul>
Cultural Heritage Specialist	<ul style="list-style-type: none"> <li>Ensures that cultural heritage sites near the dam and irrigation zone are identified, documented, and protected during construction.</li> <li>Implements the Cultural Heritage Management Plan and Chance Finds Procedure, training contractors on handling cultural heritage discoveries.</li> <li>Coordinates with cultural heritage authorities and reports any findings or impacts on cultural heritage sites in the construction area.</li> </ul>
OHS Specialists	<ul style="list-style-type: none"> <li>Develops and implements Occupational Health and Safety (OHS) protocols specifically for construction activities related to the dam and irrigation zone project.</li> <li>Conducts regular site inspections to ensure that all safety procedures are followed, reporting any risks or violations to the HSE Manager.</li> <li>Oversees the training of all site workers in OHS practices and ensures that emergency response plans are in place for the construction area.</li> </ul>
Environmental Specialists	<ul style="list-style-type: none"> <li>Ensures that environmental management procedures outlined in the ESIA are followed throughout all phases of the project, including construction, operation, and decommissioning.</li> <li>Verifies that environmental monitoring is conducted according to the procedures and parameters specified in the ESIA and ensures alignment with the ESMP requirements.</li> <li>Monitors the implementation of mitigation measures defined in the ESIA/ESMP to minimize the environmental impacts of the project.</li> <li>Coordinates with the HSE Manager to address and mitigate any identified environmental risks or issues promptly.</li> <li>Reviews and ensures that environmental reports are accurate and submitted on time, documenting compliance with environmental commitments.</li> <li>Ensures compliance with national environmental regulations and international standards, reporting any non-compliance and recommending corrective actions.</li> <li>Collaborates with other specialists (e.g., Biodiversity Specialist, Cultural Heritage Specialist) to address cross-cutting environmental issues.</li> <li>Prepares and submits regular environmental performance reports to senior management and regulatory authorities, highlighting progress on mitigation efforts and compliance status.</li> <li>Assists in the management of emergency environmental situations, including spills or unforeseen environmental impacts, ensuring proper response procedures are followed.</li> </ul>

If during project execution, Srbijavode's monitoring of the Contractor's ESHS performance indicates insufficient ESHS oversight, compliance assurance resources or practices, Srbijavode is entitled to enforce required corrective actions on the respective Contractor. This may include requiring the Contractor to allocate additional ESHS staff and resources.



### **3.3 Operation Phase**

Srbijavode will operate the Project and establish an E&S Team to implement ESMS for the operation phase. Organisation structure, roles and responsibilities will be determined following the institutional capacity assessment.

## 4. MANAGEMENT SYSTEM

This chapter presents management plans, procedures and policies to be developed during construction and operation phases of the Project by Srbijavode and Contractor.

### 4.1 Construction ESHS Management Plans

#### 4.1.1 Management Plans and Procedures owned by PWMC Srbijavode

The table below outlines the key management plans, procedures and policies required for the Project, to be developed and/or provided by **Srbijavode**, as the Project Developer. These documents form the foundation for ensuring compliance with environmental and social standards throughout the Project lifecycle. They also define specific environmental, social, health and safety (ESHS) responsibilities to be transferred to the Contractors during the construction phase.

**Table 3 Srbijavode management plans, procedures and policies**

Management Plan	Suggested plan content	Timeframe
Environmental and Social Policy	<p>Overview of the Environmental and Social Principles Guiding the Project:</p> <ul style="list-style-type: none"> <li>Brief introduction to the guiding principles of the project, emphasizing environmental and social sustainability.</li> </ul> <p>Commitment to Environmental Protection, Community Engagement, and Sustainable Development:</p> <ul style="list-style-type: none"> <li>Highlight the overall commitment to these three areas as central to the project's ethos.</li> </ul> <p>Roles and Responsibilities for Implementing the Policy:</p> <ul style="list-style-type: none"> <li>Define the roles and responsibilities of key stakeholders involved in the implementation of the policy.</li> </ul> <p>Water Use and Associated Community Engagement Principles:</p> <ul style="list-style-type: none"> <li>Specify the guidelines for water use, its impact on the environment, and how the community will be engaged in this process.</li> </ul> <p>Reference to Additional Standalone E&amp;S Policies:</p> <ul style="list-style-type: none"> <li>Specify any other policies (e.g., waste management, human rights, etc.) that will be developed and integrated into the overall E&amp;S framework.</li> <li>Provide a brief outline of these policies and their scope, showing how they complement the main E&amp;S Policy.</li> </ul>	To be developed prior to the start of the project (or during the project planning phase).
Human Resources Policy	<ul style="list-style-type: none"> <li>Overview of human resources principles, including recruitment, training, and employee welfare.</li> <li>Commitment to fair labour practices, non-discrimination, and respect for human rights.</li> <li>Conflict resolution and grievance procedures for staff.</li> <li>Capacity building sessions in HIV &amp; AIDS, COVID, STDs, SEAH, GBV, etc.</li> </ul>	To be developed and implemented prior to the start of the construction phase.
Occupational Health and Safety Policy	<ul style="list-style-type: none"> <li>Overview of occupational health and safety measures to ensure a safe working environment.</li> <li>Risk assessment procedures and mitigation strategies for construction and operational phases.</li> <li>Emergency response procedures and first aid protocols.</li> <li>Roles and responsibilities for health and safety management.</li> <li>Regular monitoring and reporting of safety performance.</li> </ul>	To be developed prior to construction start and regularly reviewed throughout the project.
Environmental and Social Management Plan	<ul style="list-style-type: none"> <li>Detailed description of environmental and social management procedures during all project phases.</li> <li>Mitigation measures for potential impacts on air quality, water, noise, biodiversity, etc.</li> </ul>	<p>This document.</p> <p>Developed as a part of the ESIA Package.</p> <p>To be updated and further detailed based on any</p>

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>Monitoring programs and performance indicators.</li> <li>Reporting obligations and accountability mechanisms.</li> <li>Roles and responsibilities for plan implementation.</li> </ul>	revisions / updates of the project / design, before the start of construction phase and updated regularly throughout the project lifecycle.
Stakeholder Engagement Plan (including Grievance Mechanism)	<ul style="list-style-type: none"> <li>Strategy for identifying and engaging stakeholders throughout the project lifecycle.</li> <li>Communication methods and channels with local communities and stakeholders.</li> <li>Procedures for addressing concerns and grievances.</li> <li>Regular reporting to stakeholders on project progress.</li> <li>Mechanisms for community feedback and participation.</li> </ul>	Developed as part of the ESIA Package. To be reviewed regularly (annually) and updated as necessary during the future phases of project implementation.
Land Acquisition Corrective Action Plan	<ul style="list-style-type: none"> <li>Historic land acquisition audit with an overview of the land acquisition process and procedures which have already been implemented, and assess their alignment with EBRD requirements.</li> <li>Identification of affected landowners and communities, along with valuation and compensation mechanisms.</li> <li>Compensation and resettlement strategies.</li> <li>Legal and regulatory compliance for land acquisition.</li> <li>Monitoring and grievance mechanisms for affected parties.</li> <li>Corrective actions Plan to mitigate any gaps identified between the land acquisition process to date and the EBRD requirements, to ensure the land acquisition process is completed in compliance with PR5</li> </ul>	Developed as part of the ESIA package.
Livelihood Restoration Plan	<ul style="list-style-type: none"> <li>Identification of economically displaced persons and baseline data</li> <li>Eligibility criteria and entitlement matrix</li> <li>Livelihood restoration measures (e.g. training, inputs, job support)</li> <li>Stakeholder engagement and participation</li> <li>Grievance redress mechanism</li> <li>Implementation schedule and responsibilities</li> <li>Monitoring, evaluation, and budget</li> </ul>	Within 90 days from the start of disclosure
Biodiversity Management Plan (BMP)	<ul style="list-style-type: none"> <li>Strategies for biodiversity protection and restoration during operation.</li> <li>Specific actions and sub plans, covering Ecological Monitoring of Terrestrial and Freshwater Receptors, Habitat Management and Enhancement including Net Gain in line PR6.</li> <li>Sensitive Site Clearance Strategy to monitoring and management for clearance activities.</li> <li>Management and actions for controlling or eradicating invasive non-native species (INNS)</li> <li>Ongoing monitoring and adaptive management for biodiversity protection.</li> <li>Actions for mitigating impacts on aquatic species, including habitat restoration.</li> <li>Monitoring success of biodiversity offset programs.</li> </ul>	Developed as a part of the ESIA package. Relevant for all project phases - Pre-construction, Construction, and Operational Phase <b>See Appendix C</b>

#### 4.1.2 Management Plans and Procedures owned by the Contractor

Contractor management plans are the operational control documents defining how specific commitments and mitigations will be delivered on site and performance verified.

Each Contractor shall develop a **Construction Environmental and Social Management Plan (CESMP)** commensurate with the scope of its works. The CESMP shall fall within the scope of the Contractors

management system and will operationalise all obligations and mitigations specified in this ESMP for implementation on the ground.

