

**FOSTERING AND LEVERAGING OPPORTUNITIES
FOR WATER SECURITY (FLOWS)**



MIE

**ENVIRONMENTAL AND SOCIAL
MANAGEMENT FRAMEWORK**

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ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

MIE (Ministry of Infrastructure and Environment)



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Abbreviation

FLAWS	Fostering and Leveraging Opportunities for Water Security
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
RPF	Resettlement Policy Framework
pRAP	Preliminary Resettlement Action Plan
EU	European Union
IPA	Instrument for Pre-accession
MIE	Ministry of Infrastructure and Environment
HMIK	Hydro Meteorological Institute of Kosovo



1. NON TECHNICAL AND EXECUTIVE SUMMARY

Kosovo has limited water resources which are often polluted. Services are poorly managed with outdated infrastructure and low financial sustainability. Flooding and droughts are causing damage to the economy, infrastructure and harvests. Currently, there are no river basin management plans, or actionable plans or forums to convene, debate, allocate and manage water use optimisation across sectors. The monitoring and the maintenance of the five existing dams were partially suspended in recent years. Currently, Kosovo is underprepared to tackle these water management challenges.

Realising the challenges, the Government with its partners, have begun to address the multiple challenges. The Government of Kosovo is working with the World Bank to develop a multi-sector investment program to respond to immediate challenges while developing the building blocks for improved water future of Kosovo, taking an integrated, systematic approach, i.e. *Long-term Project: Fostering and Leveraging Opportunities for Water Security (FLOWS)*. The FLOWS project includes the following components/sub-components:

Component 1: Foundational measures for water security (*Sub-component 1.1 - Strategic investment planning, Sub-component 1.2 - Enhance integrated water management capacity, Sub-component 1.3 - Investments in strategic water security measures*).

Component 2: Catalytic investments in Morava e Binces Basin (*Sub-component 2.1 - Strategic investments in water infrastructure and services, Sub-component 2.2 - Agro-environment and rural livelihood investments, Sub-component 2.3 - Participatory basin planning and implementation of small-scale*).

Within these components/sub-components different types of investments/activities are envisaged. Some of the activities proposed in project components/sub-components will be implemented on a national level, as activities proposed in Component 1, while the activities in Component 2 will be implemented in the region of Morava e Binace River Basin.

This document, the Environmental and Social Management Framework (ESMF), is prepared for the Project FLOWS (for Component 1 and Component 2). The ESMF sets out the general principles, rules, guidelines and procedures to assess the environmental and social risks and impacts and are propose general measures and plans to reduce, mitigate adverse risks and impacts. Also, ESMF provides information about the agencies responsible for addressing project risks and impacts, including its capacity to manage environmental and social risks and impacts.

In the ESMF, the legal environmental and social requirements related to the Project, defined in Kosovo's legislation are presented, as well as the conducting procedure for EIA. Additionally, the World Bank Environmental and Social Framework is taken into consideration which has set ten Environmental and Social Standards (ESS) that the Borrower and the Project will meet through the project life cycle. From the set ten ESS, the ESS7 and ESS9 are not relevant to this project.

The key relevant institutions for environmental and social management for the related projects are defined in the ESMF.

Stakeholder engagement and analysis activities are part of the development and disclosure of this document. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. The disclosure and consultation process for the ESMF is organised before appraisal of the project, but the ESMF will be public and accessible during the whole implementation cycle. The stakeholder engagement Framework is a standalone document that describes how the stakeholders are engaged during the preparation and implementation of the project activities. The stakeholder



engagement process secures possibility for grievances for any aspects of the project including Environmental and Social impacts. For this project, there has been an extensive consultation and communication process. In the ESMF, the Disclosure of ESMF, Public Consultations, Grievance Redress Mechanism and Establishment of Grievance Redress Committee are taken into consideration.

The environmental and social baseline information and analysis (physical, biological and social environment) relevant to the project (all municipalities in Morava e Binces Basin and the whole country) presents the environmental and social condition in the project area and the possible hot spots.

The environmental and social risks and impacts that may arise as a result of the proposed investments implementation (pre-construction, construction and operational phase) are taken into consideration and analysed on the basis of the baseline data. The proposed project investments are expected to cause positive environmental and social benefits as a result of improved: drinking water availability, irrigation delivery system and efficiency of water use, flood resilience, water quality in rivers, soil quality, protection of biodiversity, reduced land degradation, landslide stabilisation, increased awareness and capacity in coping with disasters, improved health and wellbeing, reduced potential risk for diseases, improved livelihood opportunities in the project areas, etc.

Although all investments are environmentally and socially beneficial, the construction of new infrastructure and upgrading or rehabilitation of the existing infrastructures are likely to result in certain adverse environmental and social impacts, as a result of: the nature of the activities, possible land use, use of materials and energy, generation of emission and waste, that may cause adverse impact on the air quality, climate, water, soil biodiversity, population, community etc. in all phases of the project. Of all proposed activities, the biggest environmental risks and impacts may cause activities related with construction and rehabilitation of irrigation infrastructure and water supplying infrastructure (substantial risks), while the biggest social risks and impacts may cause only activities related to construction and rehabilitation of irrigation infrastructure. The other investments/activities may cause low to moderate environmental and social risks. In order for anticipated risks and impacts to be avoided or reduced a mitigation measures are proposed.

In accordance with the WB policy, the Borrower is obliged to carry out appropriate environmental and social assessment of sub-projects, i.e. the sub-projects to be financed under the Project must undergo environmental and social screening procedure in the manner described in this ESMF. The basis of the screening procedure will determine, the category of the project and the type of further documentation that should be prepared. For the Low risk project, the Applicant needs to prepare ESMP - Check list, for Moderate risk - ESMP, for Substantial risk - Preliminary ESIA and for High risk - ESIA.

The Ministry of Infrastructure and Environment, the Water Sector and the PIU will have the overall responsibility for coordinating and monitoring the implementation of the ESMF. The monitoring of ESMF implementation includes compliance monitoring and evaluation.

In terms of implementation arrangements, it is proposed for the multi-sector Project Management Team (PMT) to be housed in the MIE, with participation of Ministry of Agriculture, Forestry, and Rural Development (MAFRD), led by a Project Coordinator and other relevant staff. Within the PMT there will be a specific Environmental and Social Unit.



In the ESMF, capacity building for all relevant stakeholders of the FLOWS project on a national and local level is proposed, which includes: training for main stakeholders, workshops and seminars for all stakeholders.

The MIE should provide funding for the preparation of documentation, arrangement of experts, conducting ESIA procedure, training, obtaining permits, implementation of techniques/technologies for impact mitigation, etc. In this phase of the Project, it is difficult to prepare exact budget estimates, so this should be included in the procurement plan.



2. INTRODUCTION

2.1. Context

Kosovo has limited water resources and very little river inflow from other countries, only one river (Iber) flowing into the country. The water resources in Kosovo are often polluted, services are poorly managed with outdated infrastructure and low financial sustainability. Flooding and droughts are causing damage to the economy, infrastructure and harvests, and currently there are no river basin management plans, or actionable plans or forums to convene, debate, allocate and manage water use optimisation across sectors.

At the same time, many problems have arisen from unprecedented urbanisation and the construction boom of the past decade, which has caused at times development in flood risk zones, impeded flood drainage, and legacy and newly emerging inadequate land use and land degradation in the rural areas. These issues are compounding the climate problems and communities have suffered water shortages and floods, ecosystem degradation, pollution and water-related diseases - particularly in the east of the country.

Five large dams exist in Kosovo. The monitoring and the maintenance of the dams were partially suspended in recent years. They are the backbone of the water supply in Kosovo. Visual inspections of the existing dams, brief review of existing documentation show that the dams are currently in stable conditions, but considerable knowledge and updated calculations are missing. Careful integration of dam safety and operational improvements cognizant of basin changes can significantly enhance overall basin water efficiency for multiple sectors.

Watershed protection is important for ensuring environmental functions. More than 55 percent of Kosovo's land surface is prone to mild or severe erosion, through forest loss and thinning, catchments get degraded, threatening their hydrological functions with noticeable reductions of flow in summer.

Kosovo's development strategy sets out tackling the high non-revenue water ratio in the drinking water sector. However, at the same time improving the environmental and financial sustainability of Regional Water Companies (RWCs) remains a priority in the drinking water sector, especially through the reduction of Non-Revenue Water (NRW) (in 2018 at 58 %).

Currently, Kosovo is underprepared to tackle these water management challenges. Efforts to address them are hampered by a multitude of factors.

The nation needs to prepare and implement a pipeline of water-related investments, in terms of irrigation for commercialisation and competitiveness, drinking water supply and water protection. Kosovo's water sector development should increase economic opportunities for rural populations for the development of agriculture, industry, tourism, services and other sectors. These inclusive developments should encourage collaboration among diverse communities. Pursuing these opportunities should also enhance Kosovo's implementation capacity of EU acquis and its readiness for transboundary water dialogue.

Realizing the challenges, the government, with its partners have begun to address the multiple challenges. Under the guidance of the Inter-Ministerial Water Council and following the Water Strategy (2017), efforts have begun to rehabilitate and improve the management of critical water resources assets in the country.

As a first step towards achieving Kosovo's long-term national water strategy, the Government of Kosovo is working with the World Bank to develop a multi-sector investment program to respond to



immediate challenges while developing the building blocks for improved water future of Kosovo taking an integrated, systematic approach, i.e. *Long term Project: Fostering and Leveraging Opportunities for Water Security (FLOWS)*. This project is built around two mutually reinforcing pillars: (i) *strengthening institutional capacity for transforming integrated land and water resources management foundations, and (ii) catalytic multi-sectoral investments in one target area.*

The proposed project aligns well with the World Bank's Country Partnership Framework (CPF) for Kosovo.

Since the project is closely aligned with the national aspiration on EU accession and is designed to help build capacity in the water sector to further align with the Water Framework Directive and other EU partnerships, it supports the broader national and regional priorities. The project is also expected to contribute to human capital outcomes in Kosovo, from health benefits through access to improved water supplies, water quality; to socio-economic benefits associated with water for irrigation, sustainable watersheds, and improved resilience through better management of water resources, dam safety and better management of weather shocks. Increases in household income, strengthened empowerment and determination of water pathways, improvements in water supply and hygiene all contribute to improved human development outcomes, as also contained in Sustainable Development Goal 6. The project also contributes to the WBG's twin goals of ending extreme poverty and promoting shared prosperity. The project area targets the driest and most at-risk region of Kosovo, where rural poverty rates and emigration rates are high.

2.2. Objectives of the Environmental and Social Management Framework

Environmental and social management framework (ESMF) is an instrument that examines the risks and impacts when a project consists of a program and/or series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified. The ESMF sets out the general principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. It contains general measures and plans to reduce, mitigate and/or offset adverse risks and impacts, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes general information on the proposed area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used. The detail assessment of the risks and impacts from the project activities will be provided after the preparation of the Feasibility study and the detail project documentation for proposed investments/activities.

The ESMF sets the requirements defined in the World Bank's Environment and Social Framework (ESF) as well as Kosovo's legislation that the project activities will need to comply with during their implementation. More precisely, this ESMF will be used as a guide for the Project implementation agency during preparation of the various projects/subprojects, conducting the ESIA procedure and its implementation.

It is expected that detailed environmental and social assessments for project sites (where specific project activities will be implemented) will be carried out in accordance with this ESMF reviewed and cleared by the World Bank and MIE.



3. PROJECT DESCRIPTION

3.1. Project Development Objective

The proposed project development objective is to (i) strengthen national capacity for managing Kosovo's water resources, and (ii) in selected basin areas, improve integrated land and water resource management practices and services.

The project proposed the following indicators for each of the two PDO (proposed project development objective) aspects:

- i. Strengthen national capacity for managing Kosovo's water resources (PDO part 1):
 - National Water Resources Investment Plan developed and presented to government for endorsement;
 - Structured stakeholder engagement mechanisms such as basin council introduced;
 - Data for spatial, hydro-met, climate, and dam safety made publicly available in near real time; and
- ii. In selected basin areas, improve integrated land and water resource management practices and services (PDO part 2):
 - Morava e Binces River Basin under approved management plan and agreed institutional mechanism for coordination;
 - Land area under sustainable landscape management practices;
 - People provided with access to safely managed water sources.

3.2. Project Components

This Project will implement both the basin's specific investments and the national investment plan. It will plan for a number of activities and implement investments that show readiness, and are proof-of-concept and/or provide learning opportunities. In doing so, the project seeks to make Kosovo's population less vulnerable to climate change—exacerbated floods and droughts—among other things, by focusing on integrated water resources management, infrastructure development, and efficient, reliable water supply services. Moreover, the project will be flexibly designed to adapt to priorities emerging from the basin planning process, and overall support water security—by adapting to climate change and preparing for future programmatic and larger scale investments. Finally, there are a number of activities (related to agro-environment, watershed, water-saving, afforestation, irrigation efficiency improvements, tourism) that are best approached through civil society initiatives and the private sector, and these will be supported through targeted and mainstreamed grant financing and sub-projects, piloting the EU Instrument of Pre-Accession Assistance for Rural Development (IPARD) grants and building these local initiatives within regional planning. Care shall be taken to maintain a balanced and self-standing project in all scenarios – Figure 1 below presents the two-pronged nature of the project and the envisaged evolution to a more programmatic approach as well as the broad spectrum of activities that jointly need to be implemented through or in close association with the project. The figure below illustrates the main components of the project:



Component I - Foundational Measures



Component II – Catalytic Investments and Emergency Response

From project-by-project to an integrated, systematic approach



Catalytic Investments program provides immediate tangible outcomes, and provides lessons learning on:

- Collaborative Integrated Watershed and (Sub) Basin Management (information, institutions, investments in storage and upstream catchment protection)
- Water Services (Irrigation, drinking water, flood protection)
- Livelihoods (IPARD style grants, agro-environmental investments)

Figure 1 Illustration of Project Concepts

Component 1: Foundational measures for water security (US\$22.1 million, of which IDA US\$11 million and EU IPA Grant €10 million)

This component will build the foundations for water security in the country and build readiness for major investments. It will support engineering studies, national level knowledge base development, and institutional capacity building for river basin management institutions. This component will focus on establishing the foundation for science-based water resources management planning and people-centred management capacities in Kosovo, including support for data collection, management and analysis, and human capacity development. These activities will also enable improved implementation of Kosovo’s Climate Change Framework Strategy.



Sub-component 1.1 - Strategic investment planning (IDA US\$4.0 million): As one of the most water stressed country in Southeast Europe, Kosovo needs to strategically manage its water resources for its people, environment and economy. However, many fundamental decision-making supporting data and tools are still lacking, preventing Kosovo from more efficient use of its water resources. While other donors such as the Swiss Agency for Development Cooperation has had long-term engagement with the Kosovo government and are supporting both the capacity enhancement at national level institutions and are starting the development of River Basin Management Plans for Kosovo's major river basins, these plans need to be turned into tangible investments to bridge infrastructure gaps and realise their full impacts.

This sub-component aims to improve the long-term vision and readiness for water security in Kosovo through the following specific activities: (i) develop the national water resources investment plan, including a strategic environmental assessment. This plan will consider the 1980s Master Plan, which includes the siting of more than twenty water reservoirs for Kosovo. The updated investment plan would be comprehensive, going beyond storage development and including optimising current storage management, nature-based solutions, and water loss reduction investments. Investment planning will consider different climate change scenarios, updated water demand projections, and ecological status of rivers; and (ii) subsequently develop a priority investment pipeline by supporting development of feasibility designs and studies for a limited number of prioritised investments, including the Kremenata Reservoir. In addition, structured stakeholder consultations on future investments will be imbedded within relevant activities.

Sub-component 1.2 - Enhance integrated water management capacity (IDA US\$3.6 million): Implementing integrated water resources management strategies developed in sub-component 1.1 and other similar initiatives, as well as the investments under component 2 require qualified professionals. Currently, Kosovo is in shortage of professionals with technical skills for water resources planning and management, and large-scale infrastructure development and asset management. In addition, many water sector agencies and institutions face shortage of technical and operational staff.

This sub-component will initiate a Young Professional Program (YPP) among participating sectors to help train and mentor the next generation of water, agriculture, and environmental specialists and facilitate their entry in the professional workplace. The YPP will consist of supporting an internship program on water security and project-related subjects in participating implementing agencies and civil society, targeting around 100 individuals over the project lifetime; as well as short courses and trainings for participating agency staff. Training programs will be designed to introduce integrated water resources planning and management, and support core water resources management functions. To prepare for improved water resources investment facilitation and dam safety operation, specific focus will be provided on building these skills in government. For data collection, management and analysis, specific training support will be provided for the hydromet department and cadastral agencies. For engineering and project management, secondments will be identified from participating institutions and agencies to join the Project Management Team (PMT) of this project and participate in every day project management. This sub-component will also finance the PMT staffing, equipment, office and operating costs as well as short term consultants needed to address ad-hoc technical challenges.

Sub-component 1.3 - Investments in strategic water security measures (IDA US\$3.4 million and EU IPA Grant €10 million): In addition to policy planning and human capacity challenges, Kosovo's water sector is facing other fundamental challenges that prevents science-based and more



sustainable water resources management. For example, Kosovo's existing dams lack an efficient surveillance network that allows regular monitoring and maintenance.

The sub-component 1.3 focuses on addressing investment gaps of strategic water infrastructure at the national level, including water information, dam safety surveillance, and irrigation efficiency. This component will dovetail well with the institutional support program by SDC in the water sector, which supports broad institutional strengthening of the River Basins Authority in MIE.

This sub-component aims to overcome the immediate investment gap for sustainable water resources management, by addressing hydromet challenges and investing in immediate needs for dam safety and irrigation systems nation-wide. Specifically, it will support the following activities: (i) investments and technical assistance to improve water information systems from data production, analysis and dissemination. This activity will be closely aligned with SDC support in the sector. This includes equipment and works for gauging stations and automatic weather stations, making data available in real-time; (ii) finance the assessments, equipment and training for institutionalizing dam safety surveillance measures. This will include a partial Dam Operation Improvement and Safety Project (DOISP) that will identify information, analysis and investment gaps on improving Kosovo's dam safety management capacity; and (iii) finance priority works and technical assistance that will improve water use efficiency measures to enhance water services delivery and demand management capacity of Kosovo's irrigation sector. In terms of dam safety, this project will address two main challenges in Kosovo's dam safety management: 1) **Improve dam safety surveillance and maintenance of existing dams in Kosovo**. The monitoring and the maintenance of the dams were partially suspended in recent years. Five large dams exist in Kosovo. They are the backbone of the water supply in Kosovo. Visual inspections of the existing dams and brief review of drawings and the existence of documentation (drawings, documents on material properties and analysis) undertaken during the Kosovo Water Task Force review¹ and World Bank Project preparations show that the dams are currently in stable conditions, but much knowledge and updated calculations are missing. The Kosovo government is currently employing dam safety panels of experts and is commissioning hydrological, seismic and hydraulic studies as well as instrumentation for two World Bank funded projects: 1) Agricultural and Rural Development Project, which is supporting Radoniqi irrigation scheme rehabilitation; and 2) Water Security and Canal Protection Project, which is supporting the rehabilitation of Gazivoda and Pridvorica dams. These are the largest dams and reservoirs in the country, and these will bring dam safety analysis up to current requirements. It would be advisable to build on this momentum to strengthen a more permanent panel of experts and dam safety operations; and 2) **Improve emergency preparedness and response measures in face of flood risks and potential dam failures**. Emergency preparedness capacities of regional water companies and emergency management agency in Kosovo are weak and there is limited understanding of risks faced by downstream communities in face of dam failure. Preliminary assessment is needed to understand the exposure of dam failure risks and how to prepare communities downstream of dams.

This project will implement further steps and investments designed and implemented from a partial DOISP financed through GFDRR grant. The DOISP is envisaged as the first stage of a long-term engagement with the Kosovo Government to enhance its dam safety management capacity of Kosovo's five existing dams and ensure adequate dam safety management capacity for new

¹ Kosovo Dam Safety Review. 2012. Accessed on 10/30/2019 at: http://knmu.kryeministri-ks.net/repository/docs/Kosova_Dam_Safety_Review_Oct_2012.pdf



reservoir construction and management. This project will also develop/improve an emergency action plan for government and regional water companies based on a roadmap developed through the GFDRR grant. The roadmap is expected to summarise the current status of emergency action plan implemented by regional water companies (dam owners), identify gaps considering outputs from the partial DOISP assessment, and develop a time bound action plan (road map) for the government and the regional water companies to address these gaps.

This component will include an additional Euro 10 million IPA grant from EU for strategic irrigation investment, to be prioritised under the irrigation masterplan which currently is under development. The EU IPA grant will support investments in irrigation infrastructure. To complement the EU IPA grant, IDA funding will provide technical assistance to improve irrigation water management and operational systems. Together, these investments will improve water resources availability, water use efficiency, and service delivery thus enhancing Kosovo's resilience against natural disasters exacerbated by climate change impacts.

Investments in irrigation infrastructure will be selected among the findings of the Irrigation Master Plan and Investment Framework currently being developed under the Bank-funded Agriculture and Rural Development Project. The EU IPA grant will provide funding for the infrastructure investment and technical assistance for:

- i. Investments in irrigation and drainage rehabilitation, modernisation and revitalisation of existing irrigated areas, including existing irrigation systems under Social Owned Enterprises (SOE)-managed schemes, as well as in other priority areas;
- ii. Investments in water storage (rainwater harvesting, small reservoirs) to increase water availability for irrigation and to develop climate resilience;
- iii. Detailed design studies and quality control and supervision of targeted irrigation and water storage investments; and
- iv. Support farmers to develop farmer-led irrigation and drainage improvement including support for extension, determining standards, and training of supply chain actors.

The Technical Assistance to improve irrigation water management and/or operational systems will include support to:

- I. develop water management information systems and tools for improved water use efficiency;
- II. change processes in irrigation SOEs towards improving irrigation service delivery, financial sustainability in the sector, and improve accountability and transparency, in conjunction with investments in systems' modernisation;
- III. develop and define clear mandates and roles for small-scale, non-SOE led, collective irrigation organisations of water users and provide technical support for collective irrigation systems; and
- IV. lead a policy dialogue for improved oversight and develop a framework for measuring and monitoring SOE irrigation performance.

Component 2: Catalytic investments in Morava e Binces Basin (IDA US\$29.0 million)

This component aims to catalyse water security investments in the Morava e Binces Basin. It finances immediate measures in integrated basin development and management in the selected sub-basin that includes: (i) the design and development of critical water infrastructure, particularly the preparation of strategic water infrastructures identified through Component 1 activities,



improvements to enhance the quantity and quality of irrigation and drinking water supply in response to the region's ongoing drought crisis and flood protection infrastructure; (ii) integrated upstream watershed and landscape agro-environmental management that can strengthen water security and resilience, protect source water, reduce erosion, and improve ecological services in an integrated approach; and improve rural livelihood measures; and (iii) the development of River Basin and Flood Risk Management Plans for Morava e Binces Basin and engaging citizens in a participatory process to empower bottom-up implementation of priority measures and support private initiative for water security. Sound management of the pertinent river basin, watershed, and landscape will reduce the possible impacts of extreme weather events, particularly flash floods and droughts (as explained in paragraph 8), thus increasing the residents' resilience to the latter risks.

Sub-component 2.1 - Strategic investments in water infrastructure and services (IDA US\$18.3 million): This sub-component will finance preparation and development of critical water infrastructure within the Basin, based on outcomes of sub-component 1.1 and RBMP/FRMP. These investments would build resilience in light of climate shocks and poor service delivery and include; (i) investments to expand, rehabilitate and modernise municipal water supply systems, including measures to improve performance and efficiency of water use in RWC Hidromorova within its service area. In addition, the project will finance works, goods and consulting services for non-revenue-water diagnostic and drought management planning and implementation measures for Gjilan and other systems under RWC Hidromorava's management. This will include a comprehensive set of activities as preliminarily identified in the RWC's drought emergency recovery plan, and will include the creation of District Metering Areas, leak detection and pressure management technical assistance and equipment, network rehabilitation, flow and pressure meters, smart water meters, customer GIS database development and public awareness activities. All these activities will make water supply services more reliable and increase water supply (especially through NRW reduction), thus contributing to residents' resilience to droughts; (ii) investments to rehabilitate and construct flood protection infrastructure (embankments) along the Morava e Binces River, thereby reducing the likelihood of flooding, linked with improved early warning systems. This investment is well aligned with Kosovo's national single project pipeline priority list, and currently identified at conceptual level, to be reconfirmed with the flood risk assessments; and (iii) this sub-component will also continue preparatory work for the Kremenata Reservoir in Kamenica Municipality. This is the highest priority water resources investment in the country's investment pipeline and would, once constructed, relieve immediate water pressures in the Basin. As this would entail construction of a moderately high dam, and design studies are 30 years old, it is imperative to update the analysis in many aspects, including from a social and environmental perspective in accordance with current baseline, demands and objectives. The project will support these studies, including through a WBIF technical assistance grant, and support the development of an updated detailed design, procurement and financial packaging as well as relevant social and environmental impact assessments and management plans.

Sub-component 2.2 - Agro-environment and rural livelihood investments (IDA US\$5.5 million): This sub-component will support the piloting of the implementation of several measures as defined in the Kosovo Agriculture and Rural Development Program (or IPARD² Program) including agro-environmental measures, farm diversification and the preparation and implementation of local development strategies. One of the key objectives of the IPARD program is to restore, preserve and

² IPARD – Instrument for Pre-Accession for Rural Development of the European Union



enhance the ecosystems depending on agriculture and forestry; transfer innovation and knowledge on water conservation, agriculture and forestry to rural communities and strengthen public administration capacity in implementing rural development programs. The agro-environmental measures and forest establishment and protection measures will be designed and piloted as part of the IPARD program. The aim of these measures is to finance the implementation of the micro-catchment and forestry operational plans, improve land use management practices and provide target communities with alternative livelihood opportunities and income. These grant measures will be administered by the Agriculture Development Agency (ADA)/Paying Agency (PA) and will be piloted in sequence with other project activities, including the support of an irrigation infrastructure. Eligible applicants may include individual applicants: farmers or private forest owners or associations of farmers or forest owners. Detailed activities to be supported, selection criteria, procedures, and safeguards requirement will be described in the Grant Operational Manual (GOM) which will be prepared during project implementation prior to each call. The grant scheme will create opportunities for PA staff to gain experience in establishing and implementing future EU IPARD support for forestry and agro-environmental measures while at the same time increasing awareness, capacity and demand from potential applicants to benefit from these investment schemes.

Sub-component 2.3 – Participatory basin planning and implementation of small-scale investments (IDA US\$5.7 million): This sub-component will introduce a participatory planning approach for the Morava e Binces basin and allow for related small-scale investments. Kosovo's aspiration for EU accession will be an important aspect for the activities by taking into account the EU Acquis Communautaire and respective water legislation, particularly the EU Water Framework Directive³ and the EU Floods Directive⁴. An Integrated Management Plan focusing on River Basin and Flood Risk Management will be prepared for the Morava e Binces basin over a period of approximately 4 years, closely coordinated with activities conducted by other development partners, particularly the Swiss Cooperation Office (SCO). Based on a stock-taking assessment, existing gaps and development needs will be identified, prioritised and subsequently addressed in the frame of the activity. This also includes the development of a formal institutional mechanism with different stakeholders to co-develop and consult while preparing the Morava e Binces Management Plan, as well as a "Platform" to engage the broader population in a so-called "Friends of the Morava Program". The Platform's objectives would be to increase people's knowledge and engagement in support of a shared vision on the development of the Basin, with optimal outcomes for the people, the economy and the environment. Conceptually, this would entail:

- A strong social-media communication component on the basin's development challenges and opportunities
- A small matching grants program for local organisations to organise edutainment/awareness campaigns, combined with practical improvements that support basin water security (grants of maximum EUR 5,000; requiring co-funding from applicants to be detailed in the POM)
- Amplifying the communication of achievements and lessons created under the participatory watershed planning component (see below).

This sub-component will also pilot a complementary participatory planning approach for integrated and sustainable management of natural resources (forest, pastures, water and agricultural lands) at

³ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy"

⁴ Directive 2007/60/EC on the assessment and management of flood risks



micro-catchment⁵ (MC) level initially in three municipalities (Kamenica, Ranillug and Gjilan). The integration of forest and pasture management with agriculture crops and livestock production, as well as promotion of soil and water conservation, will help communities and governmental agencies better manage and protect these resources. This process will feed into the preparation of the broader Morava e Binces River Basin Management Plan. This sub-component will support the implementation of the micro-catchment plans through two mechanisms: (i) it will finance goods and works for small-scale public investments as sub-projects and/or technical support for activities identified in the planning process in the above-mentioned areas; and (ii) in conjunction with the Platform matching grants program, the sub-component will also help formulate and pilot a climate resilience challenge fund that supports agencies, companies, CSOs, individuals, and academia to implement and test scalable innovations in the fields of evidence-based decision-making, watershed protection, service improvements, and achieving water or energy/commercial savings. This challenge fund will include different categories for grants, requiring transparent selection criteria and transparency on fund use and outcomes achieved, before scaling the initiative in future engagements. Activities that can be financed under 2.2 (agro-environmental measures) will be excluded from this fund, as well as minor awareness-oriented activities.

3.3. Results Chain

Achievements of proposed objectives should result in improved capacity to plan, manage and develop water resources at the national and the Basin level; improved availability, analysis and utilisation of information for decision-making; increased water storage capacity; improved irrigation service delivery and irrigation coverage; improved flood resilience; and increased water supply to meet residential (urban and rural) and industrial water demand; and overall stronger and more inclusive institutions that articulate development priorities into action. While the country needs these investments, currently it is not ready for a large transformation (due to lack of data, analysis and institutional frameworks for decision making). That is why the project is seeking to combine “ready to go” investments in one basin that nevertheless have real tangible outcomes and provide learning opportunities, with parallel work on preparation, prioritisation and planning for a scale-up of such investments and measures in the long run through a programmatic approach.

⁵ Micro-catchments (MCs) need to be defined before appraisal stage. MCs are smaller catchment areas within a watershed defined by hydrological boundaries. The average size of an MC and its population needs to be determined.



4. LEGAL AND REGULATORY FRAMEWORK

4.1. Foreword

Kosovo is Europe's youngest country. In 1999, after being part of the socialist Yugoslavia for over 50 years, Kosovo became a separate territory administrated by the United Nations (UN) and subsequently declared independence in 2008. Benefiting from international support and help of its own numerous diaspora, the country has achieved noticeable progress since independence, however, often at the expense of environmental safety and social fairness. Despite growing environmental concerns amongst general population, sustainable development and environmental protection are still not high on the list of priorities of Kosovo's political actors. It is a theme rather forced upon by the international organisations such as EU and WB and the political commitment is often poorly translated into practice with no real understanding of what such change of development recourse entails. Kosovo, with its policies directed to the overarching political objective of European integration, also aspires to and invests considerable efforts into becoming a member of the European Union (EU). Though such aspiration on top of the ongoing transition from the socialist command economic system to a young democracy gave strong push for privatisation, infrastructure and entrepreneurship development, it was burdened by ethnic conflicts that have lasted for over 30 years and unresolved international status, and did not deliver the expected prosperity, but created noticeable social gaps while adding to numerous inherited environmental issues. The 2018 EC Progress Report noted very little progress in the transposition of EU acquis in all sectors, with no recorded progress in environmental protection sector since 2017^{6,7}.

4.2. Relevant Institutions for the Project

The key relevant institutions for environmental and social management for the related projects are:

- Ministry of Infrastructure and Environment (MIE)
 - Department of Environmental and Water Protection
 - Inter-ministerial Water Management Council
 - Regional River Basin Authority (department under MIE)
 - Kosovo Environment Protection Agency (KEPA)
 - Kosovo Institute for Spatial Planning
 - Hydrometeorology Institute of Kosovo
 - Kosovo Conservation Agency (KCA)
- Ministry of Economic Development
 - Publicly Owned Enterprise Policy and Monitoring Unit
 - Geological Service of Kosovo
 - Regional Water Company 'Hidromorava' Gjilan
 - Department of Expropriation, etc.
- Ministry of Agriculture, Forestry, and Rural Development
- Ministry of Finance

⁶ European Commission Kosovo Progress Report, Staff Working Document, 2018.

⁷ Draft Kosovo Environmental and Social Framework (ESF) Implementation Stakeholders Mapping with Focus on Water Sector



- Ministry of Infrastructure and Transportation
- Municipalities: Kamenica, Raniluk, Gjilan, Viti, Klokot, Novo Brdo and Partesh
- Ministry of Local Government Affairs
- Water Service Regulatory Authority
- Association of Regional Development Agencies (ARDA)
- Ministry of Health - National Institute of Public Health
- Ministry of Labour, Employment and Social Policy

4.3. National Environmental and Social Legal Framework

4.3.1. National Environmental Legal Framework

Environmental Protection

The Environmental Protection Law (03/L-025-2009) is the highest level environmental legal document in Kosovo that regulates prevention and reduction of pollution, regulates environmental monitoring, and sets out the principles of rational use of natural resources. According to this law, planned projects, including changes in technology, reconstruction, and extension of facilities or interruption of operations, which may result in major environmental impact or which constitute risk to human health, require prior Environmental Impact Assessment (EIA). The procedure for the implementation of a comprehensive EIA is described in the Environmental Impact Assessment Law (03/L-214).

The Law No. 03/L-214 on Environmental Impact Assessment (EIA) regulates the procedures for identification, and screening, of projects subject to environmental impact assessment, and in addition, it describes aspects, content, scope of assessment, reporting and administration procedures of environmental impact assessments of proposed projects in order to provide all the relevant information regarding the environment, in order to enable and facilitate the decision making process. On the basis of environmental impact assessments, MIE issues Environmental Consent required for every public or private project (listed in Annex I or Annex II of this Law), that is likely to have significant effects on the environment by virtue of, among other things, its nature, size or location. Conducting the ESIA procedure in accordance with the Kosovo Legislation is presented in Annex 1 of this document.

The Law on Strategic Environmental Impact Assessment (SEIA) (03/L-230) aims to align the plans and programs developed for the protection of the environment and health of people. This law stipulates the development of an integrated approach to assessment in preparation of endeavours for environment protection towards a sustainable development. The law further stipulates that SEIA shall be developed for plans or programs that have potential for a significant environmental impact, which includes water, water resources, and waste management projects. SEIA provides a framework for further project developments which are subject to environmental impact assessment in accordance with the Law on EIA. SEIAs are primarily developed by municipal authorities, as a means to provide a framework for managing potential environmental impacts of development projects.

In general, the SEIA has sufficiently developed secondary and technical legislation to be implemented.

Administrative Instruction No. 10/2012 for the Release of Municipal Environmental Permit (MEP) regulates procedures and issuance, validity and other aspects of municipal level environmental assessment. MEP Report is requested on the basis of EIA Law Annex II screening, Annex III criteria



and MIE decision. It has a much narrower scope than the EIA, is limited to 10 pages and can be prepared by a natural person.

The Law on Integrated Prevention Pollution and Control (No. 03/L-043) transposes the EU Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control, offering the opportunity to address much of what the application of the ESS3 standard entails. However, the accompanying guidelines on best available techniques and acceptable limits (emissions, efficiency and other) have not been translated to Albanian, and, therefore, cannot be in general use, and projects must rely on WB EHSs.

According to the Law on IPPC, subject to the IPPC permit are industrial activities laid down in Annex 1 of this law, as follows:

- A person shall operate an installation only under the authorisation of the MIE;
- The application for a permit must be submitted by the person who will have control over the operation of the installation after authorisation of the permit;
- An application to the competent authority for a permit shall be in writing and shall have a content defined in the law.

Water

Kosovo made good progress in adopting the primary and secondary legislation for the water sector. The primary ones are: (i) Environmental Protection Law; (ii) Law on Waters of Kosovo; (iii) Law for Regulation of Water Services; and (iv) Law on Public Health (related to the quality of drinking water) are in force. Secondary legislation has also been adopted in accordance with the EC directives and licensing, permit and control procedures are defined in the following fields: (a) water resource management; (b) waste management; (c) spatial/urban planning and housing and construction; (d) nature protection and biodiversity; and (e) environment protection.

The national authority in charge of water resources governance and management is the Ministry of Infrastructure and Environment (MIE) supported by the Kosovo Environment Protection Agency (KEPA), which monitors the state of the environment, including water resources.

The corpus of legal documents that currently regulates water and wastewater management sector in Kosovo consists of the following primary and secondary laws:

- Law No. 04/L-147 on the Waters of Kosovo, or the Water Law;
- Law for regulation of water services (05/L-042);
- Law No. 02/L-78 on Public Health;
- Law No. 03/L-086 on the Activities of Water, Wastewater and Waste Services Providers;
- Law No. 02/L-9 on the Irrigation of Agricultural Lands;
- Administrative instruction (AI) No.03 /2018 “on Procedures for Water Permit”;
- AI No. 15/2017 “on Criteria for Determining the Sanitary Protection Zones for Water Resources”;
- AI No. 16 /2017 “on the Classification of Surface Water Bodies”;
- AI No. 17 /2017 “on the Classification of Ground Water Bodies”;
- AI No. 09/2017 “Instruction for Design, Construction and Use of Dams”;
- AI No. 05/2016 “for the regulation of the Status of Water Assets”;



- AI No. 04 /2016 “on Criteria and Procedures for the Protection of the Water Flows, Banks and Accumulations”;
- AI No. 02/2016 “on Water Payment”;
- Regulation No. 02/2016 “on the Manner of Determining the Acceptable Ecological Flow Rates”;
- AI No. 19/2015 “for Protection from Harmful Water Actions”;
- AI No. 30/2014 “on Limit Values of Effluents Discharged into Water Bodies and in Public Sewage Network” approved by the Government of Kosovo (GoK);
- AI No. 12/2013 “Water Information System”;
- AI No. 26/2013-MIE “on the Determination of the Evidence Manner and the Legitimacy of Water Inspector”;
- AI No. 16/2012 “on the Quality of Water Intended for Human Consumption”.

Strategies, plans and other documents:

- Kosovo Water Strategy 2017 – 2036

 **Air Quality**

Law on air protection (No. 2004/30) assigns responsibility for setting air quality and emissions standards; identifies main air quality indicators; and sets obligations for protection of air quality. Other relevant legislation is:

- Law on Air Protection from Pollution (No. 2010/03-L-160);
- Administrative instruction for substances that deplete the ozone layer and fluorinated greenhouse gases (Act.No.QRK-16/2013), Published on 11.11.2013;
- Administrative instruction No. 02/2011 on air quality assessment;
- Administrative instruction (GRK) - No. 21/2013 for arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in air;
- Administrative instruction No. 15/2010 administrative instruction on criteria for defining of air quality monitoring points, number and frequency of measurements, classification of pollutants which are monitored, the methodology of work, form and timing of data reporting;
- Administrative Instruction 2007, on the rules and standards of the discharges on air by the stationary sources of pollution.

 **Nature Protected Areas**

Law on Nature Protection No. 2010/03-L-233, relies on the principles of collaboration, sustainability, integration, polluter-pays, education and schooling, responsibility, and effective management for nature conservation. Other relevant legislation is:

- Law on Forests in Kosovo, 2003/3, amended 2004/29, 03/L-153;
- Administrative instruction GRK No. 18/2013 on proclamation of the Ecological network;
- Administrative instruction No. 19/2013 on assessment of acceptability of plan, program or intervention of ecological network;
- Administrative instruction No. 12/2011 - for the sources of natural habitat types, natural habitat map, threatened and rare natural habitat types, as well as safeguard measures for conservation of natural habitat types;



- Administrative instruction No. 18/2012 for proclamation of wild species protected and strictly protected;
- Administrative Instruction on the Collection of Protected Wild Plants Species, with the Purpose of Processing and Trading No. 08/2011/ (13.07.2011);
- Administrative Instruction on Maintenance Conditions, the Manner of Marking and Evidencing of the Protected Animals in Captivity No. 01/2012/ (28.02.2012);
- Administrative Instruction on the Content and Manner of Preserving Nature Protected Values No. 07/2012 (18.06.2012);
- Administrative Instruction on Wildlife Crossings No. 16/2012 (01.08.2012).

Strategies, plans and other documents:

- Strategy and Action Plan for Biodiversity 2011-2020;
- Forestry Strategy 2010-2020;
- Strategy for Wildlife Management and Hunting 2012-2022 (a long-term plan for the conservation of ecosystem and ecological balance, adequate protection of wild animals, ensuring their welfare and conditions for economic utilisation of their natural resources);
- Strategy for Non-Wood Forest Products (NWFP);
- The Work Plan for the Selection of NATURA 2000 Sites Listing, Needed Data, Responsibilities, Timelines and Tools;
- Technical Report: Preliminary Identification of Natura 2000 Sites in Kosovo (Biodiversity Hotspots), etc.

The current legislation does not support separate permitting, therefore, for the time being the only procedure for permitting works in Nature Protected Areas is through the EIA procedure. For smaller works, outside of the EIA scope, permits are not required. However, projects need to take into account the limitations defined in the Nature Protection Law.

Waste Management

The Law on Waste No. 04/L-060 (2012) regulates waste management, plans for environmental management, rights and obligations of licensed persons who deal with waste management, manner and conditions of waste collection, transport, treatment, processing, storage and final disposal, import, export and waste transit, monitoring, information system and financing. Hazardous waste is also managed according to the provisions of the Law on Waste: MIE is mandated to manage hazardous waste, in cooperation with the respective Ministry.

Noise

Law on Noise Protection No. 02/L-102: The purpose of the Law on Noise Protection is to avoid, prevent or reduce the harmful effects (including annoyance due to exposure to noise) of noise on the environment. This law provides a basis for developing measures to reduce the noise emitted by road and rail traffic, aircrafts, outdoor and industrial equipment, mobile machinery and other major sources of environmental noise pollution and annoyance. The Law (promulgated in 2007) envisages the Government and municipalities to produce a Strategic Map of Noise and compile resulting Noise Action Plans, but neither have been produced to this date (June 2019).

Other relevant sub-law legislation: Administrative instruction - No. 08/2009 on allowed values of noise emissions from pollution sources.



Climate Changes

In order to implement the legislation on Climate Changes, the following AIs have been adopted:

- AI No. 16/2013 for substances that deplete the ozone layer and fluorinated greenhouse gases (EC/1005/2009 and EC/842/2006 F-Gases);
- AI No. 19/2013 on access to the information for economic consumption of fuel and CO₂ emissions of new personal vehicles (1999/94/EC);
- AI No. 20/2013 on implementation of flexible mechanisms for clean development (2003/87/EC); and Administrative Instruction (GRK) - No. 01/2016 on mechanism for monitoring greenhouse gas emissions, adopted on 29.01.2016.
- Administrative Instruction (GRK) - No. 09/2015 for monitoring greenhouse gas emissions, adopted on 30.12.2015; and
- Regulation (EU) No. 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions.

Cultural Heritage

According to the **Law on Cultural Heritage No. 02/L-88**, any intervention that may affect the integrity or value of the cultural heritage requires written permission from the Competent Institution. The Competent Institution shall order an immediate stop for an unspecified period of time of any kind of unauthorised work on the Cultural Heritage. Application for permission to construct buildings or other developments within the Protective Zone of an architectural monument, or within an architectural conservation area, or affecting the setting of an ensemble, must be submitted for consideration to the Competent Institution. The Competent Institution has a veto right over the granting of such permission. If the Competent Institution does not respond to an application to construct buildings or other developments within 15 days, the permission can be granted by the relevant planning and building authority. The Law allows any construction work in locations which may impact cultural values, structure of the cultural heritage object that is under temporary protection list only following a written permit of the respective institution.

Other Relevant Legal Framework

There are other relevant laws/policies in the country which could be relevant to the project scope, like:

- Plant protection product
- Agricultural policy
- Forestry policy

4.3.2. Environmental Impact Assessment Procedure

In compliance with the EU Directives and with Article 7 of the Law No. 03/L-214 “*on Environmental Impact Assessment*”, an environmental consent shall be required for every public or private project listed in Annex I or Annex II of this Law, which is likely to have significant effects on the environment by virtue, *inter alia*, of its nature, size or location. On the basis of the same Law, all projects which are listed in Annex I **shall be obliged to implement an EIA**, asking the corresponding authorisation from the Ministry of Infrastructure and Environment (MIE), while projects listed in Annex II shall be examined, case by case and in accordance with the criteria set out in Annex III, in order to determine whether they must require an EIA. It is very important to mention that the MIE shall not grant any environmental consent mentioned above until an EIA has been carried out on the project and the applicants shall not be granted a construction permit or any other permit (including IPPC) for the



above-mentioned projects and he shall not begin to execute any of them, until he has not been granted an environmental consent by the same MIE. Only in the case of projects with national defence purposes and upon decision of the Government, the MIE may allow, for special cases, the non-completion of the EIA. Therefore, an EIA is required for any kind of the new or renovated installation as defined by the Annex I to the Law No. 03/L-214, presented in Annex I.

In accordance with the Law, the EIA procedure includes the following phases: (1) selection; (2) scoping; (3) review of EIA Report and (4) public debate. Only the main conclusions and recommendations included in the EIA Report and in the proposed decision for environmental consent (not the whole report) are subject to public debate. The Applicant is responsible for organising the public consultation meeting and for collecting relevant opinions and comments from the public. The Public Consultation Plan (PCP) prepared by the Applicant determines the location, date of the public debate, the mechanisms and times for informing the public, and the locations where the Non-Technical Summary of the EIA Report and the proposed decision will be displayed. MIE approves the Public Consultation Plan, and the public debate cannot be held until the Applicant has received written approval from MIE. The public is usually informed of the EIA, date, place and time of the public debate and availability of documents through public information media, including an announcement in at least one daily newspaper. The public consultation meeting is held within 20 to 30 days from public announcement. While information dissemination is the responsibility of the Applicant, a public consultation meeting is organised and facilitated by MIE (including EIA summary presentation). Conducting the EIA procedure in accordance with the Kosovo Legislation is presented in ANNEX I of this document.

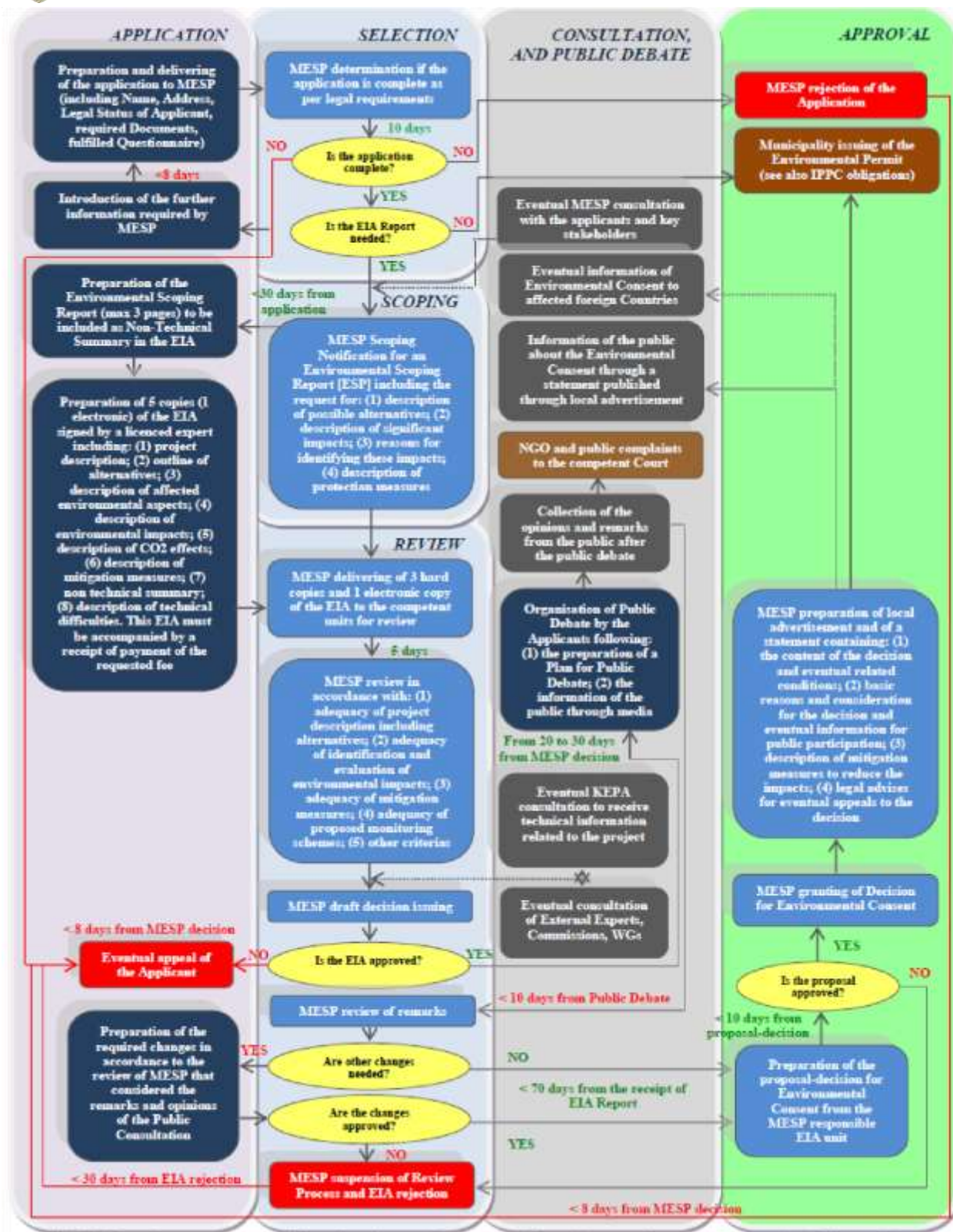


Figure 2 Procedures to approve an EIA and to release an Environmental Permit in accordance with Kosovo law⁸

⁸ Source: Environmental Impact Assessment/Strategic Environment Assessment that Integrates Climate Change and Biodiversity, SLED Project (2014-IC-108) *Booklet on the EIA process* (5 November 2014)



In the frame of the project the PIU established by the MIE will be responsible for conducting early environmental and social screening of the proposed sub-projects in order to define eligibility criteria.

4.3.3. National Social Legislation Overview

Health and Safety

Law No. 2007/02-L-78 on Public Health, aims to provide the legal basis for the protection and promotion of the health of the citizens of the Republic of Kosovo through the promotion of health, preventive activities, and the provision of comprehensive and quality health care services. The law provides rights and obligations in the field of health, principles of health care and the health care system, activity of health institutions and oversight of health services.

Law No. 05/I-088 on Road Traffic Safety: This law determines the main mutual basis of the relationships and behaviours of the participants and other subject in road traffic, the basic conditions that the roads should meet in terms of development of road traffic, system of traffic signs, and signs given by the authorised persons, duties in case of road traffic accidents, preparation of candidates for driver, passing of driver examination, and the conditions for the right to drive a vehicle; towing vehicle, means and equipment that vehicles must be equipped with, dimensions, total weight, vehicle axes weight, and conditions that should be met by the vehicle in traffic.

Labour and Workforce

Law on Labour (03/L-212) regulates the rights and responsibilities of parties that have established a formal employment relationship. The law regulates employment in both private and public sectors. It bans all forms of discrimination and any form of forced work. Law stipulates terms and criteria for establishing employment relationships and requirements for the working conditions, including working hours, remuneration schedule and other employment benefits. Termination of contracts and grievance mechanisms are also regulated by this law. The law establishes a social dialogue, which is further elaborated in the Collective Contract. The Law on Labour offers general guidance for occupational protection and safety, which is further regulated by the Law on Safety and Health at Work (04/L-161). Working conditions are further regulated by a set of administrative instructions (AI), which prohibit or provide minimum requirements for working arrangements for minors (such as AI No. 05/2013 and AI No. 17/2008), define grievance mechanisms and disciplinary procedures (regulation No. 01/2018), maternity leave and remuneration during maternity leave (AI No. 01/2018, AI No. 07/2014, AI No. 05/2011), establish the minimum wage (AI No. 09/2017), etc.

Among others, Law on Labour (No. 03/L-212):

- Prohibits all forms of Discrimination: Discrimination is prohibited in employment and occupation in respect of recruitment, training, promotion of employment, terms and conditions of employment, disciplinary measures, cancellation of the contract of employment or other matters arising out of the employment relationship and regulated by Law and other Laws into force;
- Prohibits Forced or Compulsory Labour;
- Protects Youth, Women and Persons with Disabilities;
- Protects of Employees' Rights.

The purpose of **Law No. 04/I-161 on Safety and Health at Work** (16.05.2013) is to set measures for improving the level of safety and health of employees at work. It regulates working conditions at a workplace, rights of employees and employer obligations, in general. It contains general principles



for prevention of occupational hazards, elimination of hazardous and accidents factors, information, consultation, balanced participation in improving the level of safety and health at work, treatment of employees, their representatives and general guidelines for implementing such principles.

Law on the Protection from Discrimination (05/L-021) provides a general legal framework for prevention of and protection from all forms of discrimination on any rounds in public and private life. It is aligned with EU directives embracing equal treatment of persons regardless of racial or ethnic origin and gender. Regulation No. 03/2017 promulgated by the Kosovo Government defines rules and responsibilities of government stakeholders with regard to the legal framework implementation and protection against discrimination.

Land Acquisition and Resettlement

Law on Expropriation (03/L-139) regulates all expropriation activities in Kosovo. It foresees procedures, including legal remedies for the protection of individuals from unfair interferences with their property rights. Based on the Law on Expropriation, the Government shall have the authority to expropriate property for the construction, enlargement, establishment or placement of mines and other works, safety areas and facilities for or relating to activities involving the exploitation of mineral resources. The law states that the expropriation authority may only be a government institution, either at the national or local level (i.e. municipality). The Law on Expropriation has been complemented with secondary legislation, most notably technical procedures in expropriation projects, such as the Administrative Instruction No. 02/2015 on the Approval of Technical Evaluation Methods and Criteria for Calculation of the Compensation Amount for the Immovable Property Expropriated, and Damages Related to Expropriation.

Other relevant laws to the Land Acquisition and Resettlement issue are described in standalone document named Resettlement Policy Framework, which is planned to lead any land take activities.

Stakeholder Engagement and Communication

The need for public disclosure and consultation activities, under national legislation, are set in the following relevant legislation:

- Law on Environmental Protection⁹
- Law on Environmental Impact Assessment¹⁰
- Administrative Instruction on information, public participation and interested parties in the environmental impact assessment procedures¹¹
- **Law on Use of Languages**

Other relevant Laws which foresee disclosure of project information or support access to information, encompassing processes for raising grievances and appeals, are:

- **Article 41 of the Constitution of the Republic of Kosovo,**
- **Law on Access to Public Documents¹² (LAPD),**
- **Law on Spatial Planning¹³,**

⁹ No. 03/L-02526

¹⁰ No. 03/L-21437

¹¹ No. 09/11

¹² No. 03/L-21519

¹³ No. 04/L-174



- **Administrative Instruction 16/2015 on Information, Public Participation and Interested Parties**

Furthermore, the country has not acceded to the **Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters**. However, most of the principles of the Convention have been implemented in the national legislation.

4.4. World Bank Environmental and Social Framework

The World Bank Environmental and Social Framework (2018) sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity. This Framework comprises:

- A Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability;
- The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and
- The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the Borrower and projects.

The World Bank Environmental and Social Framework, has set ten Environmental and Social Standards that the Borrower and the project will meet through the project life cycle, as follows:

Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts

ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).

ESS1 is relevant to the project. The proposed project activities/investments within the FLOWS from environmental and social aspects are assessed with low to substantial risks. For that reason, within ESS1, the Borrower is obliged to conduct environmental and social impact assessment of the proposed project activities on the base on the screening criteria for sub projects, which is part of ESMF (for the Low risk project, the Applicant needs to prepare ESMP - Check list, for Moderate risk - ESMP, for Substantial risk - Preliminary ESIA and for High risk – ESIA). The environmental and social assessment will assess the impacts and risks in an integrated way (direct, indirect and cumulative environmental and social risks and impacts throughout project life cycle, including those specifically identified in the ESS2-10), propose mitigation measures and monitoring activities. The environmental and social assessment will include stakeholder engagement as an integral part of the assessment, in accordance with ESS10.

Environmental and Social Standard 2: Labour and Working Conditions

ESS2 recognises the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

ESS2 is relevant to the project, therefore Labor Management Plan (LMP) will be prepared. LMP is part of ESMF and it will be mandatory for Contractor and Sub-contractors, for any of the sub-projects (investments). ESS2 also addresses the necessity of mandatory use of PPE, for all workers.



The occupational health and safety topic are covered with national law and ESS2. Regular health checks for all workers engaged on any of the planned project activities will be also part of the care for worker's health and safety that ESS2 proposes. Occupational Health and Safety Plan is mandatory and should be developed by each contractor and their subcontractors where there is at least minimum risk for the health and safety of engaged workers on this project.

Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management

ESS3 recognises that economic activity and urbanisation often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations.

At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.

This ESS3 sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with GIIP.

The ESS3 is relevant to the project. Project activities/investments include use of a raw materials from borrow pits, energy, water etc. Also, as a result of project activities a large quantities of construction and demolition waste (hazardous and nonhazardous) are expected. Proposed project activities include use of chemicals and hazardous materials, pesticides, etc.

Proposed project activities and generated emissions may cause risks and adverse impacts on air quality, climate change, water and soil quality. For that reason it is recommended the Borrower to consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The measures will be proportionate to the risks and impacts associated with the project and consistent with GIIP, in the first instance the EHSs. Mitigation measures include direct measures for avoiding possible impacts and risks, preparation of plans (Waste Management Plan, Asbestos Management Plan, Hazardous Materials Management Plan and Spill Prevention Control etc.) and implementation of measures that will arise from the plans (in construction and operation phase of the project), trainings, etc.

Environmental and Social Standard 4: Community Health and Safety

ESS4 addresses the health, safety and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimise such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

ESS4 is relevant to the project. Given the linear character of the sub-projects, full partition or fencing of construction sites might not be possible, therefore, signalling will be installed and mitigation measures to control excessive noise and dust levels will be ensured through a robust mitigation and management plan in the proposed ESMPs or site-specific ESMP Checklists.

Traffic/Road Safety Management Plans with appropriate measures to ensure the safety and wellbeing of nearby communities and road users during construction and for the operation phase will be prepared in cooperation with the local authorities, including traffic police. General guidelines for traffic management plans are included in ESMF to guide contractor to prepare site specific plans. Special guidelines will be given for sensitive sites like schools, hospitals, religious places, etc. A Traffic Management Plan will be prepared by the Contractor prior to commencing with reconstruction/rehabilitation activities.



It is also necessary to prepare the Emergency Response Plans with procedures to respond to accidental leaks, spills, emissions, fires, and other unforeseen crisis events. This is due to the construction of infrastructure for transportation of liquids (water) from one point to other and furthermore distributing it to the homes, as end users.

Establishing and implementing appropriate quality management system to anticipate and minimise risks and impacts that such services (water or irrigation canals, such as drowning, flooding, or water-related diseases) may have on community health and safety.

Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

ESS5 recognises that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

ESS5 is relevant to the project. The Resettlement Policy Framework is prepared because the program during the preparation will not be able to identify all investments and all sub-project details that determine the need for land acquisition and appropriately, the adverse impacts that are generated with this act. For a sub-project to generate land and livelihood related impacts, a site-specific Resettlement Action Plan will be prepared.

Some of the planned investments will include earthworks in their construction phase, for which a process of private land acquisition will be necessary.

Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

ESS6 recognises that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services¹⁴.

The ESS6 is relevant to the project. Although, the locations of proposed subproject activities/investments are still not identified, there is a possibility some of the works to be carried out in the areas with valuable biodiversity, habitats and species. The area and potential impacts will be identified during project design when specific locations will be known. More precisely, in the screening phase will be determined whether the project activities are going to be performed in the protected areas, taking into account the nationally and internationally recognized and designated protected area, or in areas with important habitats and species. In addition in the preparation phase of the sub projects, monitoring of the ecosystems, habitats and species should be performed, in order proper measures to be implemented for avoidance or reduction of possible impacts.

¹⁴ Requirements related to ecosystem services are set out in ESS1



Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

This standard is not applicable to this Project given the fact that in Kosovo, there are no any social or cultural groups of specific characteristics defined in ESS 7.

Environmental and Social Standard 8: Cultural Heritage

ESS8 recognises that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people’s cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.

ESS8 is relevant to the project. Cultural Heritage Management Plan is necessary to be created if some covered or uncovered cultural heritage will be affected. All project activities and investments will try to avoid locations that are known to hold cultural heritage, to the maximum extent possible. Any of the investments that will include earthworks will have established the Chance Find Procedure within the construction plan.

Environmental and Social Standard 9: Financial Intermediaries

This standard is not applicable as the project does not envision involvement of financial intermediaries.

Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure

ESS10 recognises the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

ESS10 is relevant to this project. Creation of Stakeholder Engagement Framework will chart the general rules for information dissemination and engagement to all project stakeholders. Due to the specific stakeholder list for the program, and specific activities it is recommended each sub-project to create its own Stakeholder Engagement Plan that will target its appropriate audience.

4.4.1. Environmental and Social Risk Classification

The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications:

- High Risk,
- Substantial Risk,
- Moderate Risk or
- Low Risk.

In determining the appropriate risk classification, the Bank takes into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the



environmental and social risks and impacts in a manner consistent with the ESSs¹⁵. Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed.

These could include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security. The Bank will disclose the project’s classification and the basis for that classification on the Bank’s website and in project documents.