The content of each Contractors CESMP shall include (but not be limited to):

- Objectives of the management plan/purpose and scope,
- Reference documents (indication of other Project-level documents, reference to relevant applicable standards);
- Overall Contractor ESHS organization structure;
- Identification of Project activities/operations associated with the impacts addressed by the CESMP;
- Description of mitigation measures to address impacts and links to sub-plans and procedures where these will be expanded;
- Contractor ESHS staffing, roles and responsibilities;
- Subcontractor requirements (including for ESHS self-monitoring and reporting to Contractor);
- Risk Management (Risk Register) and Resilience and Recovery Process;
- Management controls:
  - Contractor ESHS self-verification (frequency, oversight inspections of own and subcontractor activities, joint inspections with Employer, etc.);
  - Contractor ESHS assurance (internal and external audits, management review etc.);
  - Tracking (system for recording and monitoring of ESHS actions until closure);
  - Non-compliance notification, recording and corrective action;
  - ESHS incident reporting and investigation;
  - ESHS monitoring program;<sup>1</sup>
  - ESHS reporting (daily, weekly, monthly reporting, KPI reporting etc.);
  - ESHS documentation management (ESHS records management)
- Communication channels (internal, external, emergency);
- Monitoring and reporting; staff training needs;
- Training and competence;
- ESHS Management of Change Process.

Construction phase related risks need to be assessed, and mitigation measures defined in the **Occupational Health and Safety Management Plan (OHSMP)** or be included as a part of the **Construction Environmental and Social Management Plan (CESMP)**.

The spatial scope of the Project specific OHSMP or Construction ESMP should include (but is not limited to) the following:

- All Project construction sites,
- All Project construction camps and facilities therein,
- All borrow pits and quarries used for the Project,
- All access roads and all transportation routes to be used by the Project,
- Other construction, auxiliary or temporary sites used by the Contractor or subcontractors, as applicable.

The Contractors Health and Safety core processes are the foundation for all project H&S programs/plans and processes that need to be implemented on the Project to ensure all activities are executed in an appropriate manner in accordance with regulatory and project specific requirements.

The categories or core H&S processes include general safe work procedures, H&S training and competency, hazardous work /permit procedures, health and hygiene procedures, emergency planning / evacuation procedures and environmental assurance compliance procedures. For every high-risk activity during the operational phase, a Risk Assessment Method Statement (RAMS) should be developed.

Considering the potential risk, some of the construction activities may be classified as high risk with significant potential incident if no appropriate mitigation management systems are not adopted.

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<sup>1</sup> Monitoring program shall be commensurate with the planned project activities, type of work to be performed and location of sensitive receptors and ESIA Report findings.

It is important to ensure that the Contractor and its subcontractor employ workers that are suitably trained and have the appropriate equipment to undertake their tasks in a safe manner.

All workers associated with the Project, and in particular the site management, will be required to be familiar with the appropriate safety measures, starting with undertaking appropriate hazard and risk assessment for all activities. This should be followed by appropriate training, that workers undertaking the hazardous tasks are certified to do so and implementation of specific international requirements for working at height and working in enclosed spaces.

Worker accommodation should be designed and maintained to meet the standards defined in IFC and EBRD guidance on accommodation. The standards of the rooms or dormitory facilities should be designed to allow workers to rest properly and to maintain good standards of hygiene. This includes cafeteria, medical room, shower and toilets, wastewater treatment plants/septic tanks, water supply facilities (i.e. water well).

The table below presents the environmental, social, health and safety (ESHS) management plans, procedures, and policies that must be developed and implemented by the Contractors prior to the commencement of construction activities. These documents will ensure that the Contractors manage environmental and social risks effectively and comply with the requirements set out by the Project Developer, as well as national legislation and applicable international standards.

**Table 4 Contractor's management plans, procedures and policies**

Management Plan	Suggested plan content	Timeframe
Construction Environmental and Social Management Plan (CESMP)	<ul style="list-style-type: none"> <li>Objectives of the management plan/purpose and scope,</li> <li>Reference documents (indication of other Project-level documents, reference to relevant applicable standards);</li> <li>Overall Contractor ESHS organization structure;</li> <li>Identification of Project activities/operations associated with the impacts addressed by the CESMP;</li> <li>Description of mitigation measures to address impacts and links to sub-plans and procedures where these will be expanded;</li> <li>Contractor ESHS staffing, roles and responsibilities;</li> <li>Subcontractor requirements (including for ESHS self-monitoring and reporting to Contractor);</li> <li>Risk Management (Risk Register) and Resilience and Recovery Process;</li> <li>Management controls: <ul style="list-style-type: none"> <li>Contractor ESHS self-verification (frequency, oversight inspections of own and subcontractor activities, joint inspections with Employer, etc.);</li> <li>Contractor ESHS assurance (internal and external audits, management review etc.);</li> <li>Tracking (system for recording and monitoring of ESHS actions until closure);</li> <li>Non-compliance notification, recording and corrective action;</li> <li>ESHS incident reporting and investigation;</li> <li>ESHS monitoring program;</li> <li>ESHS reporting (daily, weekly, monthly reporting, KPI reporting etc.);</li> <li>ESHS documentation management (ESHS records management)</li> </ul> </li> <li>Communication channels (internal, external, emergency);</li> <li>Monitoring and reporting; staff training needs;</li> <li>Training and competence;</li> <li>ESHS Management of Change Process. Details to be further developed in line with suggested content of each subtopic presented in this table.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence.
Traffic Management Plan	<ul style="list-style-type: none"> <li>Defined access roads to be used by all project vehicles, as specified in the TMP;</li> <li>Establishment and enforcement of appropriate speed limits;</li> <li>Identified sensitive receipts and define control and mitigation measures.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before



Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>• Conditions and requirements for the transport of explosives, if applicable;</li> <li>• Mandatory driver training and periodic medical examinations;</li> <li>• Defined procedures and designated areas for vehicle fuelling;</li> <li>• Regular vehicle inspections, with specific attention to exhaust systems, to minimize noise and air pollution;</li> <li>• Implementation of one-way traffic systems on access roads, where feasible, to reduce collision risks and improve traffic flow;</li> <li>• Procedures for proper loading and covering of trucks to prevent spillage along transport routes;</li> <li>• Assessment of site and road conditions to identify critical safety points, which should be included in driver training sessions.</li> </ul> <p>For projects involving the use of explosives, the plan should also include specific transport conditions such as:</p> <ul style="list-style-type: none"> <li>• Obtaining required approvals and police escort from the Ministry of Internal Affairs (MUP);</li> <li>• Use of technically sound vehicles equipped with safety gear and operated by two trained drivers;</li> <li>• Adherence to transport limits (e.g., max 50 km/h speed, max 60% vehicle capacity);</li> <li>• Prohibition of stops in populated areas and restriction on transporting additional passengers;</li> <li>• Training of drivers in safety procedures for handling and transporting explosives.</li> </ul>	any construction activities commence
Waste Management Plan (covering hazardous and non-hazardous waste streams)	<ul style="list-style-type: none"> <li>• Key legal and other relevant requirements related to waste management;</li> <li>• Implementation of the waste hierarchy (prevention at source, reuse, recycling, energy recovery, responsible disposal);</li> <li>• Identification and classification of waste into hazardous and non-hazardous categories, including construction debris, excavated material, chemicals, and municipal waste;</li> <li>• Maintenance of a waste register, including types, quantities, and waste streams;</li> <li>• Waste handling procedures, including: <ul style="list-style-type: none"> <li>– collection,</li> <li>– segregation by type,</li> <li>– temporary storage,</li> <li>– treatment (where applicable),</li> <li>– transportation with accompanying documentation,</li> <li>– disposal at authorized sites;</li> </ul> </li> <li>• Monitoring and reporting on waste management practices and compliance with regulations;</li> <li>• Record-keeping on generated waste, implemented measures, and engaged operators.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Resource and Material Management Plan (RMMP)	<ul style="list-style-type: none"> <li>• Key Legal and Regulatory Requirements: Overview of Serbian legislation and regulations concerning material extraction, water use, waste disposal, and environmental protection. This includes obtaining necessary permits for quarrying, water use, and waste disposal, and updating the RMMP with permit conditions.</li> <li>• Material Extraction and Site Rehabilitation: Development and implementation of an RMMP for material extraction activities, ensuring that extraction is restricted to designated sites. The plan should include measures for site rehabilitation after use to restore disturbed areas.</li> <li>• Material Estimation and Waste Management: Accurate estimation of material quantities to prevent excessive extraction and waste generation. The plan should outline procedures for managing surplus materials, prioritising reuse and recycling, and ensuring proper disposal of unsuitable materials.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>• Permitting and Compliance: Ensuring that all material extraction activities are conducted with the necessary permits and regulatory approvals, in compliance with national regulations.</li> <li>• Procurement Strategies: Sourcing materials such as cement, aggregates, and fuel from licensed suppliers that meet environmental and quality standards.</li> <li>• Transportation and Logistics: Incorporating logistics planning to mitigate transportation-related impacts, including efficient scheduling of material deliveries to minimise road strain, emissions, and noise.</li> <li>• Storage and Handling: Defining proper stockpiling and storage measures to prevent contamination and material degradation.</li> <li>• Monitoring and Compliance Assessments: Conducting regular monitoring and compliance assessments to track material usage, waste generation, and adherence to regulatory requirements, ensuring responsible resource management and overall project sustainability.</li> <li>• Material Passport Development: Facilitating the potential reuse of surplus materials in future projects by developing a material passport, providing clear specifications on material properties, origin, and suitability for various applications.;</li> </ul>	
Spill Prevention and Response Plan	<ul style="list-style-type: none"> <li>• Identification of activities and locations with potential risk of hazardous material spills (fuel, oil, chemicals, etc.);</li> <li>• Spill prevention measures, including: <ul style="list-style-type: none"> <li>– fuel and chemical storage protocols,</li> <li>– secondary containment systems (e.g. bunds, barriers),</li> <li>– regular inspections of storage facilities and equipment;</li> </ul> </li> <li>• Locations and maintenance procedures for spill response equipment (absorbents, neutralizers, protective gear);</li> <li>• Procedures for immediate response in case of a spill, including: <ul style="list-style-type: none"> <li>• rapid identification and containment of contamination,</li> <li>• collection and disposal of contaminated materials,</li> <li>• protection of workers and the environment during response actions;</li> </ul> </li> <li>• Notification procedures and designation of responsible personnel in case of an incident;</li> <li>• Mandatory training for personnel on safe handling of chemicals, spill prevention, and emergency response;</li> <li>• Procedures for incident recording and reporting, including mechanisms for learning from past events;</li> <li>• Regular review and update of the plan in line with changes in site conditions, legislation, and internal audit results;</li> <li>• Compliance with relevant environmental regulations and hazardous material management requirements.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Wastewater Management Plan	<ul style="list-style-type: none"> <li>• Establishing protocols for handling high-pH wastewater generated during concrete mixing to prevent contamination of soil and water resources;</li> <li>• Defining appropriate locations for washing concrete vehicles and equipment, equipped with systems for collecting wastewater;</li> <li>• Implementation of secondary containment and filtration systems for wastewater to reduce the risk of pollutants washing into the surrounding environment;</li> <li>• A plan for regular maintenance and cleaning of concrete washout systems to ensure that residual materials do not contaminate wastewater;</li> <li>• Procedures for collecting, storing, and disposing of wastewater and concrete residues in accordance with regulations and environmental standards;</li> <li>• Procedures for measuring the pH of wastewater before it is directed to disposal or treatment;</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>• Introduction of a system for regular monitoring and reporting on the condition of wastewater and any deviations from acceptable limits;</li> <li>• Training of personnel on the safe handling of wastewater and the application of environmentally-friendly waste management procedures;</li> <li>• Response protocols for wastewater spills or violations of established protocols.</li> </ul>	
Stormwater Management Plan	<ul style="list-style-type: none"> <li>• Establishing basic protocols for controlling stormwater during the construction and operation of the dam to prevent contamination of water resources;</li> <li>• Implementing systems for the retention of stormwater at key locations, such as access roads and areas with a high risk of erosion;</li> <li>• Defining the contractor's responsibilities for maintaining the stormwater management systems during construction, with a focus on preventive measures and responding to spills or unexpected incidents;</li> <li>• Procedures for responding to potential flooding or other extreme weather events that may affect the system.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Erosion and Sediment Control Plan (ESCP)	<p>This plan should rely on the information and recommendations contained in the existing Geotechnical Reports (including landslide analyses, karst analyses, etc.).</p> <ul style="list-style-type: none"> <li>• Site Assessment: Initial site evaluation to identify areas requiring restoration, focusing on areas impacted by construction activities (e.g., excavation, material storage, access roads).</li> <li>• Soil Stabilization: Measures to prevent erosion and improve soil structure, including the use of soil amendments or erosion control methods.</li> <li>• Vegetation Replanting: Selection of native plant species for replanting to restore the natural vegetation and biodiversity of the area. This may also include planting trees or shrubs to provide long-term landscape stabilization.</li> <li>• Landscape Rehabilitation: Ensuring the restoration of natural contours and water flow to minimize environmental impact, including the reinstatement of any altered watercourses or drainage systems.</li> <li>• Monitoring and Maintenance: Regular monitoring of the site's recovery, including vegetation growth and soil stability, with corrective actions if necessary.</li> <li>• Timeline for Restoration: A clear timeline for completing restoration activities, with deadlines for each stage of the process.</li> <li>• Responsibility and Resources: Defining the responsibilities of the contractor and relevant stakeholders, including providing adequate resources for site restoration and rehabilitation activities.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Site Restoration and Rehabilitation Plan (SRRP)	<ul style="list-style-type: none"> <li>• Site Assessment: Initial site evaluation to identify areas requiring restoration, focusing on areas impacted by construction activities (e.g., excavation, material storage, access roads).</li> <li>• Soil Stabilization: Measures to prevent erosion and improve soil structure, including the use of soil amendments or erosion control methods.</li> <li>• Vegetation Replanting: Selection of native plant species for replanting to restore the natural vegetation and biodiversity of the area. This may also include planting trees or shrubs to provide long-term landscape stabilization.</li> <li>• Landscape Rehabilitation: Ensuring the restoration of natural contours and water flow to minimize environmental impact, including the reinstatement of any altered watercourses or drainage systems.</li> <li>• Monitoring and Maintenance: Regular monitoring of the site's recovery, including vegetation growth and soil stability, with corrective actions if necessary.</li> <li>• Timeline for Restoration: A clear timeline for completing restoration activities, with deadlines for each stage of the process.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>Responsibility and Resources: Defining the responsibilities of the contractor and relevant stakeholders, including providing adequate resources for site restoration and rehabilitation activities.</li> </ul>	
Cultural Heritage Management Plan	<ul style="list-style-type: none"> <li>Cultural Heritage Management during Construction: Defining responsibilities for the protection of cultural heritage and appointing a responsible person.</li> <li>Training of Workers on Cultural Heritage: Providing training for workers on how to recognize and protect cultural assets, including specialized training for work near cultural sites.</li> <li>Chance Find Procedure: Implementing a procedure in case of unexpected discoveries, including immediate cessation of work, notifying relevant authorities, protecting and documenting the find.</li> <li>Key Legal and Regulatory Requirements - Ensuring adherence to relevant national laws and international guidelines for the protection of cultural monuments. Implementation of the mitigation measures prescribed by the institute for Protection of Cultural Monuments, for the mapped cultural heritage assets.</li> <li>Documentation and Reporting: Regularly reporting on the implementation of protective measures and compliance with obligations to relevant authorities.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Occupational Health and Safety Management Plan	<ul style="list-style-type: none"> <li>Key legislation and standards;</li> <li>H&amp;S Policy;</li> <li>H&amp;S Objectives;</li> <li>H&amp;S roles and responsibilities;</li> <li>Incident reporting, investigation and monitoring of non-compliance;</li> <li>H&amp;S records and document control;</li> <li>H&amp;S trainings and competency;</li> <li>Communication;</li> <li>H&amp;S performance measuring and monitoring (KPIs);</li> <li>Safe work procedures;</li> <li>Work permits;</li> <li>PPE requirements;</li> <li>Risk Management;</li> <li>Incident and Emergency Management.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Emergency Preparedness and Response Plan	<ul style="list-style-type: none"> <li>Emergency Preparedness and Response, encompassing protocols for handling minor incidents such as small spills, as well as major events like floods, earthquakes, and other natural disasters. Adequate communication with emergency services to be in place.</li> <li>The Plan shall clearly define: <ul style="list-style-type: none"> <li>Roles and responsibilities, chain-of-command and communication;</li> <li>On-site Incident Response Team;</li> <li>Incident notification procedure;</li> <li>Incident investigation requirements;</li> <li>Incident management considerations;</li> <li>Training and review requirements;</li> <li>Potential emergency scenarios;</li> <li>Emergency stop procedures in case of natural disaster.</li> </ul> </li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Community Health, Safety, and Security Management Plan	<ul style="list-style-type: none"> <li>Identification of community risks</li> <li>Methodology of determined mitigation measures implementation</li> <li>Clear prescription of actions of security personnel in case of conflict situations;</li> <li>Regular trainings of security personnel on communication with local residents and training of guiding principles on human rights;</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>Measures of control of actions of security personnel;</li> <li>Envisaged rewards and violations, including termination of working contracts;</li> <li>Identification and management of key site areas and routes, including: <ul style="list-style-type: none"> <li>Common work areas for employees</li> <li>Access / egress points or gates</li> <li>Parking areas</li> <li>Walkways</li> <li>Emergency response routes</li> <li>Assembly points</li> </ul> </li> </ul>	activities commence
Water Environment Monitoring and Mitigation Plan (WEMMP)	<ul style="list-style-type: none"> <li>Continuous monitoring of water quality, including sedimentation, turbidity, and flow.</li> <li>Actions for minimizing water pollution during construction.</li> <li>Management measures for aquatic species, particularly in relation to water quality and sedimentation.</li> <li>Pollution control techniques, including the use of silt curtains, sedimentation ponds, and coffer dams.</li> <li>Regular monitoring of watercourse crossings (if used)</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Biodiversity Management Plan (BMP)	<ul style="list-style-type: none"> <li>In line with construction phase related actions of the Biodiversity Management Plan developed as a part of the ESIA Package.</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Labour Management Plan	<ul style="list-style-type: none"> <li>Training and skill development activities;</li> <li>Employee grievance mechanism;</li> <li>Measures for fair treatment, non-discrimination, and equal opportunity in employment;</li> <li>Requirements related to provision of safe and healthy working conditions, and the health of workers;</li> <li>Promotion of local recruitment at all levels of the Project and facilitating the qualification and recruitment of local candidates, for example with appropriate skills training;</li> <li>Measures to maximize use of national subcontractors and suppliers;</li> <li>Workers' community interaction behavioural code of conduct;</li> <li>Contractor employment practices conformance, reporting and monitoring;</li> <li>Management measures related to child labour, forced labour, third-party workers</li> <li>Workers Accommodation Plan</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence
Subcontractor Management Plan (SMP)	<ul style="list-style-type: none"> <li>Contractors' and Subcontractors' engagement and management processes, procedures and systems to be used;</li> <li>Roles and responsibilities of the Contractor and its Subcontractors, relationship and cooperation between all parties, with regards to all Project activities;</li> <li>Applicable Project Standards;</li> <li>Sets out the processes to ensure the implementation, by Subcontractors, of all requirements, project commitments, conditions, methods (work statement for the construction phases), and procedures applicable to them, intended to assure the execution of the Project;</li> <li>Training requirements;</li> <li>Grievance Mechanisms for internal and external grievances; maintenance of grievance register</li> </ul>	Prior to start of construction works: The plan should be developed, reviewed, and approved before any construction activities commence