4.4.2. Projects Involving Multiple Small Subprojects

In accordance with the World Bank Environmental and Social Framework, for projects involving multiple small subprojects¹⁶, that are identified, prepared and implemented during the course of the project, the Bank will review the adequacy of national environmental and social requirements relevant to the subprojects, and assess the capacity of the Borrower to manage¹⁷ the environmental and social risks and impacts of subprojects. When necessary, the project will include measures to strengthen the capacity of the Borrower.

The Bank will require the Borrower to carry out appropriate environmental and social assessment of subprojects, and prepare and implement such subprojects, as follows:

- (a) *High Risk* subprojects, in accordance with the ESSs;
- (b) *Substantial Risk, Moderate Risk and Low Risk* subprojects, in accordance with national law and any requirement of the ESSs that the Bank deems relevant to such subprojects¹⁸.

4.4.3. Relevance of Environmental and Social Standards for FLOWS Project

In accordance with the objectives of the Environmental and social standards and envisaged project/subproject activities defined in component 1 and 2, conditions in the project area as well in the Republic of Kosovo, the relevant Environmental and Social Standards are presented in the table below and the Borrower is obliged to meet them through the project life cycle.

Table 1 Screening for relevant ESSs

	Environmental and Social Standards	Relevance
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS2	Labour and Working Conditions	Relevant
ESS3	Resource Efficiency and Pollution Prevention and Management	Relevant
ESS4	Community Health and Safety	Relevant
ESS5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant

¹⁵ More detail for risk categorization are presented on the following link:

<https://policies.worldbank.org/sites/ppf3/PPFDocuments/18479bc9036d43f980875b7ba94cd934.pdf>

¹⁶ Paragraphs 36 to 39 apply to a Bank supported project with multiple small subprojects, as in the case of community-driven development (CDD) projects, projects involving matching grant schemes, or similar projects designated by the Bank.

¹⁷ The Bank will assess the capacity of the Borrower to (a) screen subprojects; (b) obtain the necessary expertise to carry out the environmental and social assessment; (c) review the findings and results of the environmental and social assessment for individual subprojects; (d) implement mitigation measures; and (e) conduct monitoring on the environmental and social performance during project implementation.

¹⁸ Where subprojects are likely to have minimal or no adverse environmental or social risks and impacts, such subprojects do not require further environmental and social assessment following the initial screening.



ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Relevant
ESS8	Cultural Heritage	Relevant
ESS9	Financial Intermediaries	Not Relevant
ESS10	Stakeholder Engagement and Information Disclosure	Relevant

4.4.4. Other Relevant World Bank Documents

The World Bank developed Good practice notes which the Borrower is obliged to apply on an appropriate level of performance, during preparation of subproject documentation as well as during its implementation.

Good Practice Notes

- World Bank, Good Practice Note Environment & Social Framework for IPF Operations Non-discrimination and Disability, 2018,
- World Bank, Good Practice Note, Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works, 28 September 2018,
- World Bank, Good Practice Note: Assessing and Managing the Risks and Impacts of the Use of Security Personnel, October 2018,
- World Bank, Good Practice Note: Environment & Social Framework for IPF Operations Road Safety, October 2019,

4.4.5 Overview of differences between WB ESF and Kosovo legislation

Compliance analyses, i.e. the overview of differences between the WB ESF and Kosovo Legislation, gaps between the policy and proposed respond in the following table are presented.

Table 2 Compliance analyses

WB Environmental and social standards (ESS)	National Environmental and Social framework	Gaps	Proposed respond
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	- Environmental Protection Law (03/L-025-2009), -Law No. 03/L-214 on Environmental Impact Assessment (EIA), -Administrative Instruction on information, public participation and interested parties in the environmental impact assessment procedures (No.09/11)	WB requirements: Categorization of project, i.e. the E&S risks is based on the preliminary screening, intensity of the impacts and risks (probability and magnitude). On the base on the E&S risks intensity (low, moderate, substantial and high) it is make decision about the type of documents (instruments) that should be prepared: ESMP - Check list, ESMP, preliminary ESIA or ESIA. National legislation: In accordance with the national legislation an environmental consent shall be required for every public or private project listed in Annex I or Annex II of the Law on EIA, which is likely to have significant effects on the	Because the proposed activities/investments will be financed by the WB, then the Borrowers should follow WB policy, i.e. ESF guidelines, but in the same time to follow the national legislation as well.



		<p>environment by virtue, <i>inter alia</i>, of its nature, size or location. On the basis of the same Law, all projects which are listed in Annex I shall be obliged to implement an EIA, asking the corresponding authorisation from the Ministry of Infrastructure and Environment (MIE), while projects listed in Annex II shall be examined, case by case and in accordance with the criteria set out in Annex III, in order to determine whether they must require an EIA.</p> <p>The procedures for the EIA approval are defined in Chapter III of the Law and includes the following phases: (1) screening; (2) scoping; (3) review of EIA Report and (4) Public Consultation. On the basis of environmental impact assessments, MIE issues Environmental Consent.</p> <p>If MIE decided that for the proposed project it is not required to conduct an EIA, after submission of the Environmental Screening Report in that case an applicant should prepare EIA Report and submits it to a municipality as part of the Municipal Environmental Permit request.</p> <p>Beside this, there is a gap for social assessment required by World Bank, which is not included in the national procedure.</p> <p>National legislation do not include preparation of ESMF, ESMP, RPF, and SEP as it is proposed in WB ESF.</p> <p>Differences there are with regard to disclosure and public consultation. Involvement of the public in ESS10 is presented.</p>	
<p>ESS 2: Labor and Working Conditions</p>	<p>National Legislation does not seek preparation of overall documents on workers rights and obligations apart from laws</p>	<p>Existence of Labor Management Procedures</p>	<p>Creation of LMP</p>
<p>ESS 3: Resource Efficiency and Pollution Prevention and Management</p>	<p>-Environmental Protection Law (03/L-025-2009), -Law on Air Protection from Pollution (No. 2010/03-L-160), -Law No. 04/L-147 Water Law, -Law on Waste No. 04/L-060 (2012),</p>	<p>Gap exists for Resource efficiency in the policy. Kosovo does not have a dedicated national resource efficiency strategy or action plan¹⁹. Some national policies and strategies that address material resource efficiency are: Law on mines and minerals and Mining strategy for the Republic of Kosovo, 2012-2025, Law on Waste, Waste Management Strategy for the Republic of Kosovo, 2013 –2022 and</p>	<p>The Borrowers should follow WB requirements as well national legislation which is in compliance with EU legislation. Issues that still need to be covered with outstanding degrees to be covered with relevant EU legislation.</p>

¹⁹ <https://www.eea.europa.eu/publications/more-from-less/kosovo-material-resource-efficiency/view>



	<p>-Law on Chemicals No. 04/L-197</p> <p>-Law on Noise Protection No. 02/L-102</p> <p>-Administrative instruction of GRK No. 11/2018 on limited values of emissions of polluted materials into soil,</p> <p>-Other Administrative instructions.</p>	<p>Law no. 2003/3 on Kosovo's forests. Examples of good practice are not available.</p> <p>Integrated Environmental licenses and permits refer to the largest polluters, the MIE supervise the efficient implementation of the legal measures provided and their impact on the environment.</p> <p>For other issues, there are no gaps on the policy level.</p>	
ESS 4: Community Health and Safety	National legislation does not foresee creation of Rapid Health Assessment	Preparation of Rapid risk hazard assessment when there is a potential problem related to community health and safety in order to preliminary assess potential threats	Follow WB ESS requirements.
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement – Resettlement Instruments	The expropriation elaborate contains a detailed list of properties to be expropriated, their location, information about individuals who have formal legal rights on these properties. Specialized Appraisal Reports hold estimated value of affected properties (Land, Crops & Trees, fixed assets). No socio-economic study has been prepared.	Preparation of this RPF, individual RPs, census survey and socioeconomic study is envisaged. The study should include information on (i) current occupants in the affected area, (ii) characteristics of displaced households and their standards of living and livelihoods, (iii) magnitude of expected losses and extent of displacement, and (iv) information on vulnerable groups or persons.	All documents must be prepared in accordance with WB ESS5 requirements, in addition to national legal requirements. The implementation of a census is required to identify the persons who will be affected by the project (including those who are not registered through national procedures). The implementation of census survey/ household census is necessary also to identify characteristics of displaced households, including standard of living, level of vulnerability, establishing baseline conditions for monitoring and evaluation purposes, and to set a cut-off date.
ESS 5: Grievance Redress Mechanism (GRM)	There is no requirement to have grievance redress mechanism apart from the institutional ones	Appropriate, affordable and accessible procedures for third-party settlement of disputes arising from resettlement must be established; such grievance mechanisms should consider the availability of judicial recourse and community and traditional dispute settlement mechanisms.	The Borrower will establish a Project specific and impact commensurate Grievance mechanism as described in the RPF.
ESS 5: Eligibility for Compensation	The Expropriation Law recognizes the eligibility of persons who have formal legal rights on land and structures, as registered by the Kosovo Cadastral Agency for and those whose rights are recognizable under national laws (factual ownership).	WB ESS also recognizes those who have no recognizable legal right or claim to the land they are occupying on Cut-off-Date are also eligible for rehabilitation assistance and compensation for loss of non-land assets at replacement value.	Compensation and assistance to PAPs without legal right or claims will be made per principles and entitlements provided in the entitlement matrix of this RPF, if they are present in the project affected area at the time of the cut-off date. Asset inventory and valuations of their affected properties will be conducted and all measures will be recorded in the internal periodical (monthly or quarterly) project progress report.
ESS 5:	Compensation for	Compensation should be equal to full	Compensation and assistance to PAPs



Valuation methodology for compensation for property	loss of properties and assets should be at least equal to the market price. Depreciation are deducted from compensation (or included by decreasing the market price value appraisal).	replacement cost without depreciation.	will be at least equal to replacement value as provided in the entitlement matrix of this RPF.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	-Environmental Protection Law (03/L-025-2009), -Law on Nature Protection No. 2010/03-L-233, -Law No. 03/L-214 on Environmental Impact Assessment (EIA)	There is no gap on the policy level.	
ESS 8: Cultural Heritage	-National legislation does not include preparation of CHMP	Creation of dedicated Cultural Heritage Management Plan	Creation of dedicated Cultural Heritage Management Plan
ESS 10: Stakeholder Engagement and Information Disclosure	-Environmental Protection Law (03/L-025-2009), -Law No. 03/L-214 on Environmental Impact Assessment, -Administrative Instruction on information, public participation and interested parties in the environmental impact assessment procedures (No.09/11).	According Kosovo legislation, preparation of SEP is not required. Also, there is a gap for public consultation period.	Follow WB requirements



5. STAKEHOLDERS ENGAGEMENT AND ANALYSIS

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. For this project, there has been an extensive consultation and communication process. Significantly valuable document that determines stakeholders for each potential sub-project has been identified and **Stakeholder and Citizen Engagement and Communications Plan Report** has been prepared as a result of this iteration of engagement.

Authorities on all three levels were consulted. On national level people that were consulted are: Director of Water Service Regulatory Authority (ARRU) based in Prishtina, Legal Adviser to the Minister of Environment/Coordinator of the working group (Mr. Nazmi Krasniqi), Secretariat of IWMC (Mr. Baton Begolli), while on a regional level the Regional Water Company "Hidromorava" (Gjilan) and the President of Water Consumer Consultative Council (Gjilan) were consulted.

On a Municipal level, in Kamenice the Director of Directorate for Economic Development and Diaspora (Ms. Majlinda Krasniqi), Coordinator of Kamenica Municipality local (both urban and village) councils (Mr. Fisnik Kastrati), and presidents of local council of Topanice, Muciverc, Strezovc and 5 other smaller surrounding villages were consulted.

In Gjilan, the President of election committee for local councils was consulted, as well as the Presidents of local council of Llashtice and Verbice e Zhegocit. In Ranillug, the Mayor of the Municipality, Mr. Vladica Aritonovic, was consulted.

NGOs and CSOs that were contacted during the stakeholder identification process are:

- a) Kamenice: NGO 'Network of Peace Movement', Leader of local women's group (Ms. Azemine Maliqi), Leader of Local Action Council - Kamenice, NGO "Fortesa", NGO "Center for Kosovo Society Depoliticization", Local youth action council activists/members, SHPSR "Mlyshi"
- b) Gjilan: Women's Business Association SHE-ERA/ farmer beneficiaries
- c) Ranillug: NGO Center for Social Affirmation of Youth

Water users and farmers in the three targeted municipalities – Kamenice, Gjilan, and Ranillug were also consulted, likewise local businesses working with agricultural production were consulted: Agrokor (Kamenice) and ASK Foods and Frutomania (Gjilan).

For the purpose of focused and efficient stakeholder engagement process that is to be applied after determination of specific sub-project activities, as well as construction period followed by operational phase, a separate document for each sub-project, named Stakeholder Engagement Plan, will be developed by a project developer. The rationality for divided approach lies in the specifics of target audiences of each sub-project planned to be financed within the overall FLOWS project.

For the need of FLOWS project, a separate **Stakeholder Engagement Framework** has been prepared. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.

5.1. Disclosure of ESMF

The draft ESMF will be posted on the website of MIE (mmph.rks-gov.net). The final version of the ESMF will be officially submitted to the World Bank for disclosure in English on the WB external webpage. The Albanian, Serbian and English versions will be also posted on the web page of the MIE. The final version of this document will be used by respective government agencies and other Project stakeholders during the project implementation.



5.2. Public Consultations

MIE has conducted initial public consultation event in the Municipality of Kamenicë on 27.02.2020, where it discloses information regarding existence of ESMF and supplementary documents. Present participants were interested mainly in local river waters capacity and potential for significant exploitation of this capacity. Also, at the end, interest was partially set on availability of Project documentation for further review and possibility to lodge comments, if such need occurs. More information about this event can be found in **Annex 11**.

MIE plans to conduct at least two other local public consultations on this draft ESMF and will invite all interested stakeholder organisations including local representatives of the other Governmental institutions and bodies, such as local branches of MIE, Hidromorava, health&labor departments, local self-government bodies, local and national organisations of farmers and NGOs from target municipalities, as well as other interested public (members/representatives/leaders as well). During the consultations, the MIE will present a summary of draft ESMF and RPF. In particular, the audience will be informed about screening of the projects, potential impacts which may be generated as well as measures to be taken to prevent/mitigate potential impacts.

Consultation on sub-project specific environmental and social assessments: The disclosure of environmental and social documents will be conducted as those become available during the project implementation and cleared by the Bank for disclosure. There will be at least one round of consultations involving, inter alia, project affected groups and NGOS, after the preparation of the ESMP. Prior to such consultations, MIE will provide relevant materials (process descriptions, maps, building plans, etc.) to participants in a timely manner and in a form and languages that are understandable to the group being consulted and records.

Public consultations on low risk subprojects which will not have a significant effect on the environment and the local community can be conducted virtually or in key sites in local public administration offices. For any construction/reconstruction activities a notice board will be installed at the project site.

5.3. Grievance Redress Mechanism

There are two options for Project stakeholders to submit complaints regarding the FLOWS, i.e. the Project Grievance Redress Mechanism (GRM) and the World Bank Grievance Redress Service (GRS). Separate grievance mechanism for project workers will be established under Labour management procedures. Also, separate grievance mechanisms for Land Acquisition issues and Stakeholder engagement issues will be established and incorporated into the documentation that will be part of FLOWS documentation, such as Resettlement Policy Framework and Stakeholder Engagement Framework/Plans.

The GRM in FLOWS is incorporated into a broader beneficiary feedback mechanism to be established by MIE at the central and local level of the institution. The project-based GRM is intended to serve as a mechanism to:

- Allow for the identification and impartial, timely and effective resolution of issues affecting the project;
- Strengthen accountability to beneficiaries, including project affected people, and provide channels for project stakeholders and citizens at all levels to provide feedback and raise concerns.



Having an effective GRM in place will also serve the objectives of: reducing conflicts and risks such as external interference, corruption, social exclusion or mismanagement; improving the quality of project activities and results; and serving as an important feedback and learning mechanism for project management regarding the strengths and weaknesses of project procedures and implementation processes.

The GRM will be accessible to a broad range of Project stakeholders who are likely to be affected directly or indirectly by the project. These will include beneficiaries, community members, project implementers/contractors, civil society, media—all of who will be encouraged to refer their grievances and feedback to the GRM.

The GRM can be used to submit complaints, feedback, queries, suggestions or compliments related to the overall management and implementation of the FLOWS, as well as issues pertaining to subprojects that are being financed and supported by the FLOWS, including:

- Mismanagement, misuse of Project Funds or corrupt practices.
- Violation of Project policies, guidelines, or procedures, including those related to child labour, health and safety of community/contract workers and gender violence.
- Disputes relating to resource use restrictions that may arise between or among affected communities.
- Grievances that may arise from members of communities who are dissatisfied with the eligibility criteria, community planning measures, or actual implementation of community energy investments or socio-economic infrastructure.
- Issues with land and asset acquisition or resettlement specifically for FLOWS supported subprojects.

The GRM's functions will be based on the principles of transparency, accessibility, inclusiveness, fairness and impartiality and responsiveness.

The timeline for complaint resolution at the FLOWS will be 15 days upon receipt of the complaint. The complainant will be informed on the outcome immediately and at the latest within 5 days of the decision.

The overall process for the GRM will be comprised of 7 steps: (1) uptake (2) sorting and processing (3) acknowledgment and follow up (4) verification, investigation and action (5) monitoring and evaluation (6) feedback and (7) follow up.

Responsible Social and/or Stakeholder Engagement Specialist:

- accepts all submitted grievances
- control reported state where feasible
- distribute grievances internally to the relevant stances
- gathers answers and prepares responses
- send answers to complainants
- regularly maintains GRM Register
- reports to PM on raised issues and their resolution/recurrence on a monthly base
- follows up on the realisation of undertaken commitments in accordance with the response sent to complainant till complainant confirms satisfaction of undertaken action/response
- participate in work of Grievance Redress Committee



The FLOWS will make quarterly reports available to the World Bank team on the implementation of the Project GRM. In addition, data on grievances and/or original grievance logs will be made available to World Bank missions upon request.

Grievance Redress Service

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit: <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>

For information on how to submit complaints to the World Bank Inspection Panel, please visit: www.inspectionpanel.org

5.4. Establishment of Grievance Redress Committee

A Grievance Redress Committee at a Program level will be established to address complaints and grievances pertaining to environmental issues and resettlement and to pre-empt all disagreements being referred to the court. The Grievance Redress Committee will include PIU staff, a representative of the affected municipality and representatives of the local communities affected by the Project.



6. ENVIRONMENTAL AND SOCIAL BASELINE AND ANALYSIS

6.1. Physical Environment

6.1.1. Geographical Position

Republic of Kosovo is placed on Balkan Peninsula and has an area of 10.887 km². The country borders with Serbia on the north and east, with North Macedonia on the southeast, with Albania on southwest and Montenegro on the west.



Figure 3 Geographical position of Republic of Kosovo

Kosovo is divided into seven districts, according to the Law of Kosovo and the Brussels Agreement of 2013, which stipulated the formation of new municipalities with Serb majority populations. The districts are further subdivided into 38 municipalities. The largest and most populous district of Kosovo is the District of Pristina with the capital in Pristina, having a surface area of 2.470 km² and a population of 477.312.

The project activities proposed under **Component 1** will take place on the whole territory of the Republic of Kosovo, while activities under **Component 2** will take place in the **Morava e Binces River Basin**. This river basin covers two districts: District of Prishtina and District of Gjilan. The municipalities which are part of the Morava e Binces Basin are Gjilan, Novo Brdo, Viti, Klokot, Partesh, Kamenica and Ranillug. The Municipalities Gjilan, Viti, Klokot, Partesh, Kamenica and Ranillug are part of Gjilan District, while Municipality Novo Brdo is part of Prishtina District. In the following table the characteristics of each municipality in Morava e Binces River Basin are given.

Table 3 Characteristics of each municipality in Morava e Binces Basin

Municipality	Surface area [km ²]	Population	Position
Gjilan	512	90.178	<ul style="list-style-type: none"> • Presevo (33 km) and Kumanovo on south – east, • Bujanovac (40.5 km) on east, • Dardan (29 km) on the northeast, • Vitina (20 km) on northeast,



			<ul style="list-style-type: none"> • Lipjan on west • Pristina (47 km) and Novoberd (19, 5 km) on the northeast
Ranillug	77,67	5.800	<ul style="list-style-type: none"> • Gjilan (17km) on east • Kamenica (15 km) on south
Kamenica	417	36.085	<ul style="list-style-type: none"> • Serbia on north and east • Ranillug on south • Novoberde on southwest • Prishtina on West
Novo Brdo	204,25	9.670	<ul style="list-style-type: none"> • Kamenica on east • Ranillug on south-east • Gjilan on south • Lipjan and Prishtina on the west
Viti	276	46.987	<ul style="list-style-type: none"> • Gjilan on east and south • N.Macedonia on the south • Kacanik on south-west • Ferizaj on the west
Klokot	23,36	5.556	<ul style="list-style-type: none"> • Within Viti Municipality
Partesh	29	5.217	<ul style="list-style-type: none"> • Within Gjilan Municipality

In the following figure the municipalities which are included in the project are given, i.e. in the Morava e Binces River Basin.



Figure 4 Municipalities in the Morava e Binces River Basin (project activities under Component 2)



6.1.2. Hydrology, Water Quality, Water Supply and Water Treatment

Kosovo has limited water resources, ground and surface water. Thereby, the protection and rational usage of water resources is of vital importance for sustainable economic development of the country. Due to its geographical position, the rivers flow in a very small part of its territory (Rivers: Ibri, Lepenci, “Lumëbardhi” River of Prizren and “Morava e Binces” River of Binça) and very quickly flow out of Kosovo. Most of the rivers in Kosovo are seasonal rivers, because their flows depend on rainfalls, therefore during the summer when the request for water is at its peak, the rivers’ flow is minimal. In a year with average humidity, Kosovo Rivers bring $3,6 \times 10^9 \text{ m}^3$ of water, respectively $121,2 \text{ m}^3/\text{s}$, whereas the overall volume accumulated in existing accumulations is $569.690.000 \text{ m}^3$, which represents only 15,7 % of the overall quantity. Natural lakes are few in number and without any significant importance regarding water supply, whereas artificial lakes are: Batllava, Gazivoda, Badovci, Radoniqi and Perlepnica.

The resources of ground water are also limited and they are mainly found in the western part of Kosovo, where the resources of surface water are also large compared to the eastern part which features fewer reserves and the south-eastern part where the need for water is very high.

The continuous increase in demand for water, food and energy, the continuous deployments of waste in rivers and unsanitary depository sites, as well as climate changes, are clear indicators which oblige a different approach towards this limited resource. With an estimated quantity of 1600 m^3 of water capita/year, the protection, preservation and development of water resources is very important and it is an environmental challenge with a high importance regarding public health. In the following figure the hydrological map of Republic of Kosovo is given.

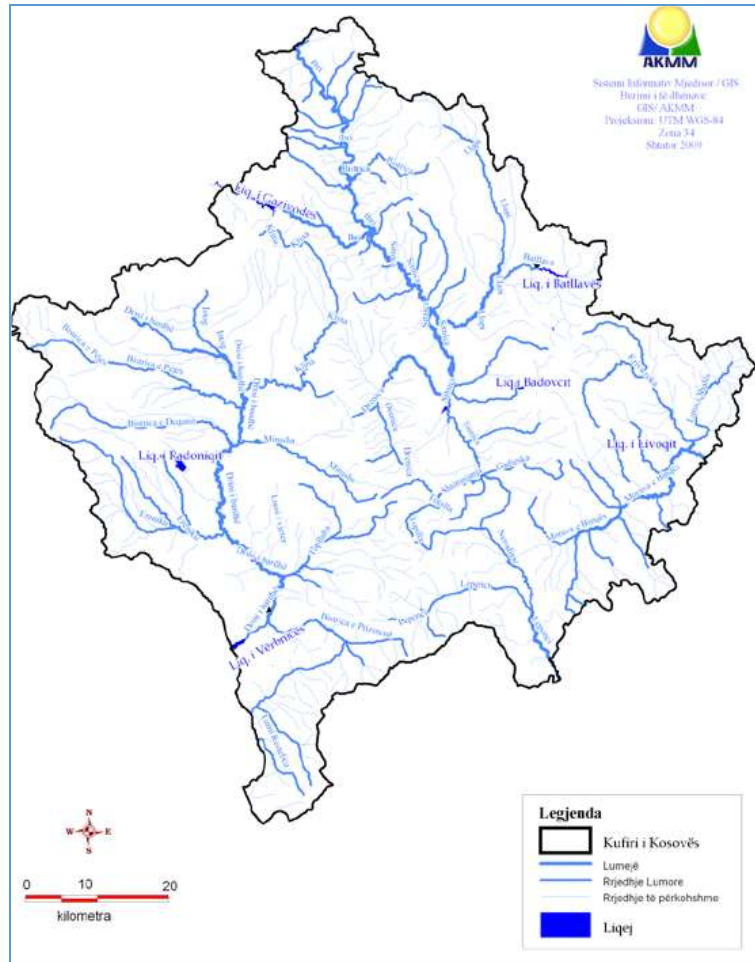


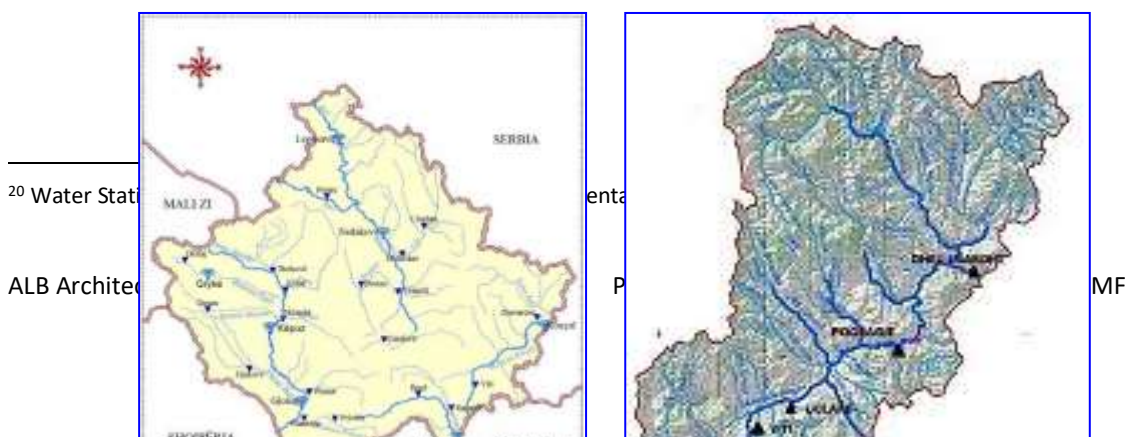
Figure 5 Hydrological map of Republic of Kosovo

In the following table is given a presentation of the main rivers which are part of the project area (for Component 2) i.e. within the Morava e Binces River Basin, with their main characteristics.

Table 4 Main characteristics of the rivers in Morava e Binces River Basin²⁰

River	Surface area [km ²]	Total length [km]	Flow [m ³ /s]	Tributaries
Morava e Binces River	1.564	76	8,7	Kriva Reka, Desivojca, Perlepnicja, Gjilan, Livoc, Cernica, Smira, Pogragja, Vlastica, Ribnik, Svintulbkes, Llapushnica, Pasjani, Zhegra, Latvia, Pakita (Beranica)
Kriva Reka River	640,7	44,5	4,43	Desivojce River, Hogoshti River, Kremenata River, Dabishevcit, Krileves etc.
Kremenata River	53	24	0,4	Zajqec stream, Deep stream, Dobishevc stream and Rasadnik stream

In the following figure the hydrological network station in Kosovo and Morava e Binces river basin is given.



²⁰ Water Stati

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Figure 6 Hydrological network station in Kosovo and Morava e Binces river basin

6.1.2.1. Water Quality

Kosovo has serious problems with the amount and quality of water. The situation in the field is very intense. If some few mechanical treatments are excluded, Kosovo does not have a treatment of polluted waters, nor from collective polluters, neither from individual ones. As a result of that, the quality of surface and ground water is disturbed.

Waste water mainly ends up in the groundwater and present a potential risk for water supplying resources, because around 40 % of the population which are outside of the water-supply systems use groundwater as a source for water supplying. These waters contain high concentrations of organic and microbiological pollutants, as a result of urban faeces and industrial wastes.

Waste waters from industries and mines are polluted and don't have any kind of monitoring regarding their quality.

Based on the analysis and monitoring conducted in the project for the development of Cadastre of Kosovo water polluters, a total of 368 water polluters were registered on the whole territory of Republic of Kosovo. Out of this number, 266 are collective polluters whereas 102 are special polluters.

The most loaded rivers by the number of pollutant discharge points are: Istog River with 12, "Lumbardhi" River of Prizren with 11, "White Drin" with 9, "Lumabardhi" River of Peja with 7, and Klina with 5 polluters, while, by the quantity, river Lumbardhi – Prizren is the leading one. However, all of these rivers are eventually merged with "White Drin" and then continue towards the Adriatic Sea. In the following figure is given a map of Republic of Kosovo with polluted rivers.

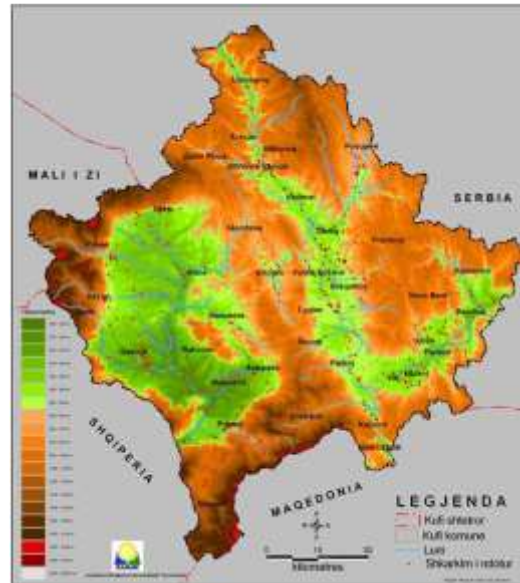


Figure 7 Map of polluted rivers in Republic of Kosovo

In the “Morava e Binces” and Lepenci Pond there are a total of 24 polluters. Some of the most loaded rivers are: “Morava e Binces” with 14 deployment sites and Mirusha River with 8 collective deployment sites.

In the region of Gjilan 66 polluters were identified, 54 of them are collective polluters, and 12 are individual ones. Municipalities with the highest number of polluters are Ferizaj with 14 polluters, Gjilan and Viti with 13, etc. Viti is one of the rare municipalities, which has solved the evacuation of waste water in the majority of locations through sewerage. The main recipient in this municipality is Morava River, which collects deployment of around 25.000 inhabitants.

The Municipality of Kamenica, as well, has almost fully covered the majority of location with public sewerage or individual sewerages of some parts of the location in rural zones. The only recipient of waste water in this municipality is Krivareka River, which collects deployment of around 25.000 inhabitants.

The Municipalities of Novobrd/Artana, Ranillug, Klllokot and Shterpce are new municipalities, and they are characterised with a lack of specific municipality environmental official, therefore documents and data regarding polluters are missing, as a result of delays in transfer from mother municipality. Mines of Artana, is an important pollutant that lies in the territory of the municipality of Prishtina, however environmental effects are transferred in Mareci River, and later on Krivareka River of Kamenica. Deployed waters are acidic waters that come out from mines and have high potential pollution effects. This impact will be taken into consideration during the project planning for development and implementation of the activities under Component 1 and Component 2. In the following figure is given a map of the pollution of the rivers in Gjilan region.



Figure 8 Map of polluted rivers in Gjilan region

Monitoring of river waters in the territory of the Republic of Kosovo is done by the Hydro meteorological Institute of Kosovo. The quality of these rivers is determined on the basis of physical, chemical and heavy metal analyses.

6.1.2.2 Drinking Water Supply

The Republic of Kosovo in general has considerable problems with drinking water supply. For a secure water supply, there is a need for establishment of more artificial lakes in peripheral parts of fields, at the hilly-mountainous areas, but for their establishment, there is a requirement of large material means. The largest flow is secured by alpine type rivers, which have powerful karstic sources and springs in high mountains, in which there are larger amounts of precipitation, while a smaller flow is secured by the left branches of Drini (apart from Prizren river) and rivers of the Kosova Plain and Anamorava, in basins of which there is 50-100% less precipitation, and another geological content.

All municipal centres, with the exception of Malisheva, have installed water supply systems. Only 44% of the urban population and 8% of the rural population are connected to the public water supply network. Around 64% of the rural population use water from shallow and unprotected wells. Only inhabitants that living in cities, and in many cases not all of them, are supplied with water from the central water supply system network. In some cities, entire neighbourhoods have been left unconnected in the central water supply system network (Besiana, Gjilan, Ferizaj etc). Due to the shortage of water, there are regular reductions in most cities (Prishtina, Ferizaj 16-18 hours/daily, Besiana, in some neighbourhoods, up to 18 hours/daily, Vushtrri up to 20 hours/daily, Mitrovica etc.), or it could be that parts of the city located in high altitudes are left without water for days on end. The technical and administrative losses and shortcomings in the water supply system are great (average loss being approximately 50%).

6.1.2.3. Irrigation System

Regarding land irrigation, in 2003 the regional irrigation companies watered only 20,4 % of the land surface under their management. In the following figure is given a map of Republic of Kosovo with installed water supply network.

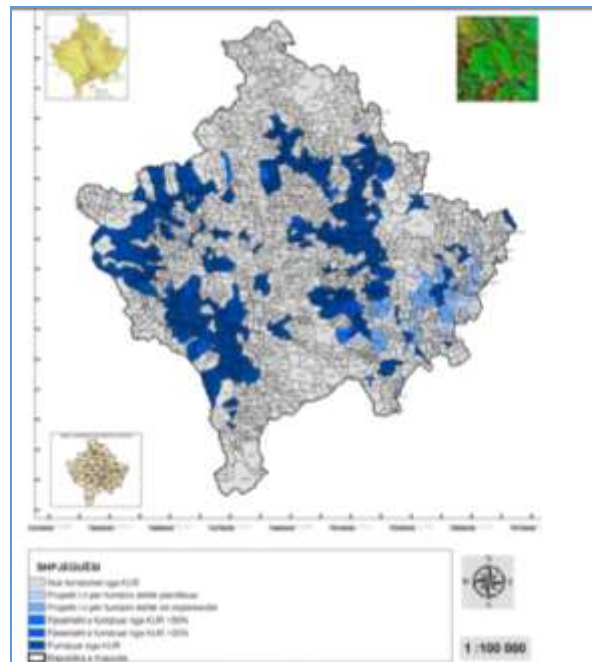


Figure 9 Installed water supply network in Republic of Kosovo managed by regional water companies

All irrigation systems have been organised and managed by six public enterprises, with a designed capacity for irrigation of 72.440 ha, where 33.490 ha by artificial rain while 38.950 ha by surface irrigation. Kosovo irrigated about 50.000 ha or about 71 % of areas is under irrigation, that it can be concluded that irrigation systems were in operation. The irrigation companies in Kosovo are:

- "Iber - Lepenc", with headquarters in Pristina
- "Istok", with headquarters in Gurrakoc
- "White Drin" with headquarters in Peja
- "White River" based in Decan
- "Radoniqi", based in Gjakova
- "Dukagjini, headquartered in Prizren

As a result of lack of maintenance and application of measures as well war in Kosovo, the irrigation areas are reduced to a total 19.150 ha. Departments of hydro systems (public companies) have prepared projects for rehabilitation of the irrigation systems supported by FAO and the European Agency for Reconstruction (EAR), where after the first phase of rehabilitation of irrigation systems in Kosovo (PRUK-I) are covered about 23,984 ha (According to data KRU-s).

6.1.3. Waste Management

The current solid waste management system in Kosovo is environmentally unsustainable. Waste collection, transport and disposal is not provided to all, and therefore uncollected waste is discarded or burned and causes a negative impact on human health, water, air, soil and biodiversity. Similarly, hazardous waste (in municipal waste stream) is not separately collected and treated and ends up being landfilled with municipal waste and presents a threat to the environment.

Municipality of Gjilan belongs to Gjilan region which comprised of 7 municipalities: **Gjilan, Kamenica, Viti, Novo Brdo, Ranillug, Partesh and Klokot**. The operator for the area, the public-private company "Ekohigijena" is based in Gjilan and has units in Kamenica, Viti and Novo Brdo. All the municipalities dispose their waste in the Gjilan (Velekinç) regional landfill. In the following figure is given the waste management operators and infrastructure in the Kosovo region.



Figure 10 Waste management operators and infrastructure in the Kosovo region (Source: Municipal waste management report for Kosovo, 2018)

Municipal waste collection, transport and final disposal to a sanitary landfill is one of the basic services that a municipality provides for all those working and living within its territory. The coverage rate with waste collection services in the region is 51,9 %, and 49,3 % in the territory served by the regional waste company.

In the following figures the waste collection service and the illegal and existing dumpsites in the whole country and Gjilan region are given.

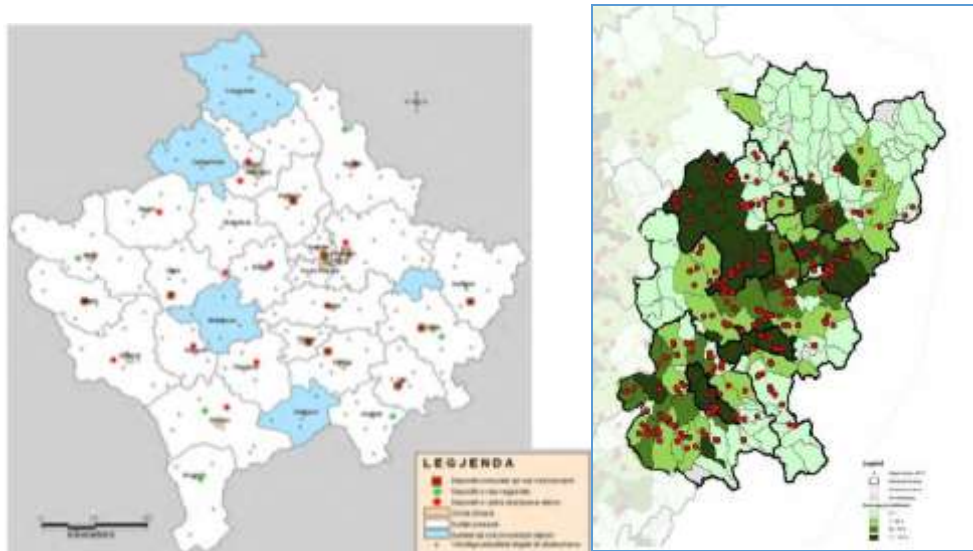


Figure 11 Waste collection service and the illegal and existing dumpsites in the whole country and Gjilan region

In the following figure the regional landfill and the served municipalities in Gjilan region is given.



Figure 12 Location of Regional landfill in Gjiilan region

The condition of this landfill is not satisfying. The pumping system is out of order and consequently surface water and landfill waste water get mixed. The landfill is constructed in 2005/2006. The lifespan of the landfill is planned for 15 years (2020 closed). The total capacity of the landfill is 1.222.222, 00 m³. The total quantity of waste deposited on landfill Velekinca for 2017 is 40.788,79 t/year.

Several municipalities have dedicated the use of a public plot for inert waste disposing. However, they are not constructed on the basis of technical standards. One example is the municipal inert waste landfill in Prizren (Zhur).

6.1.4. Air Quality

The major contributors to air pollution in Kosovo are the energy production facilities (thermal power plants), transport sector, industrial facilities (metallurgy factories, quarrying sites, and cement factories), agricultural activities and illegal waste disposal sites. Energy production facilities use fossil fuels such as coal and oil derivate with relatively high sulphur contents. The transport sector is characterized by a large number of old vehicles and low-grade fuel quality being used. In addition, the industrial sector has mainly outdated equipment. In bigger cities, central heating systems are not frequent. Therefore, air pollution is largely caused by individual heating facilities using fossil fuels. The agricultural sector contributes to air pollution by burning biomass, such as excess grasslands. Illegal waste disposal sites with frequent uncontrolled burning of waste represent a serious source of air pollution.

On the territory of Republic of Kosovo, the Institute for hydrometeorology in Kosovo (IHMK) is performing monitoring of the air quality on the whole territory through 12 monitoring stations. Only one monitoring station in Municipality of Gjiilan is placed in the Morava and Binces river basin.

In the following table the monitoring stations for air quality with the measured parameters are given.

Table 5 Air quality monitoring stations in Kosovo

Nr.	Name of the monitoring station	Code of the station	Location	Responsible authority	Measured parameters	Type of the area
1	IHMK	KS0101	IHMK, Prishtinë	IHMK	PM10, PM2.5, SO ₂ , NO _x , O ₃ , CO	Urban
2	Rilindja	KS0102	Backyard of Rilindja, Prishtinë	IHMK	PM10, PM2.5, O ₃	Urban
3	Pejë	KS0305	Primary School "Lidhja e	IHMK	PM10, PM2.5, SO ₂ , NO _x , O ₃ , CO	Urban



According to the measurements carried out by IHMK in 2017 through air network monitoring stations, significant pollution is observed from dust in the form of PM10 in Gjilan, Obiliq and Dardhishte monitoring station, and PM2.5 in the monitoring stations in the IHMK, Rilindje, Drenas, Mitrovice, Obiliq and Dardhishte monitoring stations, while other parameters do not exceed the maximum allowed value (VML).

6.1.5. Climate and Climate Change

The climate in **Kosovo** is medium-continental with a dominant influence of Adriatic-Mediterranean climate in the Dukagjinit Plain, (through the valley of the Drini i Bardhe), and with less impact of Aegean-Adriatic climate in the Kosovo plain. Key climate macro-factors, which affect the climate in Kosovo are: its position toward earth land masses (Euro-Asia and Africa), water masses (Atlantic Ocean and Mediterranean Sea), air masses (the tropics and the Arctic-maritime or continental) and the position of baric systems (azures maximum and Iceland minimum). The main local factors that affect the climate in Kosovo are: relief, water, land and vegetation. In the following table the climate parameters for the project area are given.

Table 6 Climate parameters for the project area

Parameters	Republic of Kosovo	Morava e Binces River Basin						
		Gjilan	Ranillug	Kamenica	Novo Brdo	Viti	Klokot	Partesh
Minimal temperature (°C)	-18,7	3	0,8	-1	-7	-11	-11	-4
Maximal temperature (°C)	28,3	29	21,9	21,5	26	29	29	29
Humidity (%)	/	76,8	74	76,8	0	/	/	0
Rain (mm)	>700	612	/	<600	540	600	600	
Wind (m/s)	1,3	2,14-2,59	2,1	3	2,14-3,04	2,19-3.04	2,19-3.04	2,14-2,59



In the “Study on climate change in the Western Balkans region”, Publisher: Regional Cooperation Council Secretariat, Sarajevo, Bosna I Hercegovina, May-2018 (web site: www.rcc.int), the impact of global warming by future Climate Change throughout the Western Balkan Region is evaluated. The two meteorological parameters selected in the document are temperature and precipitation. The analysed period is 1961-2015, where the period 1961-1980 is defined as the “past” climate baseline period, while the period 1996-2015 as the “present” climate period. The trend of increasing temperature became significant since the 1980s in the Western Balkan Region.

The average monthly temperature of the air and the precipitation sums for Kosovo for the period 2020-2070 with climate change (scenario RCP8.5) are presented in in the following table.

Table 7 Average monthly temperature of the air and the precipitation sums for Kosovo 2020-2070 with climate change (scenario RCP8.5)

month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	year
Avg. Temperature (°C)	0.6	2.8	7	11	15.4	19.4	21.9	21.4	17.8	12.9	6.4	2.3	11.6
Monthly precipit. (mm)	42	34	39	44	62	53	37	34	36	40	53	49	524

The expected Climate changes, decreasing of precipitations and modifications in distribution, may cause an increase of water demands for 20%.

6.1.6. Soil and Land Use

Kosovo has a variety of soils that vary according to their composition, pedologic, physical, and chemical characteristics. The pedologic map of Kosovo represents a real mosaic. Most of the territory of Kosovo (56%) is covered by low quality soil, (29%) moderate quality soil, whereas the smallest part (15%) of good quality soil. It is accepted that Kosovo lands are suitable for agricultural production. The types of soil mainly found in Kosovo are humus, silicate humus, grey acidic, red soil, alluvial, diluvia, and blocky soil.

Soil pollution in Kosovo is mainly caused from hazardous waste. Land degradation in Kosovo occurs especially along the main roads and is one of the most widespread and threatening forms of damage of the land and the environment. Various reports indicate land occupation by construction, land degradation for economic activities and benefits, and unfavourable land-use decision-making, indicating a negative trend of land conservation for future generations.

Land degradation is the result of several specific factors such as: natural factors (large precipitation and floods, erosion and land sliding and drought) and human factor (continuous building pressures from chaotic urbanism, soil compression, pollution from economic and industrial activity, chemical pollution, corrosion interventions, construction of road and river exploitation, etc.).

The total area of agricultural land in Kosovo is 512.000 ha of land. The utilised land area for agricultural production in 2014 was 413.635 ha or 80 % of the total land area. This area is utilised by 129.884 households, with an average land area of utilised agricultural land of 3,2 ha per household.²¹

The territory of **Gjilan municipality** is situated in the south-eastern part of Kosovo and covers area of 515 km². Of these 24 940 ha is agriculture area (14 200 fields and gardens, meadows and pastures occupied area of 5746 ha – 4994 ha passive). In Gjilan, lands of red clay dominate, which lie on the foot of the mountains, alluvial land stretching along the Morava river valley and other smaller rivers

²¹ Annual report on the state of environment in Kosovo, 2018



and Smonica which mainly lie in the central part of the municipality. It is estimated that the municipality of Gjilan has about 140.000 inhabitants which means that it has less than 0,15 ha of agriculture land per capita. The Municipality of Gjilan with a highly heterogeneous relief and continental climate, offers good conditions for development of agriculture or its branches: larvae, vegetables, fruits, vineyards and livestock. It is estimated that despite the migration of population towards the city over half the population still live in rural settlements and are likely to engage in agriculture.

Municipality of Ranilug with an area of 77,67 ha, is located in eastern Kosovo, and extends towards the southwest-northeast. The urban zone of Ranilug Municipality is a very rich and fertile land for growing crops. About 70% of the population in the municipality of Ranilug is engaged in agriculture. The fertile land extends by the left and right side of the river Morava e Binces and it is mainly used for agriculture with trend of increasing conversion of arable land into construction land and unseeded area. In order to increase the development of agriculture, larger investments are needed in terms of research for quality land.

Municipality of Kamenica is characterised by a very pronounced litho-isographic variety and has a complex composition of tectonic terrain. Interactive geological processes are expressed here, the behaviour of materials from the formation of surfaces and erosion, stream and multiple occurrences of landslides and the collapse of the soil, the transfer of sterile materials etc. In general, about 30 % of the population in Kamenica is engaged in agriculture and a large proportion of the population lives in exile where it also generates enough income for some families. Fertile soils lie around the "Kriva Reka" river and are mainly used for agriculture, with a growing trend conversion of fertile soils to construction sites and uncultivated areas (wasteland). In this aspect relevant research on their quality and utilisation is lacking. It should be noted that in the town of Kamenica a regulatory urban plan has been partially applied, dividing it into a construction area and an agricultural area. Of the total area about 55 % is agricultural land, the rest about 45 % is construction land.

In general, around 60 % of the **Municipality of Novo Brdo** deals with agriculture and a major part of the population lives in exile where it generates enough income for some families. Fertile lands lie around rivers and streams and mainly are used for agriculture with a trend of increase of transformation of fertile land into a construction land and non-planted areas (wasteland). In this aspect there are insufficient studies and research conducted for their quality and use. The major part of the land is covered by forests (9.112,60 ha), whereas the other part is used for agricultural and other purposes.

Klokot and Viti Municipality lies in the land very rich in nutrients for plants and fertile ground, where about 70% of the population in the Klokot deal with agriculture. Fertile soil lies around the river and is mainly used for agriculture with a growing trend of returning fertile land into construction land and uncultivated (non-planted) land, however, in this respect, we are lacking adequate research on the quality of their use. Out of total area in cadastral zone of Klokot, about 40 % is agricultural land while the rest is used for other purposes.

Agriculture and horticulture are the main economic activities in **Partesh**. Almost hundred percent of the sector is informal and the number of the operators is unknown, but it is estimated that the sector engages about 90% of the working force. Hence, soil is a crucial natural resource, and about 2/3 of the land area is used for agriculture.



6.1.7. Soil Erosion

About 6.000 km² or 56 % of the territory of **Kosovo** is endangered by this natural phenomenon of scale I, II and III (I - very strong erosion, II - strong erosion and III - moderate erosion)²². Even on the territory of the municipality of **Kamenica** there is a natural erosion factor that results with loss of agriculture land and household damage. From a high degree of erosive hazard are including 25.050 ha or 48 % of the municipality's surface area are exposed on heavy erosion and very strong. The hazard rate is increasing due to natural and human factors. Of the highest degree of hazard with very strong erosion are involved 11.550 ha of land. The territory of the municipality of **Ranillug** is characterised by erosion surfaces according to the following categories: surfaces which are exposed to very low erosion include around 8,67 ha of the territory of the municipality, to weak erosion 2.085,48 ha and average erosion 4.539,77 ha of the territory. Surfaces with strong erosion in the Municipality of Ranillug include 1.238,69 ha. The strongest erosion lies in an area of 697,29 ha. In **Gjilan**, the the rare phenomenon of erosion is present especially on bare surfaces. Bare surfaces are a problem in itself that affect the environment. In Gjilan municipality is estimated that 2.324 ha are bare surface. This phenomenon is present almost in the whole territory of the **Municipality of Novobordo** in various forms and intensities. The acceleration of this phenomenon in most cases has been affected by the human factor as result of inefficient use of agricultural land, uncontrolled logging, but also due to the uncontrolled use of solid and construction materials. It is mostly present in the molasses formation as a result of the degradation of forests, vegetation and the slope of the terrain, which appears in the form of surface purification and steep banks, but also along river banks and streams, due to inadequate land use, lack of mountains/hills dams etc. The territory of Novo Brdo is characterised by erosion surfaces according to the following categories: surfaces exposed to very weak erosion, which includes around 9% of the territory. Average erosion is around 38%. Surfaces with strong erosion in the Municipality of Novo Brdo include 15%. The strongest erosion lies in an area of 2%. Soil erosion is present in **Partesh**, mainly in the hilly areas, where it is exacerbated by irregular forest cutting, small excavation activities and livestock grazing. Soil erosion is particularly severe in the hilly areas to the East of Pasjane settlement, where rill and gully erosion patterns are clearly visible.

6.1.8. Floods

Kosovo is vulnerable to flooding and they happen often. Floods in Kosovo in November 2007 affected more than 3500 households, also causing considerable material damages. Almost all municipalities of Kosovo, more or less, are affected by flood risk, which are manifested in the form of:

- Floods after storms in mountain areas,
- Floods after heavy rains in lowland areas,
- Floods after the snowmelt followed or not by cold weather.

Floods by river basins are: Drini i Bardhe: 50 %, Ibri: 24 %, Lepenci: 20 %, Morava e Binces: 6 %.

Floods in Kosovo are usually the result of heavy rains where the flow from Major River overflow and flood in urban and rural areas causing considerable damages to infrastructure, private property, agriculture, etc. As a result of rainfall and floods in urban areas, because of the old network, insufficient capacity and lack of facilities for wastewater treatment, increase the damage effects even more.

²² Report on the state of water, 2010



The following figures present maps with locations in Kosovo where there is a risk of flooding as well as area affected by flooding, where belongs also the Municipality of Kamenica. In the Municipality of Kamenica floods during 2014 occurred along the rivers and streams such as Kriva Reka, Hogosht River, Shipashnice and its tributaries in Hogosht, Spasnica, Meshina, Strezovc, Topanica, Muqivërc, Desivojce, Krilevo, damages floods are in infrastructure, agriculture, evacuation of residents (Hogosht) and contamination of drinking water in wells. Also, floods occurred in the Municipality of Ranilug and Gjilan. In the Municipality of Ranilug, although protective dams (walls) from clay are built on the right of the Morava e Bince bank from village Glllogoc near Ranilug, floods are appeared. From Upper and Lower Kormijan to the end of the neighbourhood, there were some minor flooding, but less intensive, otherwise this may cause significant damages in domestic agriculture and other industries.

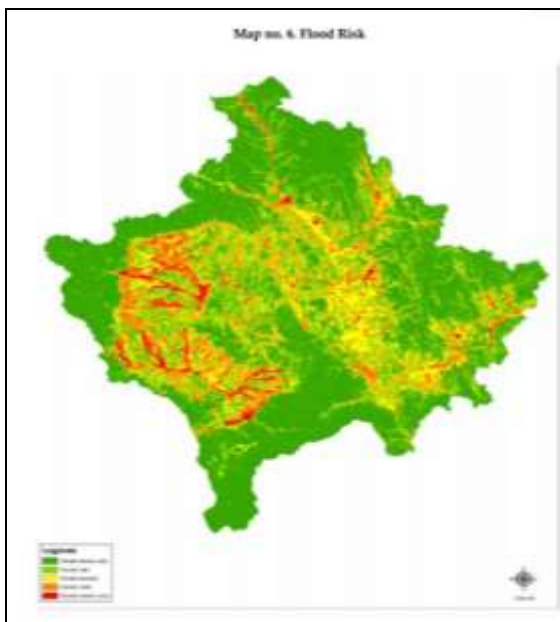


Figure 13 Flood risk map

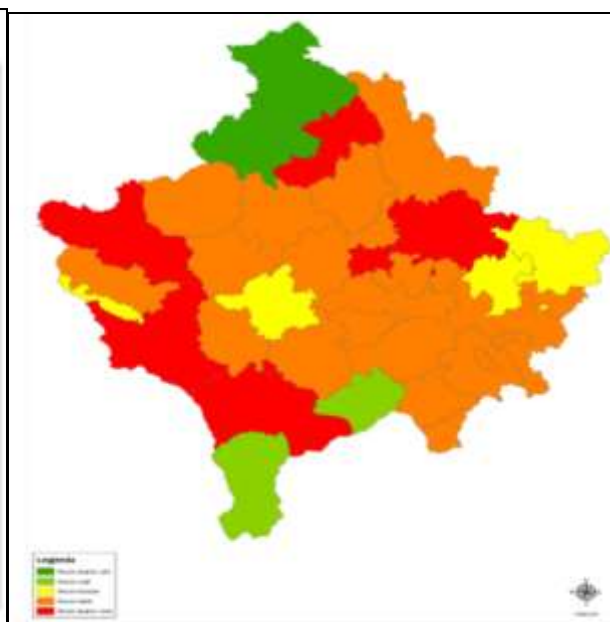


Figure 14 Area affected by floods

6.2. Biological Environment

6.2.1 Biodiversity and Nature Protection

Kosovo, although it is a small area, is quite rich in plant diversity. According to various authors' remarks, it is believed that in Kosovo are present nearly 2.800 to 3.000 species of vascular flora. Uncontrolled deforestation, habitat degradation, and global climate change are factors that directly affect different plant and animal species to face the risk of extinction. Important habitats are being damaged and degraded and ecosystems are being destabilized as a result of human intervention, in particular in ecosystems near settlements. In recent years, as a result of unattractive forests and forest fires, different species are at risk of losing their habitat as well as the emergence of invasive species that often change the ecosystem's floral structure.

Although Kosovo's diversity has been exploited for centuries, it is worrying that recent exploitation is not very rational and without planning, which in the future may result in unpredictable consequences. Major damage is being caused to the medicinal, aromatic and industrial plants from their improper collection.

In terms of fauna, Kosovo is characterised by a wide variety of species, although researches in this regard have not been completed. The overall condition of fauna is good as a result of the expansion



of the protected areas. Damage to fauna in Kosovo is caused by illegal hunting that occurs from time to time, especially during the weekends in the protected areas.

The most vulnerable species from illegal hunting are deer and wild goats, while situation is better for brown bear and wolf. Endangered are also the types of predatory birds. It is estimated that in Kosovo live about 250 species of vertebrates, 200 species of butterflies and over 500 taxa of macro zoobenthos of water. The exact number of fauna species should be determined based on the inventory that is planned to be implemented in the future during the drafting of the Red Book for fauna and other projects.

The number of protected nature areas in Kosovo (2016) is 173 and includes an area of 126.070,29 ha, or 11,55% of Kosovo's total area. Within these areas there are 19 Strict Nature Reserves ("Koretnik", "Lubeteni", "Arnen Reservoir", "Maja e Rops", "Rusenica", "Kamilja", "Pisha e Madhe", Bistra etc.), NP "Sharri", PK "Bjeshkët e Nemuna, 1 Nature Park (Pashtriku and Lake Vermicë) 146 Monuments of Nature ("Drini i Bardhë with Radavc cave", "Cave of Gadime", " Mirusha Waterfalls", " Rugova Gorge", " Drini i Bardhë Canyon at the Ura e Fshejtë", "Trungu i Rrapit në Marash", Shpella e Panorcit, etc.), 5 Landscapes ("Gërmia", "Shkugeza", etc.), and 1 Special Protected Zone of Birds ("Ligatina e Hencit, Radeva"). The largest areas of protected areas are the National Parks: "Bjeshkët e Nemuna" and "Sharri", the Nature Park "Pashtrik Mountain and Lake Vermicë" Protected Landscapes "Germia" and "Waterfalls of Mirusha" etc.

What distinguishes the flora and fauna in **Municipality of Gjilan** are the extensive changes due to the human activity. Reduction and conversion of forest areas in a subject area contributed to changing and reduced species and their population. Pigs are now very present in the terrains. The mammal species with economic value, which are already rare in the forests of this territory, are: roe, fox, wild cat and rabbit; other birds present are: the birds of prey, the crow family, woodpecker, stork etc.; and reptiles: turtles, various snakes, frogs, lizards etc.

The vegetation of this area in vertical order can be divided into these vegetative belts: termofil oak forests, mezofil oak forests, floor grass plants, mezofil belt of coniferous forests.

In **Ranillug Municipality** relief, climate and pedological composition of the soil has caused the occurrence of certain plant species in this area, and men use that cover or replace them with plant species, mostly agricultural. Starting from the lowest parts of the valley of the Morava e Binces, then the belt willow (*Salix* sp.), alder (*Alnus glutinosa*), poplar (*Populus* sp.) that is received on both sides of the river, makes it the first zone of plant cover. This land on the left and right sides of the river is dominated by corn and a lot of gardens, and away from the river on arable land it is dominated by wheat, and beyond that, orchards.

Regarding trees, the forest is dominated by oak, beech and black pine from sawmills. The oak trees (*Quercus* sp.) cover lower positions and track the sunny slopes, while beech (*Fagus moesica*) can occur as independent plant formation. On the slopes and smaller parts, other deciduous trees are less presented, such as hornbeam (*Carpinus betulus*), ash (*Fraxinus* sp.), dogwood (*Cornus mas*), coots (*Corylus avellana*), acacia (*Rubinia pseudocacia*), maple (*Acer pseudoplatanes*) wild pear (*Pyrus puraster*) and so on. As of shrubs, there are hawthorn (*Cretegus* sp.), elder (*Sambucus nigra*), and wild raspberry (*Rubus idaeus*).



Figure 15 Pine forest



Fauna - In the territory of the municipality with respect to the natural habitat, there is a variety of small wilderness. From feathered wildlife there are wild ducks, herons, cormorants in their flocks, while the river fauna is rich with fish of autochthonous species of carp, catfish, chub, whitefish, roach, prussian carp, nase, and according to the warden and fishermen, the appearance of pike and otters has shown a large increase. Further pollution of flora and fauna of rivers is exploitation of gravel from the riverbed of the river.

After research of the **Kamenica** phytodiversity, it is predicted that some species need to be preserved and conserved, as it has been found that there are phytocenoses which are quite rich and economically, scientifically and medically interesting. Regarding the zoo diversity, according to the IKMN data and the analysis of the working team, the territory of the Municipality of Kamenica is rich in wildlife, among which there are species considered as endangered and the protection of the areas is planned, the areas where these animals live and operate as well as their protection as a species. Inventory of flora and fauna throughout the municipality, including the town of Kamenica, specifying what should be protected and used.

Municipality of Novo Brdo is rich with flora and fauna and with deciduous and old forests. Food mushrooms, junipers, herbs, forest fruits etc. are present. Also, there are wild animals, such as: wild hog, deer, wolf, fox, rabbit, badger, squirrel etc. Among birds partridges, wild pigeons, falcons, back vultures and hawks etc. are known. The Municipality of Partesh is classified to have 11-30 endemic species of plants, even though there is no precise information on the actual distribution of such plant diversity.

In **Annex 8** from the ESMF, a List of plant species listed in the Red Book of Vascular Flora of the Republic of Kosovo, from the Morava e Binces river basin and List of animal species listed in the Red Book of Fauna of the Republic of Kosovo, from the Morava e Binces river basin has been given.

6.2.2. Forests

Kosovo forests, forest land, and fallow land make up to around 47 % of total surface area. Forests make up 460.800 ha, or 89.93 %; forest land 28,200 ha, or 5.50 %; and fallow land 23,400 ha, or 4.57 %. Forests represent a resource of special importance. However, as a consequence of inappropriate management of forest in the past, the result is heavy degradation of forests. Around 61.63 % of forests are publicly owned, whereas the remaining 38.37 % is in private ownership. According to statistics from the Kosovo Forest Agency, approximately 222,000 m³/year of wood is felled for construction and heating purposes. The whole volume of wood covers around 54 million m³. The average volume of wood per hectare is approximately 90 m³, and average annual growth is about 3 m³ per ha. The high demand for wood in the aftermath of the conflict is putting increasing pressure on the long-term sustainability of forest ecosystems.