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>Monitoring and reporting procedures, including Key Performance Indicators (KPIs), to monitor the performance of the Subcontractors;</li> <li>Requirements that construction vehicles need to meet;</li> <li>Procedure for non-compliance intervention.</li> </ul>	

## 4.2 Operational ESHS Management Plans

### 4.2.1 Operational ESHS Management Plans – PWMC Srbijavode

The table below outlines the key management plans, procedures and policies required for the Project operation phase, to be developed and/or provided by **Srbijavode**, as the Project Developer. These documents form the foundation for ensuring compliance with environmental and social standards throughout the Project lifecycle. They define specific environmental, social, health and safety (ESHS) responsibilities relevant for the operations phase.

**Table 5 - Operational ESHS Management Plans – Srbijavode**

Management Plan	Suggested plan content	Timeframe
Environmental and Social Policy	<ul style="list-style-type: none"> <li>Description of how environmental and social principles will be embedded into day-to-day operational activities and long-term planning.</li> <li>Measures for continued environmental protection (e.g. reservoir management, efficient water use) and maintaining cooperation with affected communities.</li> <li>Definition of how the policy's effectiveness will be monitored, including performance indicators and adaptive management measures.</li> <li>Clear assignment of responsibilities to Srbijavode staff and any external support involved in implementing E&amp;S measures during operations.</li> <li>Description of mechanisms for maintaining communication with local communities and institutions, especially regarding water use and land management.</li> <li>Identification of relevant updated or operation-specific policies (e.g. biodiversity monitoring, community health and safety), with a brief description of how they complement the main E&amp;S policy.</li> </ul>	6 months prior to start of operation phase
Human Resources Policy	<ul style="list-style-type: none"> <li>Plans for long-term staffing, including retention, local employment opportunities, and career development.</li> <li>Ongoing training programs in environmental, technical, and social areas relevant to the operational phase.</li> <li>Continued commitment to fair wages, safe working hours, and non-discrimination throughout project operations.</li> <li>Detailed procedures for reporting and resolving workplace grievances and concerns.</li> <li>Initiatives to support physical and mental wellbeing and promote diversity and inclusion in the workplace.</li> </ul>	6 months prior to start of operation phase
Occupational Health and Safety Policy	<ul style="list-style-type: none"> <li>Identification of key health and safety risks during operation (e.g. maintenance, inspections) and corresponding mitigation measures.</li> <li>Defined safety protocols for the use of equipment, vehicles, and site access during routine operations.</li> <li>Procedures tailored to emergencies specific to operation-related risks (e.g. flooding, equipment failure), including drills and coordination with local authorities.</li> <li>OHS Monitoring and Reporting: Frequency and methods of monitoring health and safety performance, including employee reporting, audits, and incident tracking.</li> <li>Assignment of specific roles within operational teams responsible for health and safety, including designated focal points</li> </ul>	6 months prior to start of operation phase



Management Plan	Suggested plan content	Timeframe
Operation and Maintenance (O&M) Plan	<ul style="list-style-type: none"> <li>Based on the Operation Rules.</li> <li>Based on the O&amp;M Manuals, as per as-build design, developed by the Contractor as part of handover process.</li> <li>Sediment Management Plan: <ul style="list-style-type: none"> <li>operation sediment management (reservoir) – potential sediment dredging</li> <li>operation sediment management (upstream sediment traps / dams) – sediment removal &amp; maintenance of check dams</li> </ul> </li> <li>E-flow rules and guidelines.</li> <li>Pre-flood reservoir drawdown procedure</li> </ul>	6 months prior to start of operation phase
Surveyance and Monitoring Plan	<ul style="list-style-type: none"> <li>Data and measurements of performance since construction</li> <li>Observations of changes around the reservoir and its environment</li> <li>Operating procedures and maintenance records of dam infrastructure</li> <li>Records of unexpected events or conditions (and its treatment/analysis)</li> <li>Details of organisational governance and policies on dam safety management (safety management implementation arrangements including compliance requirements, financial arrangements and resourcing procedures)</li> <li>Clarity on engineering standards, surveillance and monitoring requirements and including approaches to periodic safety assessments,</li> <li>Record keeping procedures: from dam design and construction to operational maintenance</li> <li>downstream warning procedure,</li> <li>coordination mechanism with downstream dam operators,</li> <li>municipalities along the river,</li> </ul>	6 months prior to start of operation phase
Emergency Preparedness and Response Plan	<ul style="list-style-type: none"> <li>Organizational responsibilities</li> <li>Risk Management</li> <li>Alarm Levels, Notification Procedures and Response Matrix</li> <li>Reporting requirements</li> <li>Notification Flowchart</li> <li>Early Warning System</li> <li>Mitigation Activities</li> <li>Update, Maintenance, Exercise and Correction of EPRP</li> <li>Emergency Response Dossier</li> </ul>	6 months prior to start of operation phase
Waste Management Plan (WMP)	<p>Key legal and other relevant requirements related to waste management during the operation of the Pambukovica Dam and associated facilities.</p> <p>Identification and classification of waste streams generated during operation, including:</p> <ul style="list-style-type: none"> <li>sludge from sedimentation and treatment processes,</li> <li>chemical packaging and expired substances,</li> <li>municipal and maintenance-related waste from staff and facilities;</li> </ul> <p>Waste handling procedures, including:</p> <ul style="list-style-type: none"> <li>collection and segregation at the source,</li> <li>temporary storage in appropriate containers and designated locations,</li> <li>safe handling of hazardous waste (e.g. chemical residues, filters),</li> <li>transportation by licensed operators with required documentation,</li> <li>disposal at authorized and licensed facilities in line with national regulations;</li> </ul> <p>Maintenance of a waste register, covering types of waste, quantities, and associated waste streams generated by the operation of the dam and supporting infrastructure.</p>	6 months prior to start of operation phase