In the **Municipality of Ranilug**, forests are mainly composed of deciduous trees of oak, lime, hornbeam etc. There are also forest plantations planted with pine, exclusively with black pine with over 30 years of age, which are in the exploitation stage. Mainly they are located in the cadastral area of Ranillug, Glllogoc, Upper and Lower Kormijan. Pine forests are treated as technical timber cultures. Municipality of Ranillug has around 3653.9 hectares, of which 469.31 ha are lower forests and 3184.59 ha are shrubs.

The forests in **Municipality of Novo Brdo** are divided based on their altitudinal position. Strips of Oak forest, Birch and Evergreen (lower strip), Strip of Oak forest, Hungarian, Italian and Turkey Oak, Forest strip with hilly Oak wood, Forest strip with forest Oak (higher strip).



Forests and shrub land cover about 26% of the territory of **Partesh**. The most common forest type is represented by broad-leaved woodlands (especially beech and oak trees). As in other parts of Kosovo, a considerable area of forest was destroyed during the war in 1999, and uncontrolled cutting has occurred since then, leading to disturbances of forest ecosystems and land degradation. It is estimated that in Kosovo around 40% of public forest land and 29% of private forest land are affected by uncontrolled activities or for illegal use. Detailed figures are not available for Partesh, but field surveys and interviews with municipal staff confirmed that the problem is widespread, and mainly caused by the need to collect firewood. Illegal tree cutting is operated also by people from outside the municipality, and has raised also concerns related to public safety, due to incidents occurred in the past that involved rival woodcutters.

6.3. Social Environment

6.3.1. Population

The total population in all three municipalities is 130 129 persons: 36,085 in Kamenica, 3,866 in Ranillug and 90,178 in Gjilan. In the municipalities of Ranillug, Kamenica and Gjilan there is a constant increase in the population from 1948 to 1991, while the 2011 census shows a decrease in population compared to the 1991 census.

As to the ethnic structure, in the municipalities of Kamenica and Gjilan, the Albanian ethnic group is dominant, while in Ranillug Serbian ethnic group prevails. Other smaller minority groups in Kamenicë are Serbian and Roma and in Gjilan, Turkish and Serbian.

The population in these three municipalities is mostly rural. Regarding the type of population (urban or rural), out of these three municipalities, only Gjilan is predominantly urban, with an urban population of 60.15%. The population in Kamenica is predominantly rural (79.68%), and Ranillug is 100% rural. Rural features of the Municipality of Ranillug, compared to other two who also has urban settlements within their boundaries is evident from the population density recorded during the Population Census in 2011, presented in the following table:

Table 8 Population Density as per Census 2011 (Kosovo Statistical Agency)

Municipality	Population (as per 2011)	Area (in km ²)	Population density per km ²
Kamenicë	36085	423	85
Gjilan	90178	385	234
Ranillug	3866	77,62	50

There are some differences in the age structure among these three municipalities. The table below indicates that Kamenica and Gjilan have younger population, with the population between 5 and 29 years old having the highest share within the age cohort groups. In Ranillug the population by age is more evenly distributed.

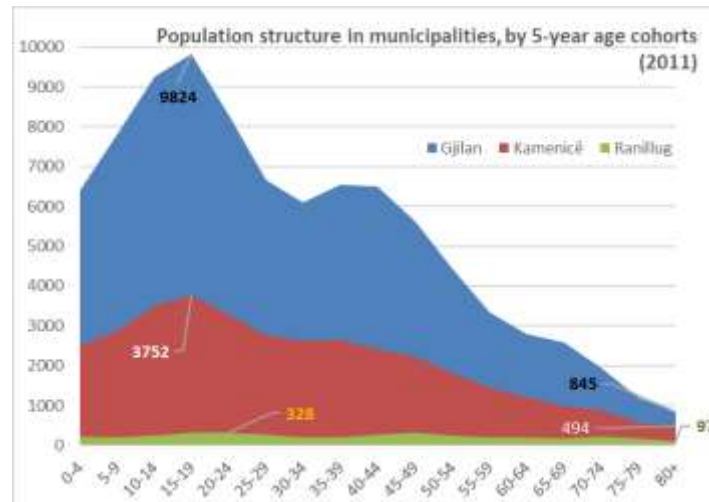


Figure 16 Age structure of the population in municipalities of Kamenica, Ranillug and Gjilan, by 5-year age cohorts, Census 2011 (Source: Kosovo Agency of Statistics)

6.3.2. Migration

The overall municipal migration balance is negative for the municipalities of Kamenica and Gjilan, while in Ranillug it is positive.

According to data for 2017, regarding international migration in the municipality of Kamenica, there are 22 people who emigrated or settled in the municipality, and 138 who left the municipality, i.e. emigrated. These figures show that there is a negative balance of -116 people. As for national migration, 152 people emigrated to the municipality, while 309 left. The balance of national migration is negative and stands at -157.

In the municipality of Ranillug, in relation to international migration, there are 4 people who have emigrated to the municipality and 3 people who have left the municipality. As far as international migration is concerned, there is a positive balance of 1 person. In terms of national migration, 11 people emigrated to the municipality, while 8 left. The balance of national migration is positive and equals 3 persons.

In Gjilan municipality, there are 514 emigrants in relation to international migration and 1025 who have left the municipality. In terms of international migration, there is a negative balance of -511 people. In terms of national migration, 327 emigrated while 381 left. The balance of national migration is negative and stands at -54.

According to data from the 2014 Migration Report for the three municipalities, most of the displaced are in Switzerland (affecting all three municipalities). In terms of gender displacement, in all three municipalities males are predominant by a small margin (in the Municipality of Kamenica 45.94% women, in Ranillug municipality 44.82% and in Gjilan municipality 45.56%).

6.3.3. Economy

Economy in these three municipalities is generally based on small businesses and partly agricultural production. Economy in Kamenica is predominantly based on bricks and alcoholic and non-alcoholic beverage production, and general small businesses. There are 2,210 registered private businesses operating in the municipality. There are total of 36 085 people in Kamenica (2011 census). The population number of people over the age of 15 is 27 185, or 75.33%. Of these 75.33% (i.e. 27 185 persons), 9969 are economically active or 36.67%. Of this group of economically active, 5 112 are employed or 51.28%. Women over 15 years make up 48,65% or 13 225 persons. Of the total number of persons over 15 years, 60.27% of women (10 376 out of 17 216) are economically



inactive. Of the economically active women, the largest percentage are in the category Unemployed, not working previously (52.95). Employed women make up 16.63 percent of the total number of employees.

Economy in Ranillug is predominantly based on dairy, milk and cheese production and small businesses. Approximately 110 registered private businesses are operating in the municipality.

In Ranilug, there are 3866 people (2011 census). The population number of people over the age of 15 is 3211, or 83.06%. Of these 83.06% (or 3211 persons), 1171 are economically active or 36.49%. Of this group of economically active, 485 or 41.42% are employed. Women over 15 years make up 49.27% or 1,582 persons. Of the total number of persons over 15 years, 55.59% women (1134 persons out of 2040) are economically inactive. Of the economically active women, the highest percentage is in the category Unemployed, not working previously (53.86). Employed women make up 32.78 percent of the total number of employees.

In Gjilan, there are 90 178 people (2011 census). The number of people over 15 years old is 66,714, or 73.98%. Of these 73.98% (i.e. 66,714 persons), 29,131 are economically active or 43.66%. Of this group of economically active, 15,861 or 54.45% are employed. Women over 15 years are 50.13% or 33,444 persons. Of the total number of persons over 15 years, 63.52% women (23,874 out of 37,583 in total) are economically inactive. Of the economically active women, the highest percentage is in the category Unemployed, not working previously (54.02). Employed women account for 25.62 percent of the total number of employees.

Economy in Gjilan is predominantly based on small businesses, and there are approximately 4100 registered active private businesses operating in the municipality.

As to the main industry, in Kamenica, the biggest number of employees fall into the category Agriculture, Hunting and Forestry, in Gjilan in the category Wholesale and retail trade; repair of motor vehicles and in Ranilug in the category Public administration and defence; compulsory social security.

In Kamenica, out of the 5112 in the category of employed, most fall into Agriculture, Hunting and Forestry, with 882 employees, followed by Education with 751 employees, and Wholesale and retail trade; and lastly, repair of motor vehicles, motorcycles and personal and household goods with 720 employees. The total number of employed women is very low, only 16.63%. Most women are employed in the Health and social work sector, where 55.17% of all employed women are employed, followed by financial intermediation, with 37.33% of employed women and Education with 27.56% of employed women. One woman is employed in the Fishing sector, the only employee in that sector, meaning 100% employed in that sector in the municipality.

In Gjilan, there are 15861 employees. Most of the employees are in Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods with 3 301 employees, followed by Education with 2003 employees and Public administration and defence; compulsory social security with 1814 employees. Employed women make up 25.62% of the total number of employees. Most of the employed women are in Health and social work with 65.52%, followed by Education with 44.08% and financial intermediation with 41.47%.

There are 485 employees in Ranilug. Most of the employees are in Public administration and defence; in compulsory social security 118 persons and 150 persons in Education. The number of employed women is 159 persons or 32.78%. Most employed women are in Health and social work - 67.27%, followed by Education with 37.33% and Public administration and defence; and lastly,



compulsory social security with 33.05%. In the financial intermediation sector, 100% of all employees in this sector of the municipality are women.

We also analysed the newly registered companies, for the first quarter of 2019. In the first quarter of 2019, a total of 152 new companies were registered in these three municipalities, most of them in the category Wholesale and retail trade, repair of motor vehicles and motorcycles (42 in Gjilan, 9 in Kamenica), followed by Manufacturing (16 in Gjilan, 5 in Kamenica) and Accommodation and service (16 in Gjilan, 1 in Kamenica).

Agriculture

According to the Kosovo Agency of Statistics, the Total figure of Land area in these three municipalities– is 3.895.452 ha, of which 18,110.19 ha in Kamenica (Utilised agricultural area 14,928.75 ha), 18,499.28 in Gjilan (Utilised agricultural area 14,624.11 ha), and 2,345.05 in Ranillug (Utilized agricultural area 1,855.83 ha).

In Kamenica, the most cultivated vegetables are peppers, grown by 958 agricultural holdings on 19.12 ha, followed by Tomatoes grown by 741 agricultural holdings on 12.87 ha land and Onions, grown by 665 agricultural holdings on 12.15 ha. The most cultivated vegetables in Gjilan are peppers, grown by 1070 agricultural holdings on 25.85 ha, then tomatoes grown by 879 agricultural holdings on 18.42 ha and onions grown by 714 agricultural holdings on 13.93 ha. In Ranilug, the most cultivated vegetables are peppers, grown by 69 agricultural holdings on 1.10 ha agricultural land, followed by onions, grown by 55 agricultural holdings on 0.70 ha and garlic, grown by 44 agricultural holdings on 0.73 ha.

Regarding fruit production, apples and plums are the most common. In Kamenica and Gjilan the number of farms producing apples is higher, while in Ranillug most of the farms are producing plums.

In terms of livestock breeding, poultry is the most developed in the three municipalities. In Gjilan, sheep breeding is more developed and in Ranillug pig breeding.

6.3.4. Health

Health services in Kosovo are provided through a network of health institutions organised into three levels: primary (PHC), secondary (SHC) and tertiary (THC).

Health care services are organised and provided by health care providers such as hospitals, outpatient, home and emergency services. Services are provided in public and private health institutions.

The activity of primary health care includes health promotion, prevention, early detection, diagnosis, treatment and rehabilitation of diseases, disorders and injuries, including dental care and minor surgeries based on the concept of family medicine. The public network of PHC consists of a total of 429 institutions, of which each municipality of Kosovo has the Main Family Medicine Centre (FMC) as the main unit, with its constituent units of Family Health Centres (FHC) and Family Health Ambulances (FHA).

In Kamenica, the primary health care system currently includes one (1) main municipal family health centre, three (3) family health care centres and 17 health houses. In Ranillug, there are eight (8) healthcare facilities. In the municipality of Gjilan, the primary health care system includes one (1) main municipal family health centre, 13 municipal family health centres, ten (10) health houses, and one (1) mobile health house. A regional hospital is located in the city of Gjilan.



6.3.5. Education

Education in Kosovo is carried out in public and private institutions. Starting from 1999, education in Kosovo was subject to reforms at all levels: from preschool education up to university level. These reforms were aimed at adjusting the education in Kosovo according to European and global contemporary standards.

According to the law on primary and secondary education in Kosovo, primary education (1-5) and low secondary education is mandatory for everyone. The mandatory education begins when the child reaches 6 years of age (the minimum age of mandatory education). According to this law, education in publicly funded educational institutions is free. The low secondary education is the second phase of the mandatory education which includes classes 6-9, generations 12 to 15 years of age, respectively.

It is noticeable from the table that the number of Primary schools and lower secondary schools is decreasing in Kamenica (31 schools in 2015/2016, 30 schools in 2016/2017, 29 schools in 2017/2018). The number of other educational institutions remains the same.

For the municipalities for which data is available, Gjilan and Kamenica, the total number of students has decreased. Regarding the percentage of female students, there are no significant changes by years, as there is almost equal gender representation.



Figure 17 Number of pupils in Preschool, Primary and Secondary Education (Source: Kosovo Agency of Statistics)

There is a public university education in Gjilan, the “Kadri Zeka” University.

6.3.6. Culture and Religion

In terms of religious affiliation, Gjilan and Kamenica are dominated by Islamic religion, in Gjilan with 98.65% and in Kamenica with 95.34%. In Ranillug the dominant religion is Orthodox Christianity with 95.52%.

A total of 44 cultural heritage sites (21 archaeological and 23 architectural) in Kamenica and a total of 64 cultural heritage sites (27 archaeological and 37 architectural) in Gjilan municipality are included in the Ministry of Culture Youth and Sport list of sites under permanent/temporary protection.



7. ENVIRONMENTAL AND SOCIAL RISKS AND IMPACT ASSESSMENT

The ESMF includes the following FLOWS activities/investments:

Component I: Foundational measures for water security

Sub-component 1.1 - Strategic investment planning

Sub-component 1.2 - Enhance integrated water management capacity

Sub-component 1.3 - Investments in strategic water security measures

Component 2: Catalytic investments in Morava e Bince Basin

Sub-component 2.1 - Strategic investments in water infrastructure and services

Sub-component 2.2 - Agro-environment and rural livelihood investments

Sub-component 2.3 - Participatory basin planning and implementation of small-scale

In accordance with the PAD, the project is classified as **Substantial Risk** by the WB, taking in account the impact and nature of the interventions, the experience of the implementing agency in managing similar activities and the application of new and energy efficient technologies.

Some of the activities proposed in project components/sub-components will be implemented on the national level, as activities proposed in Component I, while the activities in Component II will be implemented in the region of Morava e Binace River Basin. This mean that currently for the proposed activities locations as well engineering designs are not available. As a result of this, in this chapter will be given a general description of the possible environmental and social impacts, while on the level of feasibility study/project documentation, when the relevant data will be available the comprehensive consideration of impacts and mitigation measures take will be undertaken. On the basis of the proposed components/sub component activities it could be concluded that their implementation may cause positive and negative environmental and social impacts, as is presented in the chapters below.

In general, proposed project investments are expected to cause significant positive environmental and social benefits in the municipalities in the Morava e Binace River Basin as well as on the national level as a result of improved: drinking water availability, improved irrigation delivery system and water use efficiency, improved flood resilience, improved water quality in the rivers, soil quality, protection of biodiversity, reduced land degradation, landslide stabilization, increased awareness and capacity in coping with disasters, improved health and wellbeing, reduced potential risk for diseases, improved livelihood opportunities in the project areas, etc.

It is expected that the irrigation system will promote growth in agricultural production, which will stimulate incomes that could potentially disrupt the tendency of abandoning agricultural life and migrating abroad, where one can earn more than the agricultural production conditions allows in the project area.

Also, distributing the most significant infrastructure for human life, quality drinking water, will positively impact human health of the project beneficiaries.

The preparation of documentation (plans, studies, projects) and implementation of other investments proposed within the project will create job opportunity for arranged experts as well as beneficiaries on local and national level.

Although all investments are environmentally and socially beneficial, the construction of new infrastructure and upgrading or rehabilitation of the existing infrastructures are likely to result in certain adverse environmental and social impacts, as a result of: nature of the activities, possible land use, use of materials and energy, generation of emission and waste, that may cause adverse



impact on the air quality, climate, water, soil biodiversity, population, community etc. Of all proposed activities, the biggest environmental and social risks and impacts may cause activities related with construction and rehabilitation of irrigation infrastructure and water supplying infrastructure compared with other proposed activities, as a result of the nature of the investments. Assessment of the risks is made on the basis of the project scale, probability and magnitude of activities (see Table 9).

The envisaged risks and impacts should be precisely identified and mitigated across the design and implementation phases of the investments. The environmental and social impacts will depend on the environmental and social sensitivities associated with the location, the scale of the type of subproject, etc. It is deemed that a majority of the proposed investments' subproject activities will not result in significant long term adverse environmental or social impacts.

7.1. Environmental Impact Assessment

Component I: Foundational Measures for Water Security

Sub-component 1.1 - Strategic investment planning

This sub-component will improve the long-term vision and readiness for water security in Kosovo through the following activities: (i) develop national water resources investment plan, including strategic environment assessment and (ii) develop priority investment pipeline by establishing feasibility designs and studies for a limited number of prioritised infrastructure investments, including the Kremenata Reservoir.

The aim of this sub-component is to plan and prepare the future of water-related investments in Kosovo, including a ready pipeline and design for one or two identified priority investments. With the implementation of these activities, in the phase of preparation of required documentation, there will be no direct physical environmental and social impacts on a national and local level. Implementation of the activities and measures that will arise from the above mentioned documents in the next phases of the project will contribute towards social and environmental benefits. Besides benefits, some activities may cause adverse environmental and social impacts during construction and operation phase, which will be subject of separate assessment when the concrete plan/project will be prepared, i.e. SEA and site specific ESIA/ESMP.

Sub-component 1.2 - Enhance integrated water management capacity

This sub-component will initiate training among participating sectors to train and mentor the next generation of water, agriculture, and environmental specialists and facilitate their entry in the professional workplace (building capacity for integrated water resources planning and management, dam safety operation, data collection, management and analysis, etc.).

The implementation of activities from this sub-component will contribute for further environmental and social benefits as a result of build capacity for multi-sectorial water management as a result of trained new generation of water resources management professionals on a national level who can plan, manage and implement this project and future water sector investments in Kosovo, creation of job opportunity, etc. The implementation of this sub-component will take into consideration gender balance.

Sub-component 1.3 - Investments in strategic water security measures

(I) Investments and technical assistance to improve water information systems from data production, analysis and dissemination



This sub-component includes setting up equipment and works for gauging stations and automatic weather stations, making data available in real-time. These investments will be implemented in the selected areas on the territory throughout the country.

Besides environmental benefits of collection of data and its usage for sustainable water resources management, the implementation of these investments may cause adverse environmental and social impact on the target area during construction and operation phase of the project.

The possible impacts during construction phase are related with land use, use of construction material, air emission, noise and vibration, generation of waste as a result of construction (hazardous or non-hazardous) i.e. surplus excavated soil, inert waste, communal waste, packaging waste, biodegradable waste, electronic waste etc.), disturbance of the water quality as a result of performance of construction activities in the rivers/riverbeds and other water bodies or their proximity, etc.

All mentioned activities and emissions may cause adverse impact on: air quality, soil, water, landscape, as well as the local population, which may be assessed as possible, short term, local and with low intensity. The possible risk is low (magnitude-small and probability-likely).

The possible impacts during operation phase which also include maintenance activities are related with electricity consumption, land use for access to the location where the equipment, gauging stations and automatic weather stations are installed, removal of vegetation, generation of waste, inert, biodegradable, packaging waste, electronic waste, usage of mechanisation and vehicles, performance of maintenance activities in or near waterbodies, etc.

All mentioned activities and emission may cause adverse impact on: air quality, soil, water, landscape, as well as the local population, which may be assessed as possible, short term to long term, local and with low intensity. The possible risk is low (small-magnitude and probability - likely).

(II) Finance the assessments, equipment and training for institutionalizing dam safety surveillance measures

In terms of dam safety, this project will address two main challenges in Kosovo's dam safety management: 1) **Improve dam safety surveillance and maintenance of existing dams in Kosovo** and **Improve emergency preparedness and response measures in face of flood risks and potential dam failures**. This will include a partial Dam Operation Improvement and Safety Project (DOISP) that will identify information, analysis and investment gaps on improving Kosovo's dam safety management capacity; and

A large number of sub-legal acts have been developed within Law No. 04/L-147 on the Waters of Kosovo, however, there are still many legal and institutional gaps hindering the full implementation of this law, out of each is the lack of natural and legal persons for assessing dam safety, water cadastre, water information system, and other.

River Basin District Authority (RBDA), formerly MIE Department of Water, was founded in 2018. RBDA has seven (7) employees, out of which, one employee (1), Head of Planning Department, is in charge of dam conditions (Head of Planning Division) with hydro technical engineering education background (graduated at the technical faculty of engineering, Pristina University), but no experience or training in dam construction, safety or maintenance.

RBDA dam related responsibilities (according to AI 09/2017 on Design, Construction and Use of Dams):

- Approves plans and projects for the construction of new dam and filling;



- Prepares dam inspection plans and performs periodic inspections;
- Supervises use and maintenance of the dam;
- Supervises emergency aspects in collaboration with Emergency Response Agency, local authorities and other responsible authorities for emergencies;
- Examines the reports and verifies the technical safety requirements;
- If deemed necessary for technical safety of the dam, specifies the conditions for uninterrupted use of the dam.

However, lack of equipment and human resources (training, knowledge, experience) resulted in none of the dams being monitored (other than by visual inspection).

From 2008 (independence) on, there have been no cases of dam construction, to be able to test, use and evaluate competence and effectiveness of administrative procedures, including environmental permitting. Responsibilities and tasks related to the existing dams are largely not performed (periodic inspection is only visual, no coordination and collaboration on emergency aspects exist, no reports are submitted/reviewed and technical safety requirements remain unknown, no inspection plans are made).

This investment will support the continuation of the program establishment of long term and sustainable arrangements for safety of major dams. The envisaged outcomes include institutional arrangements, policies, and procedures for monitoring; risk assessment; identification of corrective actions to mitigate risks; regular operation and maintenance; dam operation during extreme climate events etc. These investments will play a leading role in facilitating a process to support the Government and the Project in instituting dam safety policies, developing guidelines for dam safety monitoring and inspection, and establishing an independent dam safety centre.

With the implementation of these activities, permanent institutional arrangements for dam safety will be established, that will minimize risks of dam failure and facilitate repair and rehabilitation of dams and dam components as risk that will contribute for significant social and environmental benefits. Implementation of these investments will enhance the dam safety management capacity of Kosovo's five existing dams and ensure adequate dam safety management capacity for new reservoir construction and management.

III) Investments in irrigation infrastructure

As was previously mentioned, investments in irrigation infrastructure will be selected among the findings of the Irrigation Master Plan and Investment Framework currently being developed under the Bank-funded Agriculture and Rural Development Project. The EU IPA grant will provide funding for the infrastructure investment and technical assistance for:

- i. Investments in irrigation and drainage rehabilitation, modernisation and revitalisation of existing irrigated areas, including existing irrigation systems under Social Owned Enterprises (SOE)-managed schemes, as well as in other priority areas;
- ii. Investments in water storage (rainwater harvesting, small reservoirs) to increase water availability for irrigation and develop climate resilience;
- iii. Detailed design Studies and quality control and supervision of targeted irrigation and water storage investment; and
- iv. Support for farmers to develop farmer-led irrigation and drainage improvements, including support for extension, determining standards, and training of supply chain actors.



Implementation of all mentioned investments in irrigation infrastructure may cause adverse environmental and social impact on the target areas during construction and operation phase of the project. The main possible impacts are related with land use, usage of raw materials and its storage, energy and water. Construction activities will generate: air emission (dust emissions, exhaust gases), noise and vibration as a result of working and transportation activities, usage of equipment and mechanisation; waste water (construction activities and labour camps), waste (hazardous or non-hazardous) as a result of preparation of construction sites and construction activities (surplus excavated soil, inert waste, communal waste, packaging waste, asbestos materials and pipes, biodegradable waste, electronic waste etc.).

All mentioned activities and emission may cause impacts on: air quality, climate, soil, water (surface and ground water), biodiversity and landscape, as well as the local population.

The impact during construction phase may be assessed as: possible, short term, local, with moderate to high intensity. The possible risk is substantial (medium-magnitude and probability-high likely to certain).

In the operational phase of the irrigation infrastructure, possible water system leaks can increase the demands on the source water supply, the amount of power used for pumping, etc. Non-efficient use of irrigation and drainage systems may cause adverse impacts of flow of downstream rivers, as well on ground water. Also, there can be a number of impacts associated with these projects including concentrations of agricultural chemicals and salts in the drainage and the impact of the drainage water on the receiving waters, downstream users, and the aquatic ecosystem. Key issues typically associated with irrigation and drainage projects are listed below.

During irrigation, some part of the water used for irrigation will evaporate and may cause meteorological changes of the project area. Usage of fertilisers and pesticides which contain nitrogen and phosphorus compounds and substances which are on the list of priority substances (Water Framework Directive) may cause significant impacts on ground and surface water during its drainage, as well on the water ecosystems.

Investments in water storage (rainwater harvesting, small reservoirs) to increase water availability for irrigation may cause adverse impact on the local hydrology, impact on soil and crops (depending of the quality of rainfall water and type of the soil that will be irrigated). Also, if they are open may cause odour, evaporation and cause impact on microclimate and contribute to climate changes.

As a result of operational and maintenance activities of irrigation infrastructure and agricultural activities (use of pesticides and fertilisers) will be generated: air emission, noise and vibration (usage of equipment and mechanisation); waste water, waste (hazardous or non-hazardous) (surplus excavated soil, inert waste, packaging waste, asbestos pipes, biodegradable waste, electronic waste etc.).

All mentioned activities and emissions may cause impact on: air quality, climate changes, soil, water (surface and ground water), biodiversity and landscape, as well as the local population.

The impact during operational phase may be assessed as: possible, long term, local, regional to national with moderate to high intensity. The possible risk is substantial (medium-magnitude and probability-high likely to certain).

IV. Technical assistance to improve irrigation water management and operational systems

The technical assistance to improve irrigation water management and/or operational systems will include the support to:

- develop water management information systems and tools for improved water use efficiency;



- change processes in irrigation SOEs towards improving irrigation service delivery, financial sustainability in the sector, and improve accountability and transparency, in conjunction with investments in modernisation of the system;
- develop and define clear mandates and roles for small-scale, non-SOE led, collective irrigation organisations of water users and give technical support for collective irrigation systems; and
- lead a policy dialogue for improved oversight and develop a framework for measuring and monitoring SOE irrigation performance.

The implementation of these small-scale activities related with water management information systems and tools for improved water use efficiency may cause an adverse environmental and social impact on the target area during construction and operation phase of the project.

The possible impacts during construction and operation phase are related with land use for access to the location where the tools and equipment should be installed (manholes, hydrants, pumps etc.), removal of vegetation, air emission and noise from mechanisation during setting and maintenance of the tools and equipment, generation of waste (inert, biodegradable, packaging waste, electronic waste) etc.

All mentioned emissions may cause possible adverse impacts, short term, and local with low or negligible intensity on air quality, soil, biodiversity. The possible risk is low (negligible-magnitude and probability-likely).

Component 2: Catalytic investments in Morava e Bince Basin

Sub-component 2.1 - Strategic investments in water infrastructure and services

l) Implementation of activities which include expanding, rehabilitation and modernisation of water supply systems including measures to improve performance and efficiency of water use in RWC Hidromorova

Implementation activities for expanding, rehabilitation and modernisation of municipal water supply systems in the target area will include activities for setting new pipelines, rehabilitation of existing pipelines, treatment of water in a water treatment plant, setting equipment for efficient water use which may cause adverse environmental and social impact on the target area during construction and operation phase of the project.

The main possible impacts are related to land use, usage of raw materials, energy and water. Construction activities will generate: air emissions (dust emissions, exhaust gases), noise and vibration as a result of working and transportation activities, usage of equipment and mechanisation; waste water (technical and sanitary), waste (hazardous or non-hazardous) as a result of preparation of a construction site and construction activities (surplus excavated soil, inert waste, communal waste, packaging waste, asbestos pipes and materials, biodegradable waste, electronic waste etc.).

All mentioned activities and emissions may cause adverse impact on: air quality, climate changes, soil, water (surface and ground water), biodiversity and landscape, as well as the local population.

The impact during construction phase may be assessed as: possible, short term, local, with moderate to high intensity. The possible risk is substantial (medium-magnitude and probability-high likely to certain).

In the operational phase of the water supplying system, possible water system leaks can reduce the pressure of the water system, compromising its integrity and ability to protect water quality (by allowing contaminated water to leak into the system) and increasing the demands on the source water supply, the quantity of chemicals, and the amount of power used for pumping and treatment.



Leaks in the distribution system can result from improper installation or maintenance, inadequate corrosion protection etc.

Water lines may be periodically flushed to remove accumulated sediments or other impurities that have accumulated in the pipe. The major environmental aspect of water pipe flushing is the discharge of flushed water, which may be high in suspended solids, residual chlorine, and other contaminants that can harm surface water bodies.

The operation of the water treatment plant requires the usage of water, electricity, hazardous chemicals for coagulation, disinfection and water conditioning, etc. As a result of the operation of the water treatment plant, waste (hazardous and non-hazardous), waste water (may contain suspended solids and organics from the raw water, high levels of dissolved solids, high or low pH, heavy metals, etc.), and air emissions will be generated. Air emissions from water treatment operations may include ozone (in the case of ozone disinfection) and gaseous or volatile chemicals used for disinfection processes (e.g., chlorine and ammonia). Non-efficient use of water supplying system may cause adverse impacts on the flow of downstream rivers.

All mentioned activities and emissions may cause adverse impact on: air quality, climate changes, soil, water (surface and ground water), biodiversity and landscape, as well as the local population.

The impact during operational phase may be assessed as: possible, short-long term, local with moderate to high intensity. The possible risk is substantial (medium-magnitude and probability-high likely to certain).

The implementation of investments related to water management information systems and tools for improved water use efficiency may cause adverse environmental impact on the target area during construction and operation phase of the project.

The possible impacts during construction and operation phase are related with land use for access to the location where the tools and equipment should be installed (manholes, hydrants, pumps etc.). removal of vegetation, possible removal of crops, air emission and noise for mechanisation during setting and maintenance of the tools and equipment, generation of waste (inert, biodegradable, packaging waste, electronic waste) etc.

All mentioned emissions may cause adverse impacts, short term, local, and low intensity on air quality, soil, biodiversity. The possible risk is low (negligible-magnitude and probability-likely).