Management Plan	Suggested plan content	Timeframe
Spill Prevention and Response Plan (SPRP)	<ul style="list-style-type: none"> <li>• Key legal and internal requirements related to the handling and storage of hazardous substances during dam operation;</li> <li>• Identification of locations and activities with potential for spills or leaks, such as fuel storage areas, chemical dosing systems, and maintenance workshops;</li> <li>• Preventive measures including: <ul style="list-style-type: none"> <li>– secondary containment systems for fuel and chemical storage,</li> <li>– routine inspections and maintenance of storage infrastructure,</li> <li>– clear labelling and safe storage practices;</li> </ul> </li> <li>• Availability and location of spill response equipment (absorbents, neutralizers, PPE), regularly maintained and restocked;</li> <li>• Immediate response procedures in case of spill</li> <li>• Reporting and notification procedures in line with national law and internal protocols, including designation of responsible personnel;</li> <li>• Training programs for staff handling hazardous substances, including emergency drills and practical exercises;</li> <li>• Incident recording and follow-up to ensure continual improvement and compliance.</li> </ul>	6 months prior to start of operation phase
Wastewater Management Plan	<ul style="list-style-type: none"> <li>• Identification of wastewater sources during dam operation, such as runoff from operational surfaces, domestic wastewater from staff facilities, and water treatment process residuals;</li> <li>• Applicable discharge limits and compliance requirements based on national and local regulations;</li> <li>• Description of installed wastewater treatment infrastructure and procedures (e.g. sedimentation tanks, oil separators, septic tanks);</li> <li>• Routine operational procedures for wastewater collection, treatment, and final discharge;</li> <li>• Monitoring parameters, frequency, and methods for treated wastewater, including compliance with discharge permits;</li> <li>• Procedure for managing sludge from wastewater treatment, including its classification, handling, and disposal;</li> <li>• Contingency measures in case of system malfunction or overflow;</li> <li>• Record-keeping and reporting on discharge volumes, monitoring results, and maintenance activities.</li> </ul>	6 months prior to start of operation phase
Stormwater Management Plan	<ul style="list-style-type: none"> <li>• Overview of potential stormwater generation areas (e.g. dam crest, access roads, parking areas);</li> <li>• Stormwater infrastructure implemented during design (channels, culverts, sediment traps, oil-water separators);</li> <li>• Operational procedures for inspection, cleaning, and maintenance of stormwater management infrastructure;</li> <li>• Measures to prevent contamination of stormwater by fuels, oils, and chemicals;</li> <li>• Monitoring of stormwater quality (visual checks, sediment levels, periodic sampling if required);</li> <li>• Management of stormwater during extreme events and high rainfall periods;</li> <li>• Record-keeping of inspections, maintenance, and corrective actions.</li> </ul>	6 months prior to start of operation phase
Sediment Management Plan	<ul style="list-style-type: none"> <li>• Identification of sediment sources and dynamics within the reservoir during operation;</li> <li>• Expected sedimentation rates and their impact on reservoir capacity and dam functionality;</li> <li>• Monitoring of sediment accumulation through bathymetric surveys or other methods;</li> <li>• Operational procedures for sediment removal or redistribution (if applicable);</li> </ul>	6 months prior to start of operation phase

Management Plan	Suggested plan content	Timeframe
	<ul style="list-style-type: none"> <li>Sediment disposal procedures, including environmental safeguards and compliance with disposal site regulations;</li> <li>Preventive measures to reduce upstream erosion and sediment inflow;</li> <li>Reporting and review procedures to assess the effectiveness of sediment management actions.</li> </ul>	
Water Environment Monitoring and Mitigation Plan (WEMMP)	<ul style="list-style-type: none"> <li>Identification of water bodies potentially affected by dam operation (reservoir, downstream river sections, groundwater);</li> <li>Monitoring of key water quality parameters (e.g. temperature, pH, turbidity, DO, nutrients, heavy metals) in line with regulatory and project-specific requirements;</li> <li>Monitoring of hydrological parameters such as flow release, reservoir levels, and seepage;</li> <li>Established monitoring locations, frequency, and methodology;</li> <li>Mitigation measures in case of identified deterioration of water quality (e.g. controlled releases, operational adjustments, emergency interventions);</li> <li>Integration of monitoring results into adaptive reservoir management;</li> <li>Regular reporting to relevant authorities and stakeholders.</li> </ul>	6 months prior to start of operation phase
Occupational Health and Safety Management Plan	<ul style="list-style-type: none"> <li>Key legislation and standards;</li> <li>H&amp;S Policy;</li> <li>H&amp;S Objectives;</li> <li>H&amp;S roles and responsibilities;</li> <li>Incident reporting, investigation and monitoring of non-compliance;</li> <li>H&amp;S records and document control;</li> <li>H&amp;S trainings and competency;</li> <li>Communication;</li> <li>H&amp;S performance measuring and monitoring (KPIs);</li> <li>Safe work procedures;</li> <li>Work permits;</li> <li>PPE requirements;</li> <li>Risk Management;</li> <li>Incident and Emergency Management.</li> </ul>	6 months prior to start of operation phase
Community Health, Safety, and Security Management Plan	<ul style="list-style-type: none"> <li>Identification of community risks</li> <li>Methodology of determined mitigation measures implementation</li> <li>Clear prescription of actions of security personnel in case of conflict situations;</li> <li>Regular trainings of security personnel on communication with local residents and training of guiding principles on human rights;</li> <li>Measures of control of actions of security personnel;</li> <li>Identification and management of key site areas and routes, including: <ul style="list-style-type: none"> <li>Common work areas for employees</li> <li>Access / egress points or gates</li> <li>Parking areas</li> <li>Walkways</li> <li>Emergency response routes</li> <li>Assembly points</li> </ul> </li> <li>Installation of safety signage - clear and visible signage around the dam area to clearly inform the public of potential hazard, and</li> <li>Regular inspection of the safety signage and assessment whether additional signs are needed.</li> </ul>	6 months prior to start of operation phase
Capacity Building Plan / Program	Based on the finding of the Capacity Assessment undertaken as a separate part of the assignment.	As per the findings of the Capacity Assessment.

In addition to the management plans and procedures listed above, Appendix D presents the full set of mitigation measures identified in the ESIA. These measures are not only aimed at reducing potential impacts but also require the development and implementation of specific thematic plans (e.g., Waste Management Plan, Health and Safety Plan, Traffic Management Plan, etc.) by both PWC *Srbijavode* and the Contractor, in line with their respective responsibilities as described in this chapter.

## 5. ESHS MANAGEMENT CONTROLS

### 5.1 Construction Phase

#### 5.1.1 Summary of Controls

Controls shall be established to continuously measure implementation of the Project's ESHS obligations and mitigations described in this ESMP, minimise compliance risks and identify and effectively correct any non-conformities.

ESHS controls for the construction works shall be effective at two levels:

- Level 1: Contractor self-verification program (inspections, monitoring, reporting, including oversight of subcontractors) to demonstrate compliance with ESHS policies, regulations and standards, and to provide evidence that obligations are being met.
- Level 2: Srbijavode oversight and compliance assurance.

Additional information on Level 1 activities is provided in Section 3.2. and in the following sub-sections.

Oversight and compliance assurance (Level 2) shall be the responsibility of Srbijavode ESHS personnel (or appropriately qualified representatives, such as role of Supervising Engineer / Consultant and Project Implementation Unit Consultant).

***Note: At the moment of the ESIA development full structure of the Project is yet to be confirmed. In addition to Level 1 and Level 2 controls, Level 3 might be added based on the future decisions by parties involved (such as roles of Independent E&S Consultant or Lenders Monitoring Advisor).***

Activities shall include review and acceptance of Contractor ESHS reports, documentation, monitoring data, procedures & plans, as well as undertaking site inspections and attending regular ESHS performance meetings with Contractors, and undertaking a schedule of targeted joint CESMP audits.

National Regulatory Inspections by environmental inspector are possible in line with the yearly inspection program or in case of grievance from affected individuals.

In addition, Srbijavode will also establish a compliance management system for its own compliance responsibilities.

Project Lenders shall undertake compliance monitoring as defined in the ESAP. Project parties shall facilitate Lenders monitoring and work with Lenders to address any issues as may arise.

#### 5.1.2 Contractor inspections and audits

Contractors shall implement a program of daily ESHS inspections at each live construction site and an appropriate, risk-based program of inspections at supporting facilities including e.g. storage, warehousing and office facilities. Inspections shall cover works and activities of the Contractor and its sub-contractors.

Inspections shall comprise a site walk-over and visual check that mitigations specified in CESMP and other Management Plans (as defined in chapter 4.1.2) are being implemented, supported by inspection checklists.

Joint inspections with Srbijavode ESHS personnel shall be carried out weekly (or as agreed based on an assessment of risk). Joint inspections may also be triggered at the request or as a result of e.g., engagement with project-affected parties, or feedback from stakeholders and regulators.

Contractors shall design a program and methodology for the effective quarterly audit of own and sub-contractor compliance with labour and working conditions obligations.

Contractor internal ESHS audit procedures shall be set out in each Contractor CESMP and accepted by Srbijavode. Audit procedures shall include preparation of an audit schedule comprising audits of the CESMP and each Supplementary Management Plan. Each plan shall be audited as a minimum on an annual basis, with the recommended frequency of 6 months given relative short span of construction works. Audits shall

be performed by an interdisciplinary team of appropriately qualified ESHS auditors. Srbijavode ESHS staff may join the Contractor audit team and participate in Contractor internal audits.

A system for transparently tracking and recording the status and closure of actions arising from inspections and audits shall be developed, accepted by Srbijavode and implemented. This may be within the Contractor Action Tracking System (ATS), refer to Section 5.1.3.

Srbijavode reserves the right to stop ongoing activities if risks identified (via audits/inspections) are HSE critical.