(ii) Investments to rehabilitate and construct flood protection infrastructure (embankments) along the Morava e Binceš River

The implementation of investments for rehabilitation and construction of flood protection infrastructure (embankments) will require land use, raw materials, energy and water. The proposed activities will result in generating air emissions (dust emissions, exhaust gases), noise and vibration as a result of use of equipment and mechanisation, transport activities, waste water as a result of construction activities, waste (hazardous or non-hazardous) as a result of construction and maintenance activities. The main adverse impacts related with these activities are impacts on water as well biodiversity, especially on aquatic habitats and species, because implementation of the activity mainly will be performed in the rivers or near surroundings. Also, there is a possibility during performance of activities for a diversion of the river's flow.

All mentioned activities and emissions may cause adverse impacts on: air quality, climate changes, soil, water (surface and ground water), biodiversity and landscape, as well as the local population. The impacts may be assessed as adverse, short term, local with low to moderate intensity. The possible risk is moderate (small-magnitude and probability-high likely).



Sub-component 2.2 - Agro-environment and rural livelihood investments

This sub-component includes implementation of agro-environmental and forestry measures which have not been yet piloted through the Government Rural Development Program. This activity will support piloting implementation of a number of measures as defined in Kosovo IPARD (Instrument of Pre-accession Assistance for Rural Development) Program, focusing on (i) supporting sustainable management of natural resources and agricultural practices; (ii) restoring, preserving and enhancing ecosystems dependent on agriculture and forestry, while addressing the challenge of climate change; (iii) promoting a more efficient use of water and increasing productivity and quality; and (iv) building capacity and gaining practical experience for the implementation of the measures (beneficiaries, advisory and administration).

With regard to the on-farm irrigation and related investment measures, these will complement the existing support, aiming at introducing water-saving irrigation systems to intensify and diversify the production in the project area, focusing on higher value crops, further developing sustainable value chains and strengthening the linkages to markets, including the local tourism industry.

Activities which are defined and covered under the IPARD program, by their nature, are similar with the project activities covered under the FLOWS Project. As a result of this common assessment of environmental impact is made.

In Chapter 8.2 and Chapter. 8.3 environmental and social assessment for each activity with defined appropriate mitigation measures are given. The assessment of afforestation is not included in the ESMF because a Forest management plan is not prepared yet (for the Morava e Binces River Basin).

Sub-component 2.3 - Participatory basin planning and implementation of small-scale investments

This sub-component will introduce a participatory planning approach for the Morava e Binces basin and allow for related small-scale investments. An Integrated Management Plan focusing on River Basin and Flood Risk Management will be prepared, closely coordinated with activities conducted by other development partners, particularly the Swiss Cooperation Office (SCO). Based on a stock-taking assessment, existing gaps and development needs will be identified, prioritised and subsequently addressed in the frame of the activity over a timeframe of approximately 4 years. The development of the Management Plan will allow to introduce key aspects of River Basin Management, including questions related to administrative arrangements, the characterisation of the river basin, identification of different water uses, pressures and impacts assessment, economic analysis, water body status assessment and the development of a Program of Measures. With regard to Flood Risk Management, Areas of Potential Significant Flood Risk will be identified. Hydrological and hydraulic modelling will allow for the preparation of Flood Hazard and Risk Maps for important areas and subsequently for the identification of measures to reduce flood risk exposure of communities, the economy and the environment. Related methodologies for the development of the Management Plan for the Morava e Binces basin will be closely coordinated with relevant activities conducted in other parts of the country by other development partners, particularly the Swiss Cooperation Office (SCO).

This sub-component will introduce a complementary participatory planning approach for integrated and sustainable management of natural resources (forest, pastures, water and agricultural lands) at micro-catchment²³ (MC) level initially in three municipalities (Kamenica, Ranillug and Gjilan). The

²³ Micro-catchments (MCs) need to be defined before appraisal stage. MCs are smaller catchment areas within a watershed defined by hydrological boundaries. The average size of an MC and its population needs to be determined.



integration of forest and pasture management with agriculture crops and livestock production, as well as promotion of soil and water conservation, will help communities and government agencies better manage and protect these resources. This process will feed into the preparation of the broader Morava e Binces River Basin Management Plan. This sub-component will support the implementation of the micro-catchment plans through two mechanisms: (i) it will finance goods and works for small-scale public investments as sub-projects and/or technical support for activities identified in the planning process in above areas; and (ii) in conjunction with the Platform matching grants program the sub-component will also help formulate and pilot a climate resilience challenge fund that supports agencies, companies, CSOs, individuals, and academia to implement and test scalable innovations in the fields of evidence-based decision-making, watershed protection, service improvements, and achieving water or energy/commercial savings. This challenge fund will include different categories for grants, requiring transparent selection criteria and transparency on fund use and outcomes achieved, before scaling the initiative in future engagements. Activities that can be financed under 2.2 (agro-environmental measures) will be excluded from this fund, as well as small awareness-oriented activities.

This sub-component will focus on wide river basin development and management planning, preparation and implementation of micro-catchment resource management plans, as well as communication and awareness raising campaigns. These activities intend to build local ownership of integrated catchment management activities and holistically address water security challenges with tangible measures.

With the implementation of these activities, in a phase of preparation of required documentations there will be no direct physical environmental and social impacts, except benefits for arrangement of different of experts (earnings for experts). The implementation of activities and measures that will arise from these documents will contribute for social and environmental benefits. The integration of forest and pasture management with agriculture crops and livestock production, as well as promotion of soil and water conservation, will help communities and government agencies for better management and protection of these resources.

In the following tables the proposed investments and possible environmental and social risks that may be caused by their implementation are presented, as well as a matrix for determination of the risks.

Table 9 Possible Risks for proposed investments

Investments	Possible environmental risks	Possible social risks
1) Investments and technical assistance to improve water information systems from data production, analysis and dissemination: Setting up equipment and works for gauging stations and automatic weather stations, making data available in real-time	Low	Low
2) Investments in irrigation infrastructure	Substantial	Substantial
3) Technical assistance to improve irrigation water management and operational systems (Develop water management information systems and tools for improved water use efficiency)	Low	Low
4) Implementation of activities which include expanding, rehabilitation and modernization of water supply	Substantial	Moderate



systems		
5) Measures to improve performance and efficiency of water use in RWC Hidromorova within its service area	Low	Low
6) Investments to rehabilitate and construct flood protection infrastructure (embankments) along the Morava e Binceš River	Moderate	Moderate

Table 10 Matrix for determination of risks

Probability/Magnitude	Large	Medium	Small	Negligible
Certain	High	Substantial	Moderate	Low
High likely	High	Substantial	Moderate	Low
Likely	Substantial	Moderate	Low	Low
Unlikely	Substantial	Moderate	Low	Low

7.2. Social Impact Assessment

This Section assesses the impacts that the sub-projects will have on the different socio-economic and land use receptors/resources discussed under the social baseline conditions. The analysis considers impacts on the following social sub-domains: land and properties, workers and community, vulnerable and marginalised groups.

The Project is now in the planning phase and social impacts described herein are indicative. During the Detail Design phase of the sub-projects, a tailored social survey will be carried out to assess adverse impacts and risks that will occur in the social environment, and consequently propose mitigation measures appropriate to the extent and scope of the sub-projects.

1. Loss of Land and Property

Potential impacts as a result of temporary and permanent loss of land have been identified. Permanent loss of land will occur during the land expropriation process at the pre-construction phase of the sub-projects. Impacts associated with the temporary loss of land will affect the owners during the construction phase.

It is expected, where it occurs, the land acquisition process to acquire mainly agricultural land (pastures, meadows and arable fields). The induced adverse impact as a result of land loss will affect farming activities of the local population, and livelihoods of some vulnerable groups that need to be properly identified during the scoping phase of each sub-project.

No existing social relationships are expected to be disrupted with the project activities.

Temporary loss of access to land and short-term impedance for conducting agricultural activities are also expected to occur, as an adverse impact thus potentially endangering livelihood of the local affected farmers.

2. Nuisance and Disturbance

Nuisance and disturbance impacts have been identified to occur during the construction phase. Temporary noise and vibration impacts during the construction phase are expected to arise due to site clearance and ground works, delivery of materials and movement of construction machinery, building of infrastructure, installation of equipment and other operations on site. Additional vehicle movements during the construction phase may generate noise impacts from



traffic on local roads and site tracks. Nuisance and disturbance impacts will specifically affect local communities located in the immediate vicinity of the infrastructure alignment and access roads towards it.

3. Worker's Health, Safety, Security and Wellbeing

Site preparation, construction activities and the use of temporary workers' accommodation pose potential risks to the health, safety, security and wellbeing of the construction workers planned to engage on various sub-projects (investments).

The need for workers' accommodation has not been identified, due to the inability to know exact construction activities of the planned sub-projects.

Project workers would include direct workers and contracted workers most likely, but also less likely the project activities could incorporate project workers that fall under category of primary supply workers. The Kosovo Labor Laws specify the need for the contracts, working hours, principles of non-discrimination and rights to associate into unions. As per Rlinvest (prominent Kosovo based think tank) about 19% of workers do not have a contract, with 82% of them being in private sector. About 81% of all employees fall under one or more of the following categories: i) they work without a contract or ii) they are paid more than the contract wage as employers under-report the wage in the contract to reduce their contribution to pension insurance; or iii) the wage paid is without pension and social insurance. These risks will be managed through Procedures, namely Labor Management Plan. The Labor Management Procedures (LMP) have to be prepared before Appraisal which will describe the types and scale of Project Workers likely to be hired under the project, address the labor risks envisaged for them, set out Grievance Mechanisms for categories of project workers, and define other principles on the employment of Contracted Workers, so that all requirements of the ESS2 are adequately reflected in tender documents.

Other related risks refer to Occupational Health and Safety (OHS) of workers hired by the Contractor ("Contracted Worker") and potentially sub-contractors. Adverse occupational health and safety impacts and risks is foreseen to include personal accident or injury of the workers as a product of ignorance of OHS rules and procedures, lack of PPE use on construction site.

4. Community Health, Safety and Security

Construction activities may imply community exposure to health, safety and security risks. Community safety and security risks during the construction phase will be quite similar to the risks for workers should no measures be taken to protect construction sites and prevent unauthorized access of local residents to the sites.

Community safety risks are also associated with:

- Exposure to hazardous materials during construction and transport of goods and materials.
- Blasting and excavation works in the vicinity of settlements associated with risks of injuries;
- Increased traffic on local roads (transport of vehicles, equipment, goods, materials, and workers to the construction sites) can cause road accidents, injuries or death in result of collision with vehicles.

5. Influx of Workers



During the Preliminary Design phase, it is anticipated that a considerable number of the workforce will be mobilized locally, however skilled workforce will be provided by the Contractors of sub-projects. Given the scale of the investment, no influx of external labor is expected but also labor influx of local workers would be expected.

7.3. Environmental and Social Screening for the Sub - projects

Sub-projects for the project investments will be prepared and implemented in line with the requirements of ESSs found relevant for the project. The World Bank requirements involve mandatory review of adequacy of local environmental and social requirements relevant for the sub-projects, as well as assessment of the Borrower's capacity to manage the environmental and social risks and impacts of such sub-projects, particularly, Borrower's capacity to

- (a) perform sub-project screening;
- (b) ensure necessary expertise for conducting environmental and social assessment;
- (c) review findings of environmental and social assessment for individual sub-projects;
- (d) implement mitigation measures; and
- (e) monitor environmental and social impact during project implementation. If necessary, the project may envisage measures to strengthen the Borrower's capacities.

The Borrower is obliged to carry out appropriate environmental and social assessment of subprojects.

All the sub-projects to be financed under the Project must undergo environmental and social screening in the manner described in this ESMF in

Annex 2 and Annex 3.

Social screening of each sub-project must be conducted by experienced or purposely trained Social and Stakeholder engagement specialists engaged by MIE. The Social screening must be reported to and controlled by the person who is responsible for managing the sub-project.

Screening is the first step in the process of thorough analysis of sub-projects, and its purpose is to identify potential impacts of the proposed sub-projects and define measures aimed to prevent or minimize negative impacts. Specifically, the screening would identify environmental and social risks related to the proposed sub-project and determine the type of impact assessment documentation needed for sub-project implementation. Sub-projects unacceptable due to the nature of the proposed activities would be rejected.

The screening procedure should include the following steps:

Screening procedure starts with the fulfilment of Questionnaire for environmental and social risk categorisation and Environmental and Social Screening (ESS) Check List, defined in

Annex 2 and Annex 3 of the ESMF. The MIE supported by environmental and social experts are responsible to prepare the required documentation, i.e. ESS Check List with all required data, in order to assess the possible impacts (intensity and duration). On the base of the preliminary assessment of the proposed activities will be determined the sub-project risk (high risk, substantial risk, moderate risk or low risk) and identified required type of environmental due diligence document for each sub – project. More precisely, during determining the risk, the following should be taken into account:

- a) the type, location, sensitivity and scale of the Project including the physical considerations of the Project; type of infrastructure, volume of hazardous waste management and disposal;



- b) the nature and magnitude of the potential ES risks and impacts, including impacts on greenfield sites; impacts on brownfield sites (e.g., rehabilitation, maintenance or upgrading activities); the nature of the potential risks and impacts (e.g. whether they are irreversible, unprecedented or complex); resettlement activities; and possible mitigation measures considering the mitigation hierarchy;
- c) the capacity and commitment of the Borrower to manage such risks and impacts in a manner consistent with the ESSs, including the country's policy, legal and institutional framework; laws, regulations, rules and procedures applicable to the Project sector, including regional and local requirements; the technical and institutional capacity of the Borrower; the Borrower's track record of past Project implementation; and the financial and human resources available for management of the Project;
- d) other areas of risk that may be relevant to the delivery of ES mitigation measures and outcomes, depending on the specific Project and the context in which it is being developed, including the nature of the mitigation and technology being proposed, and considerations relating to domestic and/or regional stability, conflict or security.

After completing the ESS Environmental and Social Checklists (

Annex 2 and **Annex 3**) by the environmental and Social Management Unit (E&SMU) and other required documentation, they should be submitted to the Project Management Team (PMT) for review. PMT would work closely with the Applicant on environmental and social documentation and provide proposals/advice. Additionally, the Applicant should contact the MIE in order to fulfil all the requirements of local legislation. The relevant Ministry would determine if full EIA is needed or not. If an EIA report is not required in accordance with paragraph 1 of Article 12 (Law on EIA), the relevant Municipality may initiate the procedure for issuing an Environmental Municipal Permit.

The project investments included in the framework and presented in table 8 can be categorised with low to substantial risk in terms of environmental and social aspects. **Investments in irrigation infrastructure and implementation of activities which include expanding, rehabilitation and modernisation of water supply systems** are categorised with substantial risk in terms of the environment aspects, while in terms of social aspect only **Investments in irrigation infrastructure** are categorised with substantial risk.

Proposed investments include activities for construction and rehabilitation of existing infrastructures that compromise land use, generation of emissions and in depend on the project area and its characteristic may cause adverse environmental and social risk, higher than anticipated in the ESMF.

In accordance with the Kosovo legislation, and the Law on EIA, all projects which are listed in Annex I **shall be obliged to implement an EIA**, asking the corresponding authorization from the Ministry of Infrastructure and Environment (MIE), while projects listed in Annex II shall be examined, case by case and in accordance with the criteria set out in Annex III, in order to determine whether they must require an EIA.

The proposed project investments in accordance with the Kosovo EIA legislation belong to Annex II that require conducting environmental assessment procedure, step by step. Only industrial waste water treatment plan, point **8. Waste and Wastewater Treatment and Disposal, sub point 33** belongs in Annex I (these activities also belong in Annex II). Whether these activities will belong to Annex I or II will be determined additionally, depending on the production and operational capacity, and location of the setting and sensitivity).



After submitting the required documents, the PMT will evaluate the sub-project based on the Environmental and Social Checklist and decide whether ESIA or ESMP is required.

For sub-projects which for many aspects are assessed with "substantial" or high risk", or if E&SMU assesses that they present potential environmental and social risk, development of preliminary ESIA or ESIA is recommended. For sub-projects with "moderate risk" ESMP is recommended. However, in case of simpler sub-projects with only one or two items assessed as "moderate impact", E&SMU may assess that concise or simplified ESMP would be sufficient.

If the sub-project is categorised as "Low risk", further environmental and social assessment shall not be required after initial ESMP - Check list, nor shall further monitoring be done.

The next step for project Applicant is preparation of ESIA or ESMP. The Terms of Reference for ESIA and indicative outline for ESMP is given in **Annex 4** and **Annex 5** of ESMF. The template form for ESMP is given in **Annex 5** and **Annex 6** and in **Annex 7** for the Monitoring Plan.

Prepared ESIA/ESMP should be submitted to the PMT for review and its approval. Sub-project shall be eligible for financing only after its approval. ESIA/ESMP approval shall follow public disclosure and completion of public consultations.

E&SMU would include a financing agreement in each sub-project, and it is the Applicant's obligation to comply with the requirements specified in the ESIA/ESMP. The Applicant would be required to invest all efforts to ensure sub-project implementation in environmentally and socially acceptable manner.



8. ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS AND MITIGATION MEASURES

The proposed components/sub-component investments within the project FLOWS include activities/investments whose implementation may cause environmental and social risks and impacts. In order for anticipated risks and impacts to be avoided or reduced a mitigation measures are proposed. The possible environmental and social risks and impacts and proposed mitigation measures for all proposed investments are presented in this chapter.

In the next phase of implementation of the project activities/investments, when the type of projects, their location and sensitivity will be known and precisely defined, the risk and impact assessment will then be updated.



8.1. Possible social impacts and mitigation measures

Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Costs
Pre – construction phase	Stakeholder Engagement	<ul style="list-style-type: none"> Potential miscommunication with the local population and other affected stakeholders such as NVO/CSOs and vulnerable groups. 	Certain, short term, regional, moderate intensity	<ul style="list-style-type: none"> Wide presentation of the Project and sub-projects (investments) to the local affected population and other institutional or non-institutional stakeholders. Creation of Stakeholder Engagement Plan for each sub-project (investment) in compliance with Stakeholder Engagement Framework 	- Sub-project developer	- 1500 €
	Land Acquisition	<ul style="list-style-type: none"> Temporary or permanent land acquisition. 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> Creation of a Resettlement Action Plan that will embrace thorough consultations with affected land owners/users, compensation and other items and actions described in the Resettlement Policy Framework Implementation of RAP. 	- Sub-project developer	- 6000 €
	Community Health and Safety	<ul style="list-style-type: none"> Social Impact Assessment and/or Community Health and Safety Impact Assessment 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> Creation of a Social Impact Assessment, as part of ESIA, or a separate document, for the sub-projects (investments) that will have significant impacts on the local population, their livelihood, health and safety. Creation of a Social Impact Assessment, as part of ESMP, for the sub-projects (investments) that will have significant impacts on the local population, their livelihood, health and safety. Creation of a Community Health and Safety Impact Assessment document where livelihood has not been affected. 	- Sub-project developer	- 4000 € - 1500 € - 3000 €



Construction phase	<p>Worker's Health, Safety, Security and Wellbeing</p> <ul style="list-style-type: none"> • Potential accidents that can cause injury or death when working on or around irrigation systems including: <ul style="list-style-type: none"> - Electrical Contacts/Accidents <ul style="list-style-type: none"> Contacts/Entanglements with Moving Parts - Chemical Exposures/Poisonings - Falls from the System - Drowning • Physical (Head, Eye, Ear, Hand & Foot) Accidents • Potential ignorance on the rights and wellbeing of the Worker's engaged on sub-projects (investments) 	<p>Probable, short term, local, moderate to high intensity</p>	<ul style="list-style-type: none"> - For each sub-project (investment), LMP to be followed by the Contractor and Sub-contractors - Mandatory use of PPE - Regular health checks for workers 	<p>- Contractor (sub-contractors)</p>	<p>- N/A</p>
	<p>Community Health, Safety and Security</p> <ul style="list-style-type: none"> • Traffic and road safety risks to workers, affected communities and road users • Community exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable and noncommunicable diseases that could result from project activities. • Community exposure to hazardous materials and substances that may be released by the project. 	<p>Certain, short term, local, moderate to high intensity</p>	<ul style="list-style-type: none"> - The sub-project's (investment's) Contractor will identify, evaluate and monitor the potential traffic and road safety risks to workers, affected communities and road users throughout the sub-project life cycle. The Contractor of sub-project who will conduct maintenance works to create a separate Traffic Management Plan that will take into consideration all aspects of sub-project related traffic passing through the populated settlements, as well as appropriate protection measures to decrease safety threat to the local population during construction phase, proportionate to the risks and impacts. - The Contractors, along with the local Institutions responsible for monitoring and protection of Public Health will conduct regular monitoring, and if it is necessary, will conduct additional Rapid risk hazard assessment (RRHA). Based on the results of the RRHA, the operator will prepare an Emergency Response Plan (ERP) in coordination with the relevant local authorities including those responsible for monitoring and protection of Public Health and the affected community. 	<p>- Contractor (sub-contractors)</p>	<p>- 2000 €</p> <p>- 1500 € (RRHA)</p> <p>- 1500 € (ERP)</p>



Operational Phase	<p>Worker's Health, Safety, Security and Wellbeing</p> <ul style="list-style-type: none"> • Potential accidents that can cause injury or death when working on or around irrigation systems including: <ul style="list-style-type: none"> – Electrical Contacts/Accidents – Contacts/Entanglements with Moving Parts – Chemical Exposures/Poisonings – Falls from the System – Drowning • Physical (Head, Eye, Ear, Hand & Foot) Accidents 	<p>Probable, short term, local, moderate to high intensity</p>	<ul style="list-style-type: none"> - For each sub-project (investment) LMP to be followed by the Operator, if the operator is different. - Mandatory use of PPE 	<p>- Operator</p>	<p>- N/A</p>
	<p>Community Health, Safety and Security</p> <ul style="list-style-type: none"> • Traffic and road safety risks to workers, affected communities and road users • Community exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable and noncommunicable diseases that could result from project activities. 	<p>Certain, short term, local, moderate to high intensity</p>	<ul style="list-style-type: none"> - The sub-project's (investment's) operator/-s will identify, evaluate and monitor the potential traffic and road safety risks to workers, affected communities and road users throughout the sub-project life cycle. The Contractor of sub-project who will conduct maintenance works to create separate Traffic Management Plan that will take into consideration all aspects of sub-project related traffic passing through the populated settlements, as well as appropriate protection measures to decrease safety threat to the local population during construction phase, proportionate to the risks and impacts. - The Operator, along with the local Institutions responsible for monitoring and protection of Public Health will conduct regular monitoring and, if it is necessary, will conduct additional Rapid risk hazard assessment (RRHA). Based on the results of the RRHA, the operator will prepare an Emergency Response Plan (ERP) in coordination with the relevant local authorities including those responsible for monitoring and protection of Public Health and the affected community. 	<p>- Contractor (sub-contractors)</p>	<p>- 2000 €</p> <p>- 1500 € (RRHA)</p> <p>- 1500 € (ERP)</p>



8.2. Possible Environmental Impacts and Mitigation Measures during Construction Phase

Component 1 Foundational measures for water security						
Sub-component 1.3 - Investments in strategic water security measures						
I) Investments and technical assistance to improve water information systems from data production, analysis and dissemination: Setting up equipment and works for gauging stations and automatic weather stations, making data available in real-time.						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Construction phase	Recourse efficiency	<ul style="list-style-type: none"> Use of construction material (concrete, water, electricity, etc.), generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> Use pre-mixed concrete from existing concrete plants, which own environmental permits for production of concrete, under the National (and local) regulation; Efficient water use; Use of energy efficient equipment during construction; Selection of usable fractions of waste and reuse as construction material, etc. 	Contractor/Subcontractor/Supervisor	Construction cost
	Air quality and climate changes	<ul style="list-style-type: none"> Generation of dust emissions, exhaust gases, and waste as a result of: <ul style="list-style-type: none"> Preparation of construction sites (cleaning up of sites, removal of vegetation); Construction activities (earth works, concrete works, etc.) Use of equipment, mechanisation and transport activities; Generation of waste (hazardous and non-hazardous, especially biodegradable waste): 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Spraying of construction sites with water to reduce dust emissions; Vehicles and construction machinery must meet emission standards; Proper maintenance of equipment and mechanisation; Use of fuels with less polluting emissions; Implementation of measures for waste management. 	Contractor/Subcontractor/Supervisor	Construction cost Water for dust suppression 1m ³ ~0.5 €



		- Storage, handling of materials and waste.				
Noise and vibration	<ul style="list-style-type: none"> Equipment and mechanisation for construction and transport activities; Construction activities. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> Implementation of good construction practices, Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); All construction equipment and mechanisation will comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment; All mechanical equipment should be silenced appropriately and regularly maintained, Limit working hours to certain locations. 	Contractor/Subcontractor/Supervisor	Construction cost	
Water	<ul style="list-style-type: none"> Performance of activities in water bodies or in their vicinity, Soil erosion, Possible washing of the equipment and vehicles; Incidental spillage on site; Generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> Implementation of good construction practice; Providing water permit in accordance with Article 72, Water Law No. 04/L-147 for working into or in close vicinity of the watercourses and all activities to be done in accordance with the requirements in the permits; The construction activities to be carried out during the dry season, especially during applying concrete; Application of soil protection measures against erosion (proper performance of earthworks, removal of vegetation etc.); Washing of vehicles and construction machinery on site is not allowed; Provide leak prevention equipment near the construction site for urgent cleaning, Implementation of measures for waste management. 	Contractor/Subcontractor/Supervisor in coordination with MIE	Construction cost	
Waste	<ul style="list-style-type: none"> Generation different types of hazardous and non- 	Possible, short term, local, low	<ul style="list-style-type: none"> Proper management with generated waste in accordance with law obligations, 	Contractor/Subcontractor/Supervisor in cooperation with MIE and	-Construction cost	



		<p>hazardous waste, as a result of:</p> <ul style="list-style-type: none"> - Clearing up and removal of vegetation on the sites, - Performance of construction activities; - Use of construction materials; - Use of equipment and mechanisation; - Presence of workers and etc. 	intensity	<p>which include identification and classification of the different waste types that could be generated at the construction sites (according to the national List of Waste on hazardous and non-hazardous waste streams), proper storage and handing over to authorised waste collectors, etc.</p>	Municipalities	<p>cost</p> <ul style="list-style-type: none"> -Transport of waste 1 km: ~ 0.5 € -Cost for collection bins will depend on types and their capacities (400 € for 1100 l, 800 € for 4000 l)
	Soil	<ul style="list-style-type: none"> • Degradation, erosion, compaction, destruction of the topsoil as a result of construction activities and moving of vehicles and mechanisation, • Soil contamination as a result of accidentally spillage, generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Minimise the surface of the construction site as much as possible; - Access to sites should be done through the access roads, - Degradation of the surrounding land should be avoided, - Upper layer of soil (topsoil) to be properly removed before construction, stored and used after the completion of construction activities; - Construction activities to be carried out in dry periods in order to reduce the possibility of soil erosion; - Proper performance of earthworks and removal of vegetation; - Provide leak prevention equipment near the construction site for urgent cleaning, - In case of soil contamination by accidental spillage, the contaminated soil layer should be removed and treated as hazardous waste in accordance with law obligation; - Proper management with generated 	Contractor/Subcontractor/Supervisor	Construction cost



				waste in accordance with the law obligation etc.		
	Biodiversity and landscape	<ul style="list-style-type: none"> • Earth works, removal of vegetation and other construction activities, • Performance of activities in or near water bodies, • Generation of waste, • Presence of workers, • Setting equipment that may be visible for the local population etc. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Applying good construction practices that would avoid degradation of species and habitats; - Minimising the surface of the construction sites as much as possible; - Cutting of the plants and destruction of the habitats for the purpose of tracing new access roads and construction sites, storage of materials or waste should be avoided; - Implementation of waste, water and soil management measures; - Educating workers that the killing of animals in the project area during the construction phase is prohibited; - Careful cleaning up of the construction site immediately after the completion of the construction activities. - Setting up equipment and objects that will not disturb the landscape values of the sites. 	Contractor/Subcontractor/Supervisor	-Construction cost



Sub-component 1.3 - Investments in strategic water security measures

(ii) Finance the assessments, equipment and training for institutionalizing dam safety surveillance measures

These investments will support the continuation of the program's establishment of long term and sustainable arrangements for safety of large dams.

The envisaged outcomes include institutional arrangements, policies, and procedures for monitoring; risk assessment; identification of corrective actions to mitigate risks; regular operation and maintenance; dam operation during extreme climate events etc.

Mitigation measures: The Government should initiate action towards these investments and together with the Ministry of Infrastructure and Environment to establish a National Dam Safety Center and funding arrangements. Ministry of Infrastructure and Environment has in parallel taken the first step to review the current dam safety practices; identify weaknesses in present dam safety practices; and study the current trends in regulation of dam safety practices in other countries. The Project will play a leading role in facilitating a process to support the Government and the Project instituting dam safety policies, developing guidelines for dam safety monitoring and inspection, and establishing an independent dam safety centre.

During the life of any dam, the owner is responsible for ensuring that appropriate measures are taken and sufficient resources provided for the safety of the dam, irrespective of its funding sources or construction status. Because there are serious consequences if a dam does not function properly or fails, the Bank is concerned about the safety of new dams it finances and existing dams on which a Bank-financed project is directly dependent.

The development of institutional benchmarking of dam safety is primarily concerned with the surveillance and emergency preparedness principles of dam safety management. A dam safety program should contain a number of components, ranging from dam safety practice in the field to support functions and governance required to provide assurance of dam safety.

The Dam Safety Surveillance Program should provide the details of how an owner will monitor and evaluate the performances of a dam or project structure.

The Dam Safety Surveillance Program should contain information that remains relatively unchanged throughout the life of the project unless there is a significant modification or investigation that results in the need for new instrumentation. This information includes details such as types of instruments, definition of action levels and threshold values, reading procedures, surveillance plans and procedures for visual inspection and documentation of data processing and evaluation methods.

According to the requirements set out in the ESS4, a Dam Safety Surveillance Program should be developed for every sub - project regardless of its size or potential hazard rating. This program should be appropriate to the complexity of the project. The Program could be as simple as a single page document outlining the basic observations necessary to evaluate the condition of the dam.

The Agency responsible for Dam Safety Surveillance Program should prepare the following Dam Safety Reports.

C. Dam safety reports

The dam safety reports will contain the information set out below and be prepared as follows:

(a) Plan for construction supervision and quality assurance



This plan will set out details of the organisation, staffing levels, procedures, equipment and qualifications for supervision of the construction of a new dam. This plan will be prepared and submitted to the Bank during project preparation.

(b) Instrumentation plan

This is a detailed plan for the installation of instruments to monitor and record dam behaviour and the related hydro meteorological, structural and seismic factors. This plan will be prepared and submitted to the Panel and Bank before bid tendering.

(c) Operation and maintenance (O&M) plan

This plan will set out details of the organisational structure, staffing, technical expertise and training required; equipment and facilities needed to operate and maintain the dam; O&M procedures; and arrangements for funding O&M, including long-term maintenance and safety inspections. The O&M plan for a dam other than a water storage dam, in particular, will reflect changes in the dam's structure or in the nature of the impounded material that may be expected over a period of years. Elements required to finalise the plan and initiate operations are normally financed under the project. A preliminary plan will be prepared and provided to the Bank during project preparation.

The plan will be refined and completed during project implementation. The final plan will be completed not less than six months prior to the start of the initial filling of the reservoir. Elements required to finalise the plan and initiate operations are normally financed under the project.

(d) Emergency preparedness plan

This plan will specify the roles of responsible parties when dam failure is considered imminent, or when expected operational flow release threatens downstream life, property, or economic operations that depend on the river flow levels. It will include the following: clear statements on the responsibility for decision making relating to dam operations and for the related emergency communications; maps outlining inundation levels for various emergency conditions; flood warning system characteristics; and procedures for evacuating threatened areas and mobilising emergency forces and equipment. The plan for emergency communication will include the mechanism through which potentially affected downstream communities will be informed.

The broad framework plan and an estimate of funds needed to prepare the plan in detail will be prepared and provided to the Bank during project preparation. The plan itself will be prepared during implementation and is provided to the Panel and Bank for a review not later than one year before the projected date of initial filling of the reservoir.



Component 1 Foundational measures for water security						
Sub-component 1.3 - Investments in strategic water security measures						
(III) Investments in irrigation infrastructure						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Construction phase	Recourse efficiency	<ul style="list-style-type: none"> Use of construction material (concrete, gravel, asphalt, etc.), water, energy, generation of waste. 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> Identify opportunities and alternatives for resource efficiency, relating to the project in accordance with GIIP, Use pre-mixed concrete, asphalt and construction materials from existing borrow pits and plants which owns environmental permits, under the National (and local) regulation. Water supplying for technical purposes to be done on the basis of signed agreement with authorized company or on the basis of water permits in accordance with Article 72, Water Law No. 04/L-147, for usage of water from wells, rivers, streams; Efficient water use; Use of energy efficient equipment during construction; Selection of usable fraction of waste and reuse as construction material, etc. 	Contractor/Subcontractor/Supervisor	Construction cost
	Air quality	<p>Generation of dust emissions, exhaust gases, VOCs, aerosols, manganese dioxide, etc. as a result of:</p> <ul style="list-style-type: none"> Preparation of construction sites (cleaning up of sites, demolition activities, etc.); Construction activities (earthworks, concrete and asphalt works, welding, insulation etc.); 	Possible, short term, local, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Implementation of pollution control systems in order to meet specified emissions limits; Use of pre-mixed plasters and masonry compounds is recommended in order for dust emission to be avoided; Placing of a protection fence or temporarily protective walls on the construction sites; Spraying with water (manually or with sprinklers) on construction sites, storage area, roads; Stabilising or covering the heaps of inert materials; Daily removal of the excavated earth and other waste material in covered transportation vehicles; Implementation of measures for waste management; Incineration of vegetation and other waste removed during 	Contractor/Subcontractor/Supervisor	-Construction cost -Protection fence for dust protection: 1m ² ~1 € -Water for dust suppression 1m ³ : ~0. 5 € -Transport of waste 1 km~0.5 €



	<ul style="list-style-type: none"> Possible production of plasters and other masonry compounds; Use of equipment, mechanisation and transport activities; Generation of waste (hazardous and non-hazardous, generation of waste that contain asbestos-dust); Storage, handling of raw materials and waste. 		<ul style="list-style-type: none"> clearing of the project area is not allowed; Introduction of procedure for control of asbestos during the demolition works, according to the national and EU legislation for hazardous waste, Demolition waste that contain asbestos should be kept in controlled area and sprayed with wetting agent to reduce debris dust; Optimization of transport activities; Proper maintenance of equipment and mechanisation; Use of fuels with less polluting emissions; Mandatory washing of tires; Daily cleaning of access roads; Implementing procedures for handling of construction materials, etc. 		
Climate change	<p>Generation of GHG as a result of:</p> <ul style="list-style-type: none"> Use of equipment and mechanisation for construction and transport activities; Removal of vegetation and generation of biodegradable waste. 	Possible, short term, local, low to moderate intensity	<ul style="list-style-type: none"> Implementation of pollution control systems in order to meet specified emissions limits; Optimisation of transport activities; Proper maintenance of equipment and mechanisation and use of fuels with less polluting emissions; Preparation of procedures for removal, storage, transport and further treatment of the removed vegetation in terms of reducing the greenhouse gas emissions; Proper management with generated organic waste; Incineration of the vegetation or other organic waste in the project area is not allowed etc. 	Contractor/Sub contractor/Supervisor	-Construction cost
Noise and vibration	<ul style="list-style-type: none"> Equipment and mechanisation for construction and transport activities; Construction activities. 	Possible, short term, local, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); All construction equipment and mechanisation will comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment; Select silenced compressors or use quieter hydraulic equipment; All mechanical equipment should be silenced appropriately and regularly maintained; Construction works in/or in close vicinity of the settlements 	Contractor/Sub contractor/Supervisor	-Construction cost



				will not be permitted during the night, etc.		
Water	<p>Impact on water quality and flow as a result of:</p> <ul style="list-style-type: none"> • Execution of some construction activities within riverbeds and their vicinity, channels for irrigation and drainage system and disturbance of water quality (pollutants, sediment, etc.); • Possible diversion of water flow for performance of construction activities in the water bodies; • Dewatering of locations where the level of ground water is high and require pumping; • Soil erosion as a result of construction activities; • Generation of wastewater (sanitary, technical) and its disposal in recipients without any treatment; • Storage and usage of chemicals and auxiliary materials, fuels; • Generation of waste and its temporary storage, 	Possible, short term, local, moderate to high intensity	<ul style="list-style-type: none"> - Implementation of good construction practices; - Providing water permit in accordance with Article 72, Water Law No. 04/L-147 for working into or in close vicinity of the watercourses and all activities to be done in accordance with the requirements in the permits; - Construction area next to the watercourses to be only large as it is strictly necessary to perform the construction works and in regard with the permits provided by the water administration; - Setting of earth embankments or barriers for diverting the flow to be performed only if there is no other way to perform the construction work; - Construction activities to be carried out during the dry season; - Downstream and upstream of the water bodies no dry trough or flood should arise as a result of the construction work; - The possible dewatering of the excavated ditches to be discharged in a controlled manner, i.e. in a way that will minimize the physical impacts on the morphology of the recipient or the pumped water to be used as a technical water for reduction of dust emission. - Water pumping management should be done in accordance with water permit for use and water permit for discharging. - Implement soil erosion control measures in order to avoid surface run off and prevent siltation, - If there is a risk of discharge of high quantity of sediment into watercourses, to be installed clarifiers (sediment traps); - Placement of mobile toilets to be at distances of more than 100 meters from water body and drainage lines. The same should be adequately managed by the certified Company; - Waste water from the construction activities should be collected and pre-treated prior their final discharge in the recipient, i.e. to be managed in accordance with Article 72, Water Law No. 04/L147-Waste water Discharge Permit, 	<ul style="list-style-type: none"> - Contractor /Subcontractor/Supervisor in coordination with MIE 	<ul style="list-style-type: none"> - Construction cost - Cost of sedimentation trap will vary depending on the type of flow control structures and the size of the trap. - Cost for mobile toilet will be defined in the agreement by the authorized company - Cost for waste water treatment should be define additionally (it will depend on the type of proposed treatment) 	



	<ul style="list-style-type: none"> Maintenance and servicing of the equipment, washing of the equipment; Incidental spillage on sites etc. 		<p>issued by the Ministry of Infrastructure and Environment or other relevant administration, responsible for water management (Water department);</p> <ul style="list-style-type: none"> Washing of mixers for prefabricated concrete that contain concrete with alkali cement or cement residues is not allowed as well as washing of the equipment and vehicles in the water bodies or in their vicinity; Provide leak prevention equipment near the construction site for urgent cleaning; Implementation of measures for waste, hazardous material management and spill prevention control etc. 		
Waste	<ul style="list-style-type: none"> Generation of different types of hazardous and non-hazardous waste, as inert waste, municipal waste, biodegradable waste, packaging waste, hazardous waste, possible asbestos waste etc. as a result of: <ul style="list-style-type: none"> Clearing up and removal of vegetation on the sites, Dismantling or demolition of existing buildings, structures, equipment, pipelines; Use of construction materials; Performance of 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Preparation of a Waste Management Plan for all activities in accordance with Article 18, Law on waste Law No.04/L-060; In the plan, issues such as location and methods of storage, transport and disposal, as well procedure for waste management, measures for monitoring and periodic audits should be addressed; Preparation of an Asbestos Management Plan and implementation of proposed measures and procedure in accordance with Good Practice Note: Asbestos: Occupational and Community Health Issues, ²⁴ GIIP, national and EU legislation. 	<ul style="list-style-type: none"> Contractor /Subcontractor/Supervisor in cooperation with MIE and Municipalities 	<ul style="list-style-type: none"> Construction cost Preparation of Waste Management Plan: 2500 € Preparation of Asbestos Management Plan: 2500 € Construction cost Transport of waste 1 km~0.5 €

²⁴ World Bank Group May 2009



		<p>construction and rehabilitation activities;</p> <ul style="list-style-type: none"> - Use of equipment and mechanisation, - Presence of workers and etc. 				
	Hazardous Substances and Materials	<ul style="list-style-type: none"> • Use of chemicals and hazardous materials at construction sites (fuels, lubricants, antifreeze, flammable gases, concrete additives, asphalt coating, plasticisers and insulation materials (bitumen), colours, possible use of pesticides and herbicides, etc. • Generation of different type of hazardous wastes, (packaging waste, waste oils and liquid fuels, oil filters and saturated absorbent materials, waste from welding, electronic and electrical waste, asbestos waste, etc.). 	Possible, short term, local, low to moderate to high intensity	<ul style="list-style-type: none"> - Preparation of a Hazardous Material Management Plan and spill prevention control prior to commencement of construction activities addressing issues such as location and methods of storage, transport and disposal, as well procedure for its management; - The Contractor should obtain all necessary authorisations and/or licenses for storage and use of dangerous substances from local authorities, as well should implement a procedure for reception of hazardous materials and ensuring that the hazardous materials are properly transported, packaged, marked and store as hazardous materials; - Preparation of an Asbestos Management Plan which will clearly identify the locations where the asbestos containing materials are present, its condition to propose procedures for access to the locations where is present and to propose measure to avoid damage, etc. Asbestos from demolition building and replaced pipes should be marked as hazardous waste and, when possible, it is recommended to be appropriately contained and sealed to minimise exposure. in accordance with Good Practice Note: Asbestos: Occupational and Community Health Issues,²⁵ GIIP, national and EU legislation. 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor 	<ul style="list-style-type: none"> - Construction cost - Preparation of Hazardous Material Management Plan and spill prevention control ~ 2500 € - Preparation of Asbestos Management Plan: 2500 €
	Soil	<ul style="list-style-type: none"> • Degradation, erosion, compaction, and destruction of the topsoil as a result of 	Certain, short term, local, moderate to high intensity	<ul style="list-style-type: none"> - Construction activities to be performed in a period of low rainfalls in order to minimise the possibilities of flooding and spreading of sediment; - Access areas for heavy machinery to be restricted to the 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor 	<ul style="list-style-type: none"> - Construction cost

²⁵ World Bank Group May 2009



		<p>construction activities;</p> <ul style="list-style-type: none"> Storage of raw materials and waste on sites; Soil contamination as a result of accidental spillage of fuel chemicals, hazardous waste, Revealed contaminated soil on the project sites; Generation of waste and waste water. 		<p>construction zone and access roads;</p> <ul style="list-style-type: none"> The topsoil (humus) should be properly removed before the excavation begins, stored and used after the completion of the activities, for the purpose of re-cultivation and stabilisation of the slopes; The removed soil heaps should be stabilised or covered (with textile) and temporary stored in places located away from the river banks or erosion-prone sites; The storage and handling of hazardous materials and waste should be in compliance with the Hazardous Materials and Spill Control Management Plan, Waste Management Plan and Asbestos Management Plan; In case of soil contamination by accidental spillage, the contaminated soil layer should be removed and treated as hazardous waste in accordance with low obligation; In the case of a revealed contaminated soil at construction sites, the Contractor should have determined and prepared procedures for appropriate storage and handling of contaminated soil, in accordance with the relevant standards as well through communication with the Ministry of Infrastructure and Environment; Implementation of measures for waste water management, etc. 		
	Biodiversity and landscape	<ul style="list-style-type: none"> Earth work, removal of vegetation and other construction activities; Execution of some construction activities within water bodies (rivers, channels, drainage systems) or their vicinity; Soil erosion; Storage of raw materials and waste; Usage of chemicals and auxiliary 	Certain, short term, local, moderate to high intensity	<ul style="list-style-type: none"> In the preparation phase of the project monitoring on the ecosystems, habitats and species in the project areas should be provided; On the basis of the results by the performed bio monitoring, the potential project-related adverse impacts should be identified and assessed and the mitigation hierarchy should be applied so as to prevent or mitigate adverse impacts from projects that could compromise the integrity, conservation objectives or biodiversity importance of such area. Additionally, it is recommended to: <ul style="list-style-type: none"> Implement measures for water and soil protection, as well measures for waste, waste water and hazardous material management; Educate the workers that the killing of animals in the 	<ul style="list-style-type: none"> Contractor /Subcontractor/Supervisor 	<ul style="list-style-type: none"> Construction cost Cost of biodiversity monitoring (investigation) will depend on sensitivity of locations and number of arranged experts (~250 € per expert man/day)



	<ul style="list-style-type: none"> materials, fuels; • Generation of waste and waste water; • Presence of workers, etc. 		<p>project area during the construction phase is prohibited;</p> <ul style="list-style-type: none"> • Carefully clean the construction site immediately after the completion of the construction activities, etc.; • Set up equipment and objects that will not disturb the landscape values of the sites. 		
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Component 1 Foundational measures for water security						
Sub-component 1.3 - Investments in strategic water security measures						
(IV) Technical assistance to improve irrigation water management and operational systems (Develop water management information systems and tools for improved water use efficiency)						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Construction phase	Air quality and climate changes	<ul style="list-style-type: none"> • Preparation of sites (cleaning up of sites, removal of vegetation); • Use of equipment, mechanisation and transport activities; • Generation of waste (hazardous and non-hazardous). 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of good construction practices; - Vehicles and construction machinery must meet emission standards; - Implementation of measures for waste management in accordance with law obligations. 	- Contractor/Subcontractor/Supervisor	- Construction cost
	Noise and vibration	<ul style="list-style-type: none"> • Equipment and mechanisation for construction and transport activities; 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of good construction practices; - Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); - All construction equipment and mechanisation will comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment. 	- Contractor/Subcontractor/Supervisor	- Construction cost



		<ul style="list-style-type: none"> Construction activities. 				
	Waste	<ul style="list-style-type: none"> Generation of waste as inert waste, biodegradable waste, packaging waste, as a result of: <ul style="list-style-type: none"> - clearing up and removal of vegetation on the sites - packaging waste for tools and equipment. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Proper management of generated waste in accordance with law obligations, which include identification and classification of the different waste types that could be generated at the construction sites (according to the national List of Waste on hazardous and non-hazardous waste streams), proper storage and handing over to authorised waste collectors, etc. 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor or in cooperation with MIE and Municipalities 	<ul style="list-style-type: none"> - Construction cost
	Soil	<ul style="list-style-type: none"> Degradation of soil as a result of cleaning of sites and moving of vehicles and mechanisation, Generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Access areas for heavy machinery to be restricted to the construction zone and access roads; - Proper management with generated waste in accordance with the law obligation etc. 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor or 	<ul style="list-style-type: none"> - Construction cost
	Biodiversity and landscape	<ul style="list-style-type: none"> Removal of vegetation for access on sites, Generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Apply good construction practices that would avoid degradation of species and habitats; - Cutting of the plants and destruction of the habitats for the purpose of tracing new access roads and construction sites, should be avoided; - Proper management of generated waste in accordance with law obligations etc. 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor or 	<ul style="list-style-type: none"> - Construction cost



Component 2: Catalytic investments in Morava e Bince Basin

Sub-component 2.1 - Strategic investments in water infrastructure and services

(I) Implementation of activities which include expanding, rehabilitation and modernisation of water supply systems

Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Cost
Construction phase	Recourse efficiency	<ul style="list-style-type: none"> Use of construction material (concrete, gravel, asphalt, etc.), water, energy, generation of waste. 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> Identify opportunities and alternatives for resource efficiency, relating to the project in accordance with GIIP; Use pre-mixed concrete, asphalt and construction materials from existing borrow pits and plants which own environmental permits, under the National (and local) regulation; Water supplying for technical purposes to be done on the basis of signed agreement with authorised company or on the basis of water permits in accordance with Article 72, Water Law No. 04/L-147, for usage of water from wells, rivers, streams; Efficient water use; Use of energy efficient equipment during construction; Selection of usable fraction of waste and reuse as construction material, etc. 	- Contractor/Subcontractor/Supervisor or	- Construction cost
	Air quality	<p>Generation of dust emissions, exhaust gases, VOCs, aerosols, manganese dioxide, etc. as a result of:</p> <ul style="list-style-type: none"> Preparation of construction sites (cleaning up of sites, demolition activities, etc.); Construction activities (earthworks, 	Possible, short term, local, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Implementation of pollution control systems in order to meet specified emissions limits; Use of pre-mixed plasters and masonry compounds is recommended in order for dust emission to be avoided; Placing of a protection fence or temporarily protective walls on the construction sites; Spraying with water (manually or with sprinklers) on construction sites, storage area, roads; Stabilising or covering the heaps of inert materials; Daily removal of the excavated earth and other 	- Contractor/Subcontractor/Supervisor or	<ul style="list-style-type: none"> Construction cost Protection fence for dust protection 1m²~1 € Water for dust suppression 1m³: ~0.5 € Transport of waste: 1 km~0.5 €



	<p>concrete and asphalt works, welding, insulation etc.);</p> <ul style="list-style-type: none"> • Possible production of plasters and other masonry compounds; • Use of equipment, mechanisation and transport activities; • Generation of waste (hazardous and non-hazardous, generation of waste that contain asbestos-dust); • Storage, handling of raw materials and waste. 		<p>waste material in covered transportation vehicles;</p> <ul style="list-style-type: none"> - Implementation of measures for waste management; - Incineration of vegetation and other waste removed during clearing of the project area is not allowed; - Introduction of a procedure for control of asbestos during the demolition works, according to the national and EU legislation for hazardous waste, - Demolition waste that contain asbestos should be kept in controlled area and sprayed with wetting agent to reduce debris dust; - Optimisation of transport activities; - Proper maintenance of equipment and mechanisation; - Use of fuels with less polluting emissions; - Mandatory washing of tires; - Daily cleaning of access roads; - Implementing procedures for handling of construction materials, etc. 		
Climate change	<ul style="list-style-type: none"> • Generation of GHG as a result of: • Use of equipment and mechanisation for construction and transport activities; • Removal of vegetation and generation of biodegradable waste. 	Possible, short term, local, low to moderate intensity	<ul style="list-style-type: none"> - Implementation of pollution control systems in order to meet specified emissions limits; - Optimisation of transport activities; - Proper maintenance of equipment and mechanisation and use of fuels with less polluting emissions; - Preparation of procedures for removal, storage, transport and further treatment of the removed vegetation in terms of reducing the greenhouse gas emissions; - Proper management with generated organic waste; - Incineration of the vegetation or other organic waste in the project area is not allowed etc. 	- Contractor/Subcontractor/Supervisor or	- Construction cost
Noise and vibration	<ul style="list-style-type: none"> • Equipment and mechanisation for construction and transport activities; 	Possible, short term, local, moderate to high intensity	<ul style="list-style-type: none"> - Implementation of good construction practices; - Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); 	- Contractor/Subcontractor/Supervisor or	- Construction cost



		<ul style="list-style-type: none"> Construction activities. 		<ul style="list-style-type: none"> All construction equipment and mechanisation should comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment; Select silenced compressors or use quieter hydraulic equipment; All mechanical equipment should be silenced appropriately and regularly maintained; Construction works in/or in close vicinity of the settlements will not be permitted during the night, etc. 		
Water	<p>Impact on water quality and flow as a result of:</p> <ul style="list-style-type: none"> Possible performance of construction activities near water bodies and disturbance of water quality; Soil erosion as a result of construction activities; Storage of materials and waste, Dewatering of location where the level of ground water is high and require pumping; Generation of wastewater (sanitary, technical) and its disposal in recipient without any treatment; Storage and usage of chemicals and 	Possible, short term, local, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Providing water permit in accordance with Article 72, Water Law No. 04/L-147 for working into or in close vicinity of the watercourses and all activities to be done in accordance with the requirements in the permits; Construction area next to the watercourses to be only large as it is strictly necessary to perform the construction works and in regard with the permit provided by the water administration; Construction activities to be carried out during the dry season; The possible dewatering of the excavated ditches to be discharged in a controlled manner, i.e. in a way that will minimise the physical impacts on the morphology of the recipient or the pumped water to be used as a technical water for reduction of dust emission; Water pumping management should be done in accordance with water permit for use and water permit for discharging; Implement soil erosion control measures in order to avoid surface run off and prevent siltation; If there is a risk of discharge of high quantity of sediment into watercourses, to be installed clarifiers (sediment traps); Placement of mobile toilets to be at distances of more than 100 meters from water body and 	<ul style="list-style-type: none"> Contractor/Subcontractor/Supervisor or in coordination with MIE 	<ul style="list-style-type: none"> Construction cost Cost of sedimentation trap will vary depending on the type of flow control structures and the size of the trap. Cost for mobile toilet will be defined in the agreement by the authorized company. Cost for waste water treatment should be define additionally (it will depend on the type of proposed treatment) 	



		<p>auxiliary materials, fuels;</p> <ul style="list-style-type: none"> • Generation of waste and its temporary storage, • Maintenance and servicing of the equipment, washing of the equipment; • Incidental spillage on sites etc. 		<p>drainage lines. The same should be adequately managed by the certified Company;</p> <ul style="list-style-type: none"> - Waste water from the construction activities should be collected and pre-treated prior their final discharge in the recipient, i.e. to be managed in accordance with Article 72, Water Law No. 04/L147- Waste water Discharge Permit, issued by the Ministry of Infrastructure and Environment or other relevant administration, responsible for water management (Water department); - Washing of mixers for prefabricated concrete that contain concrete with alkali cement or cement residues is not allowed as well as washing of the equipment and vehicles in the rivers or in their vicinity; - Provide leak prevention equipment near the construction site for urgent cleaning; - Implementation of measures for waste, hazardous material management and spill prevention control etc. 		
Waste	<ul style="list-style-type: none"> • Generation of different types of hazardous and non-hazardous waste, as inert waste, municipal waste, biodegradable waste, packaging waste, hazardous waste, possible asbestos waste etc. as a result of: <ul style="list-style-type: none"> - Clearing up and removal of vegetation on the 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> - Implementation of good construction practices; - Preparation of a Waste Management Plan for all activities in accordance with Article 18, Law on waste Law No. 04/L-060; - The plan should be addressing issues such as location and methods of storage, transport and disposal, as well procedure for waste management, measures for monitoring and periodic audits; - Preparation of an Asbestos Management Plan and implementation of proposed measures and procedure, in accordance with Good Practice Note: Asbestos: Occupational and Community Health Issues, ²⁶ GIIP, national and EU legislation. 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor or in cooperation with MIE and Municipalities 	<ul style="list-style-type: none"> - Construction cost - Preparation of Waste Management Plan: 2500 € - Preparation of Asbestos Management Plan: 2500 € - Transport of waste: 1 km ~0.5 € 	

²⁶ World Bank Group May 2009



		<ul style="list-style-type: none"> - sites, - Dismantling or demolition of some existing buildings, structures, equipment, pipelines; - Use of construction materials; - Performance of construction and rehabilitation activity; - Use of equipment and mechanisation, - Presence of workers and etc. 				
	Hazardous Substances and Materials	<ul style="list-style-type: none"> • Use of chemicals and hazardous materials on construction sites (fuels, lubricants, antifreeze, flammable gases, concrete additives, asphalt coating, plasticizers and insulation materials (bitumen), colours, possible use of pesticides and herbicides, etc. • Generation of different type of hazardous wastes, (packaging waste, 	Possible, short term, local, low to moderate intensity	<ul style="list-style-type: none"> - Preparation of Hazardous material management plan and spill prevention control prior to commencement of construction activities addressing issues such as location and methods of storage, transport and disposal, as well procedure for its management; - The Contractor should obtain all necessary authorisations and/or licenses for storage and use of dangerous substances from local authorities, as well should implement procedure for reception of hazardous material and ensuring that the hazardous material are properly transported, packaged, marked and store as hazardous material; - Preparation of an Asbestos Management Plan which will clearly identify the locations where the asbestos containing materials are present, the condition to propose procedures for access to the locations where it is present and to propose measures to avoid damage, etc. Asbestos from building demolition and 	Contractor/Subcontractor/Supervisor	<ul style="list-style-type: none"> - Construction cost - Preparation of Hazardous Material Management Plan and spill prevention control: 2500 € - Preparation of Asbestos Management Plan: 2500 €



		waste oils and liquid fuels, oil filters and saturated absorbent materials, waste from welding, electronic and electrical waste, asbestos waste, etc.).		replaced pipes should be marked as hazardous waste and when is possible it is recommended to be appropriately contained and sealed to minimize exposure in accordance with Good Practice Note: Asbestos: Occupational and Community Health Issues, ²⁷ GIIP, national and EU legislation.		
Soil	<ul style="list-style-type: none"> • Degradation, erosion, compaction, destruction of the topsoil as a result of construction activities; • Storage of raw materials and waste on sites; • Soil contamination as a result of accidental spillage of fuel chemicals, hazardous waste, • Revealed contaminated soil on the project sites; • Generation of waste and waste water. 	Certain, short term, local, moderate to high intensity	<ul style="list-style-type: none"> - Construction activities to be performed in a period of low rainfalls in order to minimise the possibilities of flooding and spreading of sediment; - Access areas for heavy machinery to be restricted to the construction zone and access roads; - The topsoil (humus) should be properly removed before the excavation begins, stored and used after the completion of the activities, for the purpose of re-cultivation and stabilisation of the slopes; - The removed soil heaps should be stabilised or covered (with textile) and temporary stored in places located away from the river banks or erosion-prone sites; - The storage and handling of hazardous materials and waste should be in compliance with the Hazardous Materials and Spill Control Management Plan and Waste Management Plan; - In case of soil contamination by accidental spillage, the contaminated soil layer should be removed and treated as hazardous waste in accordance with low obligation; - In a case of revealed contaminated soil on the construction sites, the Contractor should have determined and prepared procedures for appropriate storage and handling of contaminated soil, in accordance with the relevant standards as 	- Contractor/Subcontractor/Supervisor or	- Construction cost	

²⁷ World Bank Group May 2009



				<p>well through communication with the Ministry of Infrastructure and Environment.</p> <ul style="list-style-type: none"> - Implementation of measures for waste water management. 		
	Biodiversity and landscape	<ul style="list-style-type: none"> • Earth work, removal of vegetation and other construction activities; • Possible performance of construction activities near water bodies; • Soil erosion; • Storage of raw materials and waste; • Usage of chemicals and auxiliary materials, fuels; • Generation of waste and waste water; • Presence of workers, • Other unexpected /not detected source. 	Certain, short term, local, moderate to high intensity	<ul style="list-style-type: none"> - In the preparation phase of the project should be provided monitoring on the ecosystems, habitats and species in the project areas, - On the basis of the results by the performed bio monitoring, should be identified and assessed the potential project-related adverse impacts and to apply the mitigation hierarchy so as to prevent or mitigate adverse impacts from projects that could compromise the integrity, conservation objectives or biodiversity importance of such area. - Additionally, it is recommended: <ul style="list-style-type: none"> • Implementation of measures for water and soil protection, as well measures for waste and hazardous material management, • Educating workers that the killing of animals in the project area during the construction phase is prohibited; • Careful cleaning up of the construction site immediately after the completion of the construction activities, etc. • Setting up equipment and objects that will not disturb the landscape values of the sites. 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor 	<ul style="list-style-type: none"> - Construction cost - Cost of biodiversity monitoring (investigation) will depend on sensitivity of locations and number of arranged experts (~250 € per expert man/day)
Measures to improve performance and efficiency of water use in RWC Hidromorova within its service area						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Construction phase	Air quality and climate changes	<ul style="list-style-type: none"> • Preparation of sites (cleaning up of sites, removal of vegetation); • Use of equipment, 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of good construction practices; - Vehicles and construction machinery must meet emission standards; - Implementation of measures for waste management 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor 	<ul style="list-style-type: none"> - Construction cost



	<ul style="list-style-type: none"> mechanisation and transport activities; • Generation of waste (hazardous and non-hazardous). 		in accordance with the law obligation.		
Noise and vibration	<ul style="list-style-type: none"> • Equipment and mechanisation for construction and transport activities; • Construction activities. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implement good construction practices; - Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); - All construction equipment and mechanisation should comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment. 	- Contractor/Subcontractor/Supervisor	- Construction cost
Waste	<ul style="list-style-type: none"> • Generation of waste as inert waste, biodegradable waste, packaging waste, as a result of: <ul style="list-style-type: none"> - clearing up and removal of vegetation on the sites - packaging waste for tools and equipment. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Proper management with generated waste in accordance with the law obligation, which include identification and classification of the different waste types that could be generated on the construction sites (according to the national List of Waste on hazardous and non-hazardous waste streams), proper storage and handing over to authorized waste collectors, etc. 	- Contractor/Subcontractor/Supervisor or in cooperation with MIE and Municipalities	- Construction cost
Soil	<ul style="list-style-type: none"> • Degradation of soil as a result of cleaning of sites and moving of vehicles and mechanisation, • Generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Access areas to heavy machinery to be restricted to the construction zone and access roads; - Proper management with generated waste in accordance with the law obligation etc. 	- Contractor/Subcontractor/Supervisor	- Construction cost
Biodiversity and landscape	<ul style="list-style-type: none"> • Removal of vegetation for access on sites, • Generation of waste 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Apply good construction practices that would avoid degradation of species and habitats; - Cutting of the plants and destruction of the habitats for the purpose of tracing new access roads and construction sites, should be avoided; 	- Contractor/Subcontractor/Supervisor	- Construction cost



				- Proper management with generated waste in accordance with the law obligation etc.		
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Component 2: Catalytic investments in Morava e Bince Basin						
Sub-component 2.1 - Strategic investments in water infrastructure and services						
(I) Investments to rehabilitate and construct flood protection infrastructure (embankments) along the Morava e Bince River						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Construction phase	Recourse efficiency	<ul style="list-style-type: none"> Use of construction material (concrete, gravel etc.), water, energy, generation of waste. 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> Identify opportunities and alternatives for resource efficiency, relating to the project in accordance with GIIP, Use pre-mixed concrete and construction materials from existing borrow pits and plants which owns environmental permits, under the National (and local) regulation, In case to be used new borrow pits, it is recommended after completing the works the same to be rehabilitated; Water supplying for technical purposes to be done on the basis of signed agreement with authorized company or on the basis of water permits in accordance with Article 72, Water Law No. 04/L-147, for usage of water from wells, rivers, streams; Efficient water use; Use of energy efficient equipment during construction; Selection of usable fraction of waste and reuse as construction material, etc. 	- Contractor/Subcontractor/Supervisor	- Construction cost
	Air quality and climate changes	Generation of dust emissions, exhaust gases as a result of: <ul style="list-style-type: none"> Preparation of construction sites (cleaning up of sites, demolition) 	Possible, short term, local, moderate intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Spraying with water (manually or with sprinklers) on construction sites, storage area, roads; Placing of a protection fence or temporarily protective walls on the construction sites; Stabilizing or covering the heaps of inert materials; 	- Contractor/Subcontractor/Supervisor	- Construction cost - Protection fence for dust protection 1m ² ~1 € - Water for dust



		<ul style="list-style-type: none"> activities, etc.); Construction activities; Use of equipment, mechanisation and transport activities; Generation of waste; Storage, handling of materials and waste. 		<ul style="list-style-type: none"> Daily removal of the excavated earth and other waste material in covered transportation vehicles; Implementation of measures for waste management, especially organic waste; Optimization of transport activities; Proper maintenance of equipment and mechanisation; Use of fuels with less polluting emissions; Mandatory washing of tires; Daily cleaning of access roads; Implementing procedures for handling of construction materials, etc. 		<p>suppression 1m³: ~0. 5 € Transport of waste 1 km: ~0.5 €</p>
	Noise and vibration	<ul style="list-style-type: none"> Equipment and mechanisation for construction and transport activities; Construction activities. 	Possible, short term, local, moderate intensity	<ul style="list-style-type: none"> Implement good construction practices; Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); All construction equipment and mechanisation will comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment; Select silenced compressors or use quieter hydraulic equipment; All mechanical equipment should be silenced appropriately and regularly maintained; Construction works in/or in close vicinity of the settlements will not be permitted during the night, etc. 	- Contractor/Subcontractor/Supervisor	-Construction cost
	Water	<ul style="list-style-type: none"> Performance of construction activities in or near water bodies and disturbance of water quality; Possible diversion of water flow for performance of construction activities; Dewatering of 	Possible, short term, local, moderate intensity	<ul style="list-style-type: none"> Implementation of good construction practices; Providing water permit in accordance with Article 72, Water Law No. 04/L-147 for working into or in close vicinity of the watercourses and all activities to be done in accordance with the requirements in the permits; Construction area next to the watercourses to be only large as it is strictly necessary to perform the construction works and in regard with the permit provided by the water administration; Setting of earth embankments or barriers for diverting the flow to be performed only if there is no other way to perform the construction work; Construction activities to be carried out during the dry season; 	- Contractor/Subcontractor/Supervisor in coordination with MIE	<p>-Construction cost</p> <p>- Cost of sedimentation trap will vary depending on the type of flow control structures and the size of the trap.</p> <p>-Cost for mobile</p>



	<ul style="list-style-type: none"> location where the level of ground water is high and require pumping; • Generation of wastewater (sanitary, technical) and its disposal in recipient without any treatment; • Soil erosion as a result of construction activities, • Storage and usage of chemicals and auxiliary materials, fuels; • Generation of waste and its temporary storage, • Maintenance and servicing of the equipment, washing of the equipment; • Incidental spillage on sites etc. 		<ul style="list-style-type: none"> - Downstream and upstream of the water bodies no dry trough or flood should arise as a result of the construction work; - During construction, to continuously maintain the biological minimum of the water, i.e. during possible diversion of the river to provide a water flow that will not affect the downstream water users; - Water pumping management should be done in accordance with water permit for use and water permit for discharging. - The possible dewatering of the excavated ditches to be discharged in a controlled manner, i.e. in a way that will minimise the physical impacts on the morphology of the recipient or the pumped water to be used as a technical water for reduction of dust emission; - Implement soil erosion control measures in order to avoid surface run off and prevent siltation, - If there is a risk of discharge of high quantity of sediment into watercourses, to install clarifiers (sediment traps); - Placement of mobile toilets to be at distances of more than 100 meters from water body and drainage lines. The same should be adequately managed by the certified Company; - Waste water from the construction activities should be collected and pre-treated prior its final discharge in the recipient, i.e. to be managed in accordance with Article 72, Water Law No. 04/L147-Waste water Discharge Permit, issued by the Ministry of Infrastructure and Environment or other relevant administration, responsible for water management (Water department); - Washing of mixers for prefabricated concrete that contain concrete with alkali cement or cement residues is not allowed as well as washing of the equipment and vehicles in the rivers or in their vicinity; - Provide leak prevention equipment near the construction site for urgent cleaning; - Implementation of measures for waste and hazardous material management. 		<p>toilet will be defined in the agreement by the authorized company</p> <p>Cost for waste water treatment should be define additionally (it will depend on the type of proposed treatment)</p>
Waste	Generation of different types of hazardous and non-	Certain, short term, local, low to moderate	<ul style="list-style-type: none"> - Implementation of good construction practices; - Preparation of Waste Management Plan for all activities in accordance with Article 18, Law on waste Law No. 04/L-060, 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor in cooperation with MIE 	<ul style="list-style-type: none"> - Constructi on cost - Preparati



	<p>hazardous waste, as inert waste, municipal waste, biodegradable waste, packaging waste, as a result of:</p> <ul style="list-style-type: none"> - Clearing up and removal of vegetation on the sites, - Dismantling or demolition of some existing buildings, structures, equipment, - Use of construction materials; - Performance of construction and rehabilitation activity; - Use of equipment and mechanisation, - Presence of workers and etc. 	intensity	<ul style="list-style-type: none"> - The plan should be addressing issues such as location and methods of storage, transport and disposal, as well procedure for waste management, measures for monitoring and periodic audits. 	and Municipalities	on of Waste Management Plan: 2500 €
Soil	<ul style="list-style-type: none"> • Degradation, erosion, compaction, destruction of the topsoil as a result of construction activities; • Storage of raw materials and waste on sites; • Soil contamination as a result of 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> - Construction activities to be performed in a period of low rainfalls in order to minimise the possibilities of flooding and spreading of sediment; - Access areas for heavy machinery to be restricted to the construction zone and access roads; - The topsoil (humus) should be properly removed before the excavation begins, stored and used after the completion of the activities, for the purpose of re-cultivation and stabilization of the slopes; - The removed soil heaps should be stabilised or covered (with textile) and temporary stored in places located away from the river banks or erosion-prone sites; - In case of soil contamination by accidental spillage, the 	<ul style="list-style-type: none"> - Contractor/Subcontractor/Supervisor 	<ul style="list-style-type: none"> - Construction cost



		<p>accidental spillage of fuel chemicals, hazardous waste,</p> <ul style="list-style-type: none"> • Revealed contaminated soil on the project sites; • Generation of waste and waste water (possible pollution of ground waters in case of high level of aquifer). 		<p>contaminated soil layer should be removed and treated as hazardous waste in accordance with low obligation;</p> <ul style="list-style-type: none"> - In a case of revealed contaminated soil on the construction sites, the Contractor should have determined and prepared procedures for appropriate storage and handling of contaminated soil, in accordance with the relevant standards as well through communication with the Ministry of Infrastructure and Environment; - Implementation of procedures for handling of construction materials and waste, etc. - Proper management with generated waste in accordance with the law obligation; - Implementation of measures for waste water management. 		
	Biodiversity and landscape	<ul style="list-style-type: none"> • Earth work, removal of vegetation and other construction activities, • Performance of construction activities in or near water bodies and possible water pollution, • Possible movement of vehicles through rivers, • Soil erosion, • Storage of materials and waste; • Generation of waste and waste water; • Presence of 	Certain, short term, local, moderate intensity	<ul style="list-style-type: none"> - Apply good construction practices that would avoid pollution, eutrophication and modification of aquatic habitats; - Protecting the riparian vegetation, because it will be an important buffer zone and protection of rivers; - Prevention of interventions in the riverbed; - Cutting of the plants and destruction of the habitats for the purpose of tracing new access roads, storage the raw materials or waste should be avoided; - Educating workers that the killing of animals in the project area during the construction phase is prohibited; - Careful cleaning up of the construction site immediately after the completion of the construction activities, etc. - Setting up equipment and objects that will not disturb the landscape values of the sites, - Implementation of measures for water and soil protection as well as waste management. 	- Contractor/Subcontractor/Supervisor	- Construction cost



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8.3. Possible Environmental Impacts and Mitigation Measures During Operation Phase

Component 1 Foundational measures for water security						
Sub-component 1.3 - Investments in strategic water security measures						
(i) Investments and technical assistance to improve water information systems from data production, analysis and dissemination: Setting up equipment and works for gauging stations and automatic weather stations, making data available in real-time.						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Operational phase	Recourse efficiency	<ul style="list-style-type: none"> • Generation of waste during maintenance of stations, • Use of electricity for equipment. 	Possible, short term to long term (for consumption of electricity), local, low intensity	<ul style="list-style-type: none"> - Selection of usable fractions of waste and their reuse; - Use of energy efficient equipment. 	- Operator	Operational cost
	Air quality and climate change	<ul style="list-style-type: none"> • Generation of dust emissions, exhaust gases, waste as a result of maintenance activities on sites (cleaning and maintenance of sites, use of vehicle and mechanisation, generation of waste, etc.). 	Possible, short term, local, low to negligible intensity	<ul style="list-style-type: none"> - Implementation of the measures proposed for the construction phase. 	- Operator	Operational cost
	Noise and vibration	<ul style="list-style-type: none"> • Use of vehicle and mechanisation during maintenance of equipment and sites 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of the measures proposed for the construction phase. 	- Operator	Operational cost
	Water	<ul style="list-style-type: none"> • Maintenance of equipment in water bodies or in their vicinity and possible water pollution as a result of erosion, incidental spillage, generation of waste. 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of the measures proposed for the construction phase. 	- Operator	Operational cost
	Waste	<ul style="list-style-type: none"> • Generation of waste during maintenance of equipment and sites 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of the measures proposed for the construction phase. 	- Operator	Operational cost
	Soil	<ul style="list-style-type: none"> • Soil degradation as a result of maintenance of the equipment and sites, moving of vehicles and mechanisation during maintenance, as well 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of the measures proposed for the construction phase 	Operator	Operational cost



	generation of waste.				
Biodiversity and landscape	<ul style="list-style-type: none"> Removal of vegetation for access and maintenance of sites and maintenance of stations; Performance of activities in or near water bodies; Generation of waste. 	Possible, short term, local, low intensity	- Implementation of the measures proposed for the construction phase	Operator	Operational cost

Component 1 Foundational measures for water security						
Sub-component 1.3 - Investments in strategic water security measures						
(III) Investments in irrigation infrastructure						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Operation phase	Recourse efficiency	<ul style="list-style-type: none"> Use of material, water, energy, generation of waste for maintenance and operation of the irrigation system. 	Certain, long term, local/national, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good maintenance practices as well as implementation of the measures prescribed for the construction phase; Identification of opportunities and alternatives for resource efficiency, relating to the project in accordance with GIIP; Development an Irrigation plan that is appropriate for climate, season, soil conditions, plant materials, and grading. This plan should include optimum scheduling, monitoring, and recording systems so that energy usage and efficiencies can be examined. An irrigation logbook or database should be maintained so that quantitative measures are recorded (e.g., kWh electricity per cubic meter applied, fuel usage as litter per cubic meter applied); Installation of energy efficient pumps 	- Operator/farmers	- Operational cost



				<p>with frequency regulation that will allow a high degree of efficiency which consumes less energy for pumping;</p> <ul style="list-style-type: none"> - Ensure properly matched pumps, systems, and power sources by keeping a good record of the amount of water pumped and the energy used to ensure suitability; - Implementation of the most modern and the most efficient irrigation techniques that will reduce water consumption and reduce water losses; - Selection of usable fractions of waste and reuse as construction material, etc. 		
	<p>Air quality and climate changes</p>	<ul style="list-style-type: none"> • Maintenance of irrigation system (dust and exhaust gases emissions as a result of usage of equipment and mechanisation for maintenance of irrigation and drainage system, generation of biodegradable waste and other type of waste etc.); • Odour from water storage capacity (rainfall harvesting and small reservoirs), irrigation channel and drainage systems, generation of waste; • Evaporation from storage capacity and irrigation activities; • Farming activities and use of fertilizers and pesticides, etc. 	<p>Possible, long term, local, moderate to high intensity</p>	<ul style="list-style-type: none"> - Implementation of good maintenance practices as well implementation of the measures prescribed for the construction phase; - Collection of rainfall water in closed reservoirs; - Setting water storage capacity at appropriate locations, far away from residential areas as possible; - Use modern system for irrigation (sprinklers); - Regular maintenance and cleaning of the irrigation and drainage infrastructures; - Implementation of measures for waste management (especially biodegradable waste); - Use of appropriate irrigation techniques and practices in order to achieve high water use efficiency and avoid meteorological changes; - Training of the farmers for appropriate 	<ul style="list-style-type: none"> - Operator/farmers 	<ul style="list-style-type: none"> - Operational cost



			use of the irrigation techniques and application of good farming practises as well as pest management.		
Noise and vibration	<ul style="list-style-type: none"> Maintenance of irrigation system (usage of mechanisation end equipment for maintenance), Working of the irrigation equipment. 	Possible, long term, local, low intensity	<ul style="list-style-type: none"> Implementation of good maintenance practices as well implementation of the measures prescribed for the construction phase; Use low noise level equipment for irrigation equipment; Setting pumps at appropriate locations, as far away from residential areas as possible. 	- Operator	- Operational cost
Water	<ul style="list-style-type: none"> Maintenance of the irrigation system; Increased water demand and changes in the hydrology; Leak from the water storage capacities, irrigation and drainage system; Collection of rainfall water in storage capacity, Discharging of flash water; Soil erosion as a result of discharging of flash water; Generation of sediment and waste; Use of pesticides for removal of vegetation at irrigation infrastructures. Water pollution as a result of farming activities and water drainage (use of pesticides and fertilisers). 	Possible, long term, local, regional to national, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good maintenance practices as well implementation of the measures prescribed for the construction phase; Implementation of appropriate irrigation practices, with high water use efficiency; Maintenance of the biological minimum of rivers; Potential adverse effects on surface and ground water as a result of collection of rainfall water in storage capacity to be avoided or reduced; Evaluate potential adverse effects of surface water withdrawal on the downstream ecosystems and use appropriate environmental flow assessment to determine acceptable withdrawal rates; Conduct regular inspection and maintenance of the water storage capacities, irrigation and drainage system; Implement a leak detection and repair 	- Operator/farmers	<ul style="list-style-type: none"> Operational cost Water quality measurements ~400 € per measurement point



			<p>program;</p> <ul style="list-style-type: none"> - Maintenance of the irrigation infrastructure in good technical condition to avoid overflowing; - Discharge the flush water into a municipal sewerage system with adequate capacity in a detention pond, where solids can settle before the water is discharged; - Minimise erosion during flushing; - Implementation of measures for waste management and management with hazardous material; - Conduction measurement of the storage rainfall water that will be used for irrigation; - Regular monitoring of the water used for irrigation and recipients of drained water; - Providing training for introduction of good agricultural practice, pest management, agro-ecological measures, proper use of the irrigation system, etc. 		
Waste	<ul style="list-style-type: none"> • Waste from maintenance and operation of the water storage capacities, irrigation and drainage system (sediment, consumables spare parts and equipment, biodegradable waste as a result of maintenance of the system, packaging waste, waste oil, filter, adsorbents, waste of wiping towels, contaminated soil from 	Certain, long term, local, moderate to high intensity	<ul style="list-style-type: none"> - Implementation of good maintenance practices as well implementation of the measures prescribed for the construction phase; - Preparation of Waste Management Plan prior to commencement of operation activities. - Training of farmers about waste management. 	- Operator/farmers	<ul style="list-style-type: none"> - Operational cost - Preparation of Waste Management Plan: 2500 €



	<ul style="list-style-type: none"> accidental leakage); Waste from farming activities. 				
Hazardous Substances and Materials	<ul style="list-style-type: none"> Usage of hazardous material and generation of hazardous waste for maintenance of irrigation and drainage system and removal of vegetation. Farming activities. 	Possible, long term, local, moderate intensity	<ul style="list-style-type: none"> Preparation of Hazardous Material Management Plan and Spill Prevention Control, Waste Management Plan prior to commencement of operation activities and procedure for management; Implement measures during the operation phase of the project. Training of farmers about waste and pest management. 	Operator/farmers	<ul style="list-style-type: none"> Operational cost Preparation of Waste Management Plan: 2500 € Preparation of Hazardous Material Management Plan and spill prevention control: 2500 €
Soil	<ul style="list-style-type: none"> Maintenance of irrigation and drainage system, Leak of the irrigation system; Discharging of flash water (soil erosion); Generation of waste; Use of pesticides for removal of vegetation; Changes of the physical and chemical composition of the soil as a result of farming activities. 	Possible, long term, local, moderate to high intensity	<ul style="list-style-type: none"> Implementation of good maintenance practices as well implementation of the measures prescribed for the construction phase; Implementation of measures for water protection, as well as the measures from the Waste Management Plan and the Hazardous Management Plan. Implementation of good agricultural practices; Providing training for introduction of good agricultural practices, agro-ecological measures and proper use of the irrigation system, etc. 	– Operator/farmers	– Operational cost



Biodiversity and landscape	<ul style="list-style-type: none"> • Activities for maintenance of the irrigation and drainage system, • Farming activities; • Presence of structures and equipment for irrigation, farming activities. 	Possible, long term, local, moderate intensity	<ul style="list-style-type: none"> - Implementation of good maintenance practices as well implementation of the measures prescribed for the construction phase; - Implementation measures for water and soil protection, waste management and hazardous material management, etc. - Application of good agricultural practices; - Establish farming practices and production methods, which reflect the concern for conservation and landscape protection. 	<ul style="list-style-type: none"> - Operator/farmers 	<ul style="list-style-type: none"> - Operational cost
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Component 1 Foundational measures for water security						
Sub-component 1.3 - Investments in strategic water security measures						
(IV) Technical assistance to improve irrigation water management and operational systems (Develop water management information systems and tools for improved water use efficiency)						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Operational phase	Recourse efficiency	<ul style="list-style-type: none"> • Generation of waste during maintenance of sites and equipment, • Use of electricity for equipment. 	Certain, long term, local, low intensity	<ul style="list-style-type: none"> - Selection of usable fractions of waste and their reuse; - Use of energy efficient equipment. 	<ul style="list-style-type: none"> - Operator 	<ul style="list-style-type: none"> - Operational cost
	Air quality and climate change	<ul style="list-style-type: none"> • Generation of dust emissions, exhaust gases, waste as a result of maintenance activities on sites, i.e.: cleaning and maintenance of sites, use of vehicle and mechanisation, generation of waste 	Possible, short term, local, low intensity	<ul style="list-style-type: none"> - Implementation of the measures proposed for the construction phase 	<ul style="list-style-type: none"> - Operator 	<ul style="list-style-type: none"> - Operational cost



	Noise and vibration	<ul style="list-style-type: none"> Use of vehicle and mechanisation during maintenance of equipment and sites 	Possible, short term, local, low intensity	- Implementation of the measures proposed for the construction phase	- Operator	- Operational cost
	Waste	<ul style="list-style-type: none"> Generation of waste (maintenance of equipment) 	Possible, short term, local, low intensity	- Implementation of the measures proposed for the construction phase	- Operator	- Operational cost
	Soil	<ul style="list-style-type: none"> Soil degradation as a result of maintenance of the equipment and sites, moving of vehicles and mechanisation during maintenance, as well as generation of waste 	Possible, short term, local, low intensity	- Implementation of the measures proposed for the construction phase	- Operator	- Operational cost
	Biodiversity and landscape	<ul style="list-style-type: none"> Removal of vegetation for access and maintenance of sites and maintenance of equipment; Generation of waste. 	Possible, short term, local, low intensity	- Implementation of the measures proposed for the construction phase	- Operator	- Operational cost

Component 2: Catalytic investments in Morava e Bince Basin						
Sub-component 2.1 - Strategic investments in water infrastructure and services						
(I) Implementation of activities which include expanding, rehabilitation and modernization of water supply systems						
Project phase	Issue	Source of impact	Possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Operational phase	Recourse efficiency	<ul style="list-style-type: none"> Use of construction material, water, energy, generation of waste for maintenance of water supplying system; Energy consumption for water supplying system as well water treatment plant; Water use for water supplying. 	Certain, long term, local to regional, moderate to high intensity	<ul style="list-style-type: none"> Implementation of the measures for maintenance of the system (see construction phase), Identification of opportunities and alternatives for resource efficiency, relating to the project in accordance with GIP; Installation of 	- Operator	- Operational cost



				<p>energy efficient pumps with frequency regulation that will allow a high degree of efficiency which consumes less energy for pumping.</p> <ul style="list-style-type: none"> - Ensure properly matched pumps, systems, and power sources by keeping a good record of the amount of water pumped and the energy used to ensure suitability; - Implementation of modern and efficient water supplying system that will reduce water losses; - Selection of usable fractions of waste and reuse as construction material, etc. 		
Air quality and climate changes	<ul style="list-style-type: none"> • Maintenance of water supplying system (dust and exhaust gases emissions as a result of usage of equipment and mechanisation for maintenance of water supplying system generation of biodegradable waste and other type of waste etc.); • Air emissions from water treatment operations may include 	Certain, long term, local, moderate to high intensity	<ul style="list-style-type: none"> - Implementation of good maintenance practice as well as an implementation of the measures prescribed for the construction phase; - Installation of an ozone-destroying device at the 	- Operator	- Operational cost	



	ozone (in the case of ozone disinfection) and gaseous or volatile chemicals used for disinfection processes (e.g., chlorine and ammonia).		exhaust of the ozone-reactor (e.g., catalytic oxidation, thermal oxidation, or filter with granular activated carbon-GAC).		
Noise and vibration	<ul style="list-style-type: none"> • Maintenance of water supplying system (usage of mechanisation for maintenance), • Working of the water supplying equipment and water treatment plant. 	Certain, long term, local, low intensity	<ul style="list-style-type: none"> - Implementation of good maintenance practice as well as an implementation of the measures prescribed for the construction phase; - Implementation of good operation practices; - Setting pumps at appropriate locations, far away from residential areas as possible. 	- Operator	- Operational cost
Water	<ul style="list-style-type: none"> • Maintenance of the water supplying system; • Leak of the water supplying system; • Soil erosion as a result of discharging of flash water; • Generation of sediment, waste water and waste as a result of: - Water lines may be periodically flushed to remove accumulated sediments or other impurities that have accumulated in the pipe. Water pipe flushing is the discharge of flushed water, which may be high in suspended solids, residual chlorine, and other 	Certain, long term, local/regional, moderate to high intensity	<ul style="list-style-type: none"> - Implementation of good maintenance practice as well as an implementation of the measures prescribed for the construction phase; - Conduct regular inspection and maintenance of the system, - Implement a leak detection and repair program (including records of past leaks and unaccounted-for water to identify 	- Operator	- Operational cost



	<p>contaminants that can harm surface water bodies,</p> <ul style="list-style-type: none">- Wastewater from water treatment plant may contain suspended solids and organics from the raw water, high levels of dissolved solids, high or low pH, heavy metals, etc.- Generation of waste from water treatment plant.		<p>potential problem areas);</p> <ul style="list-style-type: none">- Consider replacing mains with a history of leaks of with a greater potential for leaks because of their location, pressure stresses, and other risk factors;- Discharge the flush water into a municipal sewerage system with adequate capacity;- Discharge the flush water into a separate storm sewer system with storm water management measures such as a detention pond, where solids can settle and residual chlorine consumed before the water is discharged;- Minimise erosion during flushing, for example by avoiding discharge areas that are susceptible to erosion and spreading the flow to reduce flow velocities;- Land application of wastes with high dissolved solids concentrations is		
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			<p>generally preferred over discharge to surface water, subject to an evaluation of potential impact on soil, groundwater, and surface water resulting from such application;</p> <ul style="list-style-type: none"> - Treat and dispose of reject streams, including brine, consistent with national and local requirements. Disposal options include return to original source or discharge to a municipal sewerage system, evaporation, and underground injection. 		
Waste	<ul style="list-style-type: none"> • Maintenance and operation of the water supplying system (sediment, consumables spare parts and equipment, biodegradable waste, etc.); • Waste from water treatment plant (process residuals, used filtration membranes, spent media and other types of wastes. Composition of the sludge depends on the treatment process and the characteristics of the source water, and may include arsenic and other metals, radionuclides, lime, polymers and other organic compounds, 	Certain, long term, local, moderate to high intensity	<ul style="list-style-type: none"> - Implementation of good maintenance practice as well as an implementation of the measures prescribed for the construction phase; - Preparation of a Waste Management Plan prior to commencement of operation activities which will take into consideration mitigation measures for Water and 	- Operator	<ul style="list-style-type: none"> - Operational cost - Preparation of Waste Management Plan: 2500 €



	microorganisms, etc.).		sanitation.		
Hazardous Substances and Materials	<ul style="list-style-type: none"> Usage of hazardous material and generation of hazardous waste for maintenance and operation of water supplying system; Water treatment may involve the use of chemicals for coagulation, disinfection and water conditioning. 	Certain, long term, local, moderate to high intensity	<ul style="list-style-type: none"> Preparation of a Hazardous Material Management Plan and Spill Prevention Control, Preparation of a Waste Management Plan prior to commencement of operation activities and procedure for management; Implement measures during the operation phase of the project. 	- Operator	<ul style="list-style-type: none"> Operational cost Preparation of Hazardous Material Management Plan and Spill Prevention Control: 2500 € Preparation of Waste Management Plan: 2500 €
Soil	<ul style="list-style-type: none"> Maintenance of water supplying system, Leak of the system; Discharging of flash water (soil erosion); Generation of waste and waste water (especially from water treatment plant). 	Certain, long term, local, moderate intensity	<ul style="list-style-type: none"> Implementation of good maintenance practice as well as an implementation of the measures prescribed for the construction phase; Implementation of measures for water protection, as well as measures from the Waste Management Plan and Hazardous Management Plan 	- Operator	- Operational cost
Biodiversity and landscape	<ul style="list-style-type: none"> Activities for maintenance of water supplying system, Generation of waste. 	Possible, short term, local, low to moderate intensity	<ul style="list-style-type: none"> Implementation of good maintenance practice as well implementation of measures prescribed for construction phase; 	- Operator	- Operational cost



				- Implementation measures for water and soil protection, as well measures for waste and hazardous material management.		
Measures to improve performance and efficiency of water use in RWC Hidromorova within its service area						
Project phase	Issue	Source of impact	Preliminary possible impact assessment	Mitigation measures	Responsibility	Indicative Cost
Operational phase	Recourse efficiency	<ul style="list-style-type: none"> • Generation of waste during maintenance of sites and equipment, • Use of electricity for equipment. 	Certain, long term, local, low intensity	<ul style="list-style-type: none"> - Selection of usable fractions of waste and their reuse; - Use of energy efficient equipment 	- Operator	- Operational cost
	Air quality and climate change	<ul style="list-style-type: none"> • Generation of dust emissions, exhaust gases, waste as a result of maintenance activities on sites, i.e.: cleaning and maintenance of sites, use of vehicle and mechanisation, generation of waste. 	Possible, short term, local, low intensity	Implementation of the measures proposed for the construction phase	Operator	Operational cost
	Noise and vibration	<ul style="list-style-type: none"> • Use of vehicle and mechanisation during maintenance of equipment and sites. 	Possible, short term, local, low intensity	Implementation of the measures proposed for the construction phase	Operator	Operational cost
	Waste	<ul style="list-style-type: none"> • Generation of waste (maintenance of equipment) 	Possible, short term, local, low intensity	Implementation of the measures proposed for the construction phase	Operator	Operational cost
	Soil	<ul style="list-style-type: none"> • Soil degradation as a result of maintenance of the equipment and sites, moving of vehicles and mechanisation during 	Possible, short term, local, low intensity	Implementation of the measures proposed for the construction phase	Operator	Operational cost



	maintenance, as well generation of waste.				
Biodiversity and landscape	<ul style="list-style-type: none">• Removal of vegetation for access and maintenance of sites equipment;• Generation of waste.	Possible, short term, local, low intensity	Implementation of the measures proposed for the construction phase	Operator	Operational cost



9. ENVIRONMENTAL AND SOCIAL MONITORING

9.1. Monitoring Framework for ESMF

The Ministry of Infrastructure and Environment, Water Sector and Project Management Team PMT will have the overall responsibility for coordinating and monitoring the implementation of the ESMF. Monitoring of ESMF implementation including compliance monitoring and evaluation that will be a continuous process to ensure that:

- All technical people at all levels have the necessary knowledge and skills to perform their duties;
- All project activities are implemented per the environmental and social management requirements of this ESMF;
- Problems arising during implementation are being addressed early enough to avoid any spill over that could subsequently hinder the outcomes of the project (e.g., issues of grievance redress mechanism and other); and
- Environmental and social mitigation measures proposed in the ESMF, and environmental and social mitigation measures further identified during project implementation and ESIA/ESMP preparation are reflected within specific ESMPs (if any) and monitoring plans.

To ensure effective implementation of measures in the ESMF as well as ESIA/ESMP (which will be prepared before the implementation of the investment), the MIE will put in place a monitoring and evaluation system. This monitoring and evaluation system will include both internal monitoring and reporting, and external monitoring and evaluation of implementation of the ESMF. A set of monitoring indicators will be developed during the development of ESIA/ESMP for each project. Appropriate monitoring formats will be prepared for monitoring and reporting requirements. A template form for Monitoring and reporting requirements is given below, in Table 11.

The process of monitoring, evaluation, and reporting will be effectively executed by separate, but complementing bodies that are involved in implementation of investment at national and local levels.

For that purpose, guidelines for the general process of the monitoring and evaluation process will be developed, as well as a template for the monitoring report, and criteria and indicators for monitoring in wider consultation with the stakeholders, state and local level governments. The monitoring and the evaluation process will be conducted by the Environmental and Social Specialist and 2 (two) Environmental and Social Officer in construction phase. In the operational phase the monitoring will be conducted by the State owned institutions such as MIE, MAFRD, Regional Water Companies, IHMK, and Cadastral Agency etc. MIE will also be responsible for preparing monitoring reports, for reporting to the World Bank, which also includes the information on the implementation of the safeguards.

More precisely, the Project will follow a quarterly reporting cycle. These quarterly reports will further be shared with all stakeholders, as defined in the SEP. Quarterly