### 5.1.3 Contractor action tracking

Contractors shall identify, record and track to closure corrective and preventative actions for reported near misses, observations, damages, accidents, incidents and non-compliances etc., including responsibilities and timescale for discharging actions, arising in relation to ESHS (including environmental, biodiversity, occupational health and safety, labour and working conditions, socio-economic, community safety and cultural heritage) matters. An appropriate management tool (such as for example an online database or excel spreadsheet) shall be used for this purpose, referred to here as an ESHS ATS.

Srbijavode ESHS management personnel shall review each Contractors' ATS on a regular basis, anticipated to be weekly unless an assessment of Project risks indicates a less regular frequency is appropriate and will follow-up on progress to confirm action closure.

Non-compliances identified as a result of inspections, monitoring and audits performed shall be recorded by Contractors as actions to be addressed within their own management systems and reported to Srbijavode in monthly ESHS performance reports as a minimum.

Contractors shall develop, record in their CESMP and implement ESHS Incident Reporting and Investigation procedures aligned with Good International Practice (GIP).

All instances of the following shall be reported to Srbijavode immediately, and no later than 12hrs after the occurrence:

- Non-compliance with or material breach of national ESHS laws, regulations and permits;
- Fatalities;
- Near misses with high risk of fatality;
- Any incident involving third parties (including property damage);
- Pollution incident involving release of more than 50 l of oil or chemicals to unprotected land or water;
- Emergency response incidents.

All other near misses, observations, damages, accidents, incidents and non-compliances etc., shall be reported to Srbijavode on a weekly basis.

Srbijavode reserves the right to carry out its own investigations of Contractor near misses, observations, damages, accidents, incidents and non-compliances etc., or be included within a Contractor investigation team.

The Srbijavode ESHS Manager shall review the weekly ESHS statistics and undertake weekly meetings with Contractor ESHS representatives to review the ATS and status of action progress and closure.

### 5.1.4 Contractor monitoring and reporting

In addition to inspections and audits, Contractors shall establish a program of 'physical' monitoring to verify that mitigations specified in the CESMP and Supplementary Management Plans are working to minimise impacts as predicted in the ESIA.

Physical ESHS monitoring measures shall be based on GIP including guidance specified in Section 2.1. Measures, frequency and responsibilities for monitoring shall be defined in the CESMP.

Each Contractor shall prepare and issue an ESHS performance report to Srbijavode on a monthly basis. The report shall include as a minimum, ESHS incident statistics, details of training delivered against planned, details of physical monitoring delivered against planned (including details of any non-conformance / no compliance identified through the monitoring), details of compliance with national permits, details of compliance with international Lender obligations, details of inspections and audits delivered against planned, ESHS staffing levels and organisation and personnel changes, ESHS management of change events, and details of all emergencies and major incidents, accidents and non-compliances etc. including investigation status and findings, ESHS ATS status and Risk Register update.

Each contractor shall also submit an ESHS statistics summary to Srbijavode on a weekly basis.

Each Contractor shall participate in a weekly ESHS meeting with Srbijavode.

#### 5.1.5 Srbijavode ESHS oversight

ESHS oversight activities shall be managed by the Srbijavode OHS Manager, Environmental Manager and Social Manager. Actions shall include ongoing review and follow-up on Contractor weekly and monthly reports and non-compliance and incident reporting and investigations, holding weekly ESHS meetings with Contractors and undertaking inspections (including joint inspections).

ESHS oversight inspections shall be scheduled and undertaken as a minimum monthly, and more frequently during periods of higher ESHS risk including construction start up and ramp down and during higher risk construction activities. Unscheduled inspections (spot-checks) of critical/key Project areas shall also be performed as needed. The locations and timing of unscheduled inspections shall be determined based on the ongoing Project activities and issues, as informed by the Contractors weekly/monthly reports and non-compliance/incident reporting.

The ESHS oversight is aimed at addressing all Project ESHS aspects and worksites and ensure that each of them are visited yearly as a minimum.

Inspections observations and findings are discussed with Contractors' ESHS representatives to determine and agree on any required actions.

Srbijavode ESHS oversight reports as minimum shall include:

- indication of the construction site and activities inspected;
- observation details providing note on positive aspects or non-compliances identified;
- photolog of the observations made/issues identified.

Where ESHS oversight inspections identify non-compliance, the remedial actions required in response are discussed and agreed with the Contractor and recorded into the Contractor's ATS.

#### 5.1.6 PWMC Srbijavode regular ESHS reporting

**ESHS oversight report** is provided by HSE Manager and Social Manager to Srbijavode Management on monthly basis. Reporting can be done more frequently if required, e.g. in the case of incident and non-compliance, in order to follow up on the recovery plan and corrective actions. The report summarizes the key issues and challenges during the reporting period as resulted from the ESHS oversight inspections and the review of the Contractors' ESHS reports and ATS status. Also, monthly E&S Committee Meetings will be held and findings of this report will be discussed and actions will be determined.

Regular reporting is intended to keep Srbijavode Project Management informed on ESHS aspects, so that direction and feedback can be provided to Contractors and leadership support obtained for addressing key and more strategic issues at appropriate decision levels as applicable.

### 5.2 O&M Phase

Srbijavode will operate the Project and establish its operational phase organisational structure, management system, documents and monitoring and control mechanisms. All these will be completed prior to operational phase following the institutional capacity assessment study.



### 5.3 External reporting

PWMC Srbijavode will prepare an Environmental and Social Report and submit it to the Lenders with the support of the Contractor on a quarterly basis during the construction phase, semi-annually during the first five years of the operation phase (or until completion of the irrigation phase, whichever comes later), and annually thereafter.

Also, Srbijavode commits to following external reporting:

Statutory Notifications and Reporting to national regulatory bodies as required in line with the applicable regulations and Project permits.

- Incident Notification and Reporting. Incident notification for Significant E&S Incident/Event (as it will be defined in Loan Agreement) within 48 hours of occurrence. Detailed Investigation Report and Remedial Action Plan within 20 working days from the occurrence of incident.
- Regular reporting to Project Lenders during construction and early operations on compliance with the Project Lender E&S policies, including mitigations committed in the Project ESIA and this ESMP, as well as performance against actions in the **ESAP**.
- According to the regulation requirements, material incidents (fatalities included) are to be reported to authorities within 24 hours from occurrence. Any such incidents will be also reported to Project lenders.

All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures as indicated in previous sections of this ESMP.

Incident notification and reporting to relevant national regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.

## 6. MONITORING

Monitoring is a key component of environmental management throughout the construction of the Pambukovica Dam project. The main goal of monitoring is to ensure that project activities do not cause negative and unintended consequences for the environment and to confirm that appropriate protective measures are in place. Monitoring also allows for the timely identification of potential issues and enables the implementation of corrective actions, contributing to sustainable development and minimizing negative impacts on biodiversity and the surrounding environment.

Monitoring will be carried out throughout all project phases: pre-construction, construction, operation, and decommissioning, with the aim of tracking the effectiveness of mitigation measures and ensuring compliance with environmental regulations and standards. Additionally, biodiversity within the project area will be closely monitored, including various ecological aspects such as aquatic and terrestrial habitats, the presence of invasive species, wildlife protection, as well as water quality and noise levels.

**Table 6 Environmental and Social Monitoring Plan**

Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
<i>Air Quality</i>					
Pre-construction	Air Quality pollutants (PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO).	Construction site and nearby sensitive receptors (defined in ESIA)	Pre-construction monitoring / Air sampling and measurement	Monitoring will be conducted for a period of at least one month, covering representative weather conditions.	PWMC Srbijavode
Construction, Decommissioning	Air quality pollutants (PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO)	Construction/decommissioning site and nearby sensitive receptors (defined in ESIA)	Regular dust monitoring surveys / Air sampling and measurement	Monthly during construction/decommissioning activities	Contractor
Construction, Decommissioning	Air quality pollutants (PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>x</sub> , SO <sub>2</sub> , CO)	Settlements along access roads in Radusa Slatina and Pambukovica, crops within area of influence, habitats and species within area of influence	Visual monitoring	During construction and decommissioning activities/daily	Contractor
<i>Noise and vibrations</i>					
Pre-construction	Conduct noise measurement in accordance with Article 18 of the Environmental Noise Protection Law	In proximity to sensitive receptors / Settlements along access road in Radusa and Habitats and species within area of influence	Pre-construction monitoring / Sound level meter measurements	Once, before construction activities	PWMC Srbijavode

Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
	("Official Gazette of the Republic of Serbia", No. 96/2021) before putting the noise source into operation, and obtain a noise measurement report from an authorized professional organization.				
Construction, Decommissioning	Conduct noise measurement in accordance with Article 18 of the Environmental Noise Protection Law ("Official Gazette of the Republic of Serbia", No. 96/2021)	In proximity to sensitive receptors / Settlements along access road in Radusa and Habitats and species within area of influence	Regular monitoring / Sound level meter measurements	Monthly during construction/decommissioning activities	Contractor
Construction, Decommissioning	Noise and vibration levels (Complaint-based)	At/near complainant's location (specific address)	Complaint monitoring / Sound level meter measurements	During construction and decommissioning/daily, evening and night/during activities on site	Contractor
Construction, Decommissioning	Vibration levels / condition of the structures	Settlements along access road in Radusa Slatina and Pambukovica (sensitive receptors such as individuals with respiratory conditions, children, and the elderly); Pambukovica Health Center and the Primary School in Pambukovica; Cultural Heritage sites (where required)	Pre-construction monitoring / a detailed pre-condition survey of all sensitive buildings by a qualified, independent surveyor to visually identify all existing signs of exterior or interior damage, cracks (including size, type and direction) and settlement.	Once, before construction activities	Contractor
Construction, Decommissioning	Vibration levels / condition of structures	Settlements along access road in Radusa Slatina and Pambukovica (sensitive receptors such as individuals with respiratory conditions, children, and the elderly);	Regular monitoring / vibration levels and condition monitoring of the identified receptors. Visually identify all existing signs of exterior or interior damage, cracks	At least bi-monthly, and following the construction activities that generate a high level of vibration at specific location	Contractor

Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
		Pambukovica Health Center and the Primary School in Pambukovica:); Cultural Heritage sites (where required)	(including size, type and direction) and settlement.  If required, crack gauges will be installed to enhance monitoring and construction methodologies will be refined to reduce vibration levels		
Construction, Decommissioning	Vibration levels / condition of structures	Settlements along access road in Radusa Slatina and Pambukovica (sensitive receptors such as individuals with respiratory conditions, children, and the elderly); Pambukovica Health Center and the Primary School in Pambukovica:); Cultural Heritage sites (where required)	Post-construction condition surveys in consultation with affected people to identify any damage. Visually identify all existing signs of exterior or interior damage, cracks (including size, type and direction) and settlement. Confirmation, as needed by a qualified, independent surveyor.	Once, post construction	Contractor
Construction, Decommissioning	Condition of the local /access roads	Local and access roads used by the Contractor	A pre-condition survey of all access roads to be used.  Conducted by a civil engineer experienced in roads and will use photographic, video and other supporting materials to document the road condition in survey reports	Once, pre-construction	Contractor
<b>Soil and groundwater</b>					
Construction, Operation, Decommissioning	Groundwater quality and level	Two piezometers (one on the left and one on the right bank at the dam profile) (defined in ESIA)	Sampling and analysis in accordance with the Regulation on Limit Values of Pollutants, Harmful and Hazardous Substances in Soil ("Official Gazette of RS," No. 30/18 and 64/19), Annex 2 – Remediation Values of Pollutants in the Aquifer Layer	Twice a year	Contractor, PwMC Srbijavode
<b>Construction, Decommissioning</b>	Groundwater quality and level	Affected wells in the settlements around the reservoir.	Conduct baseline measurements of groundwater levels in affected wells before construction begins.	Once, pre-construction	Contractor

Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
Construction, Operation, Decommissioning	Groundwater quality and level	Affected wells in the settlements around the reservoir.	Carry out regular monitoring during the construction and operation phases	Quarterly during construction Annually during operation (4 years)	Contractor during construction PWMC Srbijavode during operation
Construction, Decommissioning	Soil erosion, Land stability	Construction/decommissioning site, borrow pits	Visual monitoring (visual inspection of erosion control measures)	During construction and decommissioning activities/beginning of activities on site	Contractor
<b>Surface water</b>					
Pre-construction, Construction, Operation	Pollution Control Strategy (WEMMP Action 1)	Project-wide	Water quality monitoring, inspection of water quality control measures	Ongoing during construction and operation	Contractor, PWMC Srbijavode
Operation	Water quantity disclosure and hydrograph monitoring (WEMMP Action 2)	Flowmeter located on the discharge pipework.	Monitoring reduction in flows	Continuous	PWMC Srbijavode
Pre-construction up to Operation and Decommissioning	Monitor reservoir and downstream water quality (WEMMP Action 3)	Upstream, at the reservoir and downstream of reservoir	Water quality monitoring	Monthly baseline monitoring reflective of seasonal changes. Daily monitoring during construction and decommissioning. Monthly during the first 4 years following reservoir filling and every quarter during operation.	Contractor, PWMC Srbijavode
Operation	Monitor upstream restoration measures (WEMMP Action 4)	Upstream biological, biotechnical, filters and agricultural practices	Monitor forest growth and erosion. Monitor braid and bank stability. Monitor improved agricultural practices.	Annual	PWMC Srbijavode
Design–Operation	Habitat fragmentation and species displacement (WEMMP Action 5)	Design considerations at water courses intersected by project (especially downstream of weirs)	Monitoring of aquatic habitats, species movement	Ongoing during construction and operation	Contractor, PWMC Srbijavode

Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
Pre-construction, Operation	Downstream change in lateral and longitudinal sediment dynamics (WEMMP Action 6)	Upstream flood barriers, reservoir, downstream river	Morphology (i.e. sediment accumulation in sediment traps), turbidity (also refer to Action 3), bathymetry (i.e. sediment accumulation in reservoir), bedload, suspended load	Annual (or immediately downstream following flood event/flushing)	Contractor, PWMC Srbijavode
Operation	Composition of floating debris	On the overflow part of the dam	Composition of floating debris	Frequency depends on the amount of floating debris	PWMC Srbijavode
<b>Biodiversity (Biodiversity Management Plan)</b>					
<b>Please refer to Chapter 8.7 and Table 64 of the ESIA Volume I Book 4 Biodiversity Impact Assessment, which outlines the details of the Biodiversity Management Plan and monitoring required.</b>					
<b>Resource and material management</b>					
Construction	Quantity of materials (excavated, sourced) and resources (water, electricity) used in construction	Excavation sites, Off-site quarries, cement plants, Dam body, access roads and other Project work areas and facilities	<ul style="list-style-type: none"> <li>-Daily material volume logs and contractor records</li> <li>-Material origin verification</li> <li>- GPS mapping, and recordkeeping</li> <li>- Supplier audits and material tracking system</li> </ul>	Monthly	Contractor, PWMC Srbijavode
Construction	Quantity of water extracted from Ub River	Any point of water extraction by Contractor from Ub River.	<ul style="list-style-type: none"> <li>- Daily monitoring of the water flow level at the location of extraction</li> <li>- Daily monitoring of quantity of extracted water</li> <li>- Requirements of the water extraction limit set by relevant water authority in the water extraction permit</li> </ul>	Daily monitoring, monthly reporting	Contractor
Operation	Quality of sediment	One location in the accumulation zone, and one in each deposit location	Regulation on Limit Values of Pollutants in Surface and Ground Waters and Sediments and Deadlines for Their Achievement ("Official Gazette of RS", No. 50/12), Annex 3, Chapter I - Limit Values for Assessing Sediment Quality, Table 1 - Limit Values for	Annually	PWMC Srbijavode



Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
			Assessing the Status and Trend of Sediment Quality		
Construction and post-construction	Land stability, visual landscape	Disposal sites	Visual monitoring of disposal sites stability	Monthly	Contractor
<b>Waste management</b>					
All Phases	Waste tracking and documentation	Entire project footprint	Review of waste manifests, site waste registers	Monthly	Contractor, PWMC Srbijavode
Construction	Segregation of construction waste	Work and storage areas	Site walkthroughs, segregation checks	Weekly	Contractor
<b>Cultural Heritage</b>					
Construction	Implementation of Chance Find Procedure	Excavation and earthwork zones	Daily supervision and incident log review	Continuous	Contractor
<b>Social Monitoring</b>					
<b>Construction</b>	Labour impacts (working conditions, health and safety, wages, working hours)	Construction site	Review of HR records, worker interviews, site inspections	Quarterly	Contractor, monitored by PWMC Srbija Vode
<b>Construction</b>	Local employment data (number of workers, share of local workers, gender disaggregation)	Construction site	Review of workforce records and employment data	Monthly	Contractor, monitored by PWMC Srbija Vode
<b>Construction</b>	Grievance redress – workforce (number, type, resolution of grievances)	Workforce grievance register	Review of grievance logs and resolution reports	Monthly	Contractor, monitored by PWMC Srbija Vode
<b>Construction</b>	Grievance redress – community (number, type, resolution of grievances) including but not limited to: - Encroachment	Community grievance register	Review of grievance logs and resolution reports	Monthly	Contractor, monitored by PWMC Srbija Vode

Phase	Monitoring Parameter	Location	Method of Monitoring	Frequency	Responsible Party
	<ul style="list-style-type: none"> <li>- Damage to private or public property</li> <li>- Construction nuisance (dust, noise, mud, traffic safety)</li> </ul>				

Following should be noted and considered in addition to defined in the ESMP:

- External monitoring is yet to be defined by EBRD. Once monitoring roles and responsibilities are confirmed, the table will be updated accordingly.
- Land acquisition and livelihood impacts are expected to be monitored externally - Completion Audit is defined under the Historic Land Acquisition Corrective Action Plan, to be conducted once the expropriation process is completed and the actions from the Corrective Action Plan have been incorporated substantially.

## 7. MANAGEMENT OF CHANGE

The management of change process applies to construction, commissioning, operation and decommissioning.

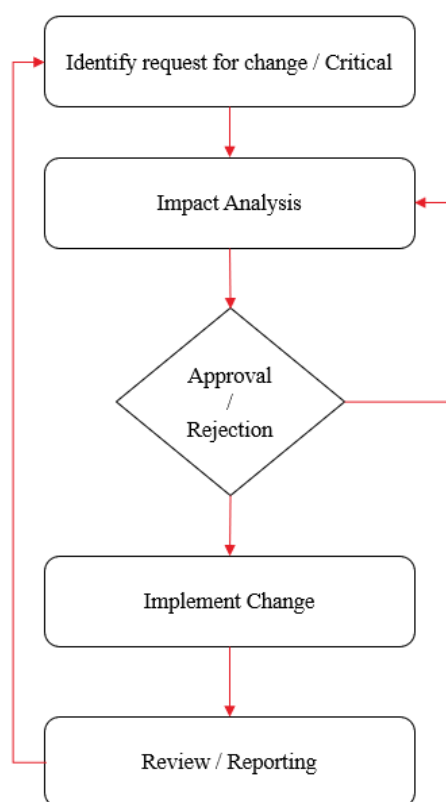
The process in place to manage changes impacting ESHS aspects of the project shall be integrated in the overall management of change process at the company level.

ESHS changes to be addressed include:

- new planned activities or processes and or changes in project activities, design or footprint leading to potential impacts that were not subject to assessment as part of the Project ESIA package;
- changes to ESHS management, mitigation and monitoring commitments not considered in the Project ESIA package;
- changes/updates of legal and regulatory requirements, technical standards and business objectives that may trigger potential impacts that were not subject to assessment as part of the Project ESIA package.

Changes to be considered may include:

- Design refinement or detailed design outcomes;
- Changes in construction methodologies;
- Field obstacles during construction;
- Results of further field surveys and monitoring;
- Comments/concerns submitted by public/stakeholders/lenders;
- Changes in regulations or requirements by regulatory bodies.



**Figure 3 Flowchart of the ESHS Change Management Procedure**

In addition, the process also applies to changes related to associated infrastructure located outside of the main project area, such as access roads, irrigation networks, construction camps, waste management areas or workers' accommodation.

The ESHS management of change process shall be managed by the ESHS Manager and comprises of the following steps.

#### ➤ **Change Identification**

ESHS changes shall be identified in various ways, including requests by the Contractors, engineering, construction teams. Changes arising from these teams shall be summarised in a **Management of Change Form** (committed to be developed and provided by Srbijavode).

Contractors shall provide justification for the proposed change, any considered alternatives, and indicate their preliminary evaluation of the ESHS category.

#### ➤ **Change Impact Analysis and Notification of Changes**

Upon receiving the Management of Change Form, the ESHS Manager performs:

- An assessment of proposed change risks;
- Screening review of any proposed changes that have the potential to give rise to new or additional significant impacts (positive or negative) which differ to those identified as part of the ESIA Package.

The Screening will be performed by/under the direction of the ESHS Manager, other Srbijavode staff and Contractors' Environmental Expert/Design Team, and/or with support from external specialized consultants. The screening will result in classification of the change into one of the following categories:

- **Level 1 Changes** – Changes where the potential impact of the change prior to mitigation will be minor.

- **Level 2 Changes** – Changes where the potential impact of the change prior to mitigation will be moderate.
- **Level 3 Changes** – Change where the potential impact of the change prior to mitigation will be major.

Level 1 Changes will be implemented by Srbijavode without notifying the Project lenders.

Level 2 Changes, Srbijavode will inform the Project Lenders of the change, but will not have to secure their approval prior to implementing the change.

For Level 3 Changes, Srbijavode will seek approval from the Project Lenders prior to implementing the change.

The changes that would be considered as Level 3 include:

- Changes to the Project design and footprint or activity that may result in a potential new major impact, or elevate an impact already assessed to a potential major impact.

For all Level 2 and 3 changes, an ESHS study will be required to confirm whether impacts are addressed through the ESMP, can be mitigated through additional measures, or require changes to management plans.

Srbijavode will however maintain a **register of all ESHS** changes, including details of the change, date of the ESHS review, findings of the review & justification, significance rating, and details of the actions that will be taken and by when.

This register (Change Log) will be periodically reviewed and shared with Lenders upon request. Actions arising in relation to ESHS management of change shall be tracked to closure and regular status updates recorded.

If the change requires revision of environmental permits or national EIA documentation, the PIU and Supervision Engineer will coordinate with regulatory authorities to ensure compliance and submit updated documentation as needed.

In cases where the approved change introduces mitigation measures not covered by the existing ESMP, the Contractor shall prepare an ESMP or CESMP addendum to address the gap, subject to review by PIU and Lenders.

A detailed procedure for the management of changes, including change categorization and the associated assessment form, is presented in **Appendix A – Management of Change Procedure**.

## 8. TRAINING

The Training requirements apply to construction, commissioning, operation and decommissioning.

### 8.1 Public Water Management Company Srbijavode

Srbijavode is committed to ensure that ESHS training is delivered to all its own staff as required for delivering their roles. Project staff are selected and recruited based on a competency and experience. All staff will receive an induction including ESHS information relevant to all roles (including actual or potential ESHS risks associated with their work activities, their behaviour, and of the potential consequences if Project ESHS obligations are not complied with), and ongoing role specific ESHS training that different levels of responsibility, ability, and risks associated with each position takes into account.

Capacity building training requirements will be defined as part of the Capacity Assessment.

Training records will be documented and held on file.

### 8.2 Contractor

Contractors and service providers are contractually bound to implement specified ESHS training requirements, including development and delivery of a training and competence matrix by role (**Training Plan**). This requirement will be contractually specified.

Each Contractor shall ensure that all construction employees (own and subcontractor staff) are adequately qualified and have the ESHS knowledge and skills required for the execution of their work duties.

Prior to the commencement of the work, each Contractor shall submit a **Training Plan** identifying specific training requirements against each role to Srbijavode for review and acceptance.

The **Training Plan** shall be based on an analysis of training requirements and shall comprise as a minimum:

- an induction training program to be delivered to all personnel (own and subcontractor staff), and site visitors;
- minimum competence requirements (including relevant certifications) by role;
- indication of refresh training schedule in line with the regulatory requirements and specific characteristics of work position; and
- general and job/task-specific training as needed for the performance of the duties under each role (own and subcontractor staff).

Contractors shall perform regular evaluations throughout the construction works period to ensure that the **Training Plan** has achieved its objectives i.e. that all staff (own and subcontractor employees) are suitably qualified, competent and fit for their job duties. The frequency and timing of such evaluations is to be determined by the Contractors and subject to Srbijavode approval.

Implementation of ESHS training requirements will be reviewed by Srbijavode throughout the contract period according to the provisions of this ESMP.



## 9. MANAGEMENT REVIEW

Management reviews shall be undertaken during construction, commissioning, operation and decommissioning.

Srbijavode and Contractor management reviews shall comprise:

- Srbijavode performance reviews;
- Contractor ESHS reviews;
- Project management meetings;
- Weekly and monthly ESHS function meetings.

Srbijavode senior management shall periodically review the overall effectiveness of the ESHS management system, annually as a minimum. The scope of the ESHS Management Review shall include:

- Non-conformances and corrective actions;
- Monitoring and measurement results;
- Audit results;
- Stakeholder feedback and concerns (as resulting from the stakeholder engagement process);
- Adequacy of ESHS resources;
- ESHS performance;
- ESHS incident trends, response and reporting;
- Opportunities for continual improvement;
- Significant ESHS risks and envisaged risk management in the following period.

The annual ESHS Management Review will inform the annual ESHS planning and targets as well as any changes including resource needs.

## 10. E&S COMMITMENTS & MITIGATIONS

Upon completion of the ESIA process, the mitigation measures to address potential project impacts as defined in the ESIA were transferred into a Commitments Register in the form of actionable measures, management and monitoring activities for implementation during Project implementation stages.

The Commitments Register provides summary of all actions which the Project has committed to execute to ensure the environmental/social/health committed environmental, social, health and safety performance. The Commitments Register was developed in an easily understandable format allowing to be used as a tool by the Project ESHS staff during Project execution.

The Commitments Register informed the Project Management Plans defined as part of this plan which detail the procedures put in place by PWMC Srbijavode and the Contractor requirements to ensure commitments implementation. The Commitments Register represents an integral part of this ESMP and is provided in **Appendix B**.

# Appendix A

## Management of Change Procedure

*See separate file*

# Appendix B

## Commitments Register

*See separate file*

# Appendix C

## **Biodiversity Management Plan**

(as presented in the ESIA Volume I Book 4 – Biodiversity Impact Assessment)

*See separate file*

# Appendix D

## List of Mitigation Measures

*See separate file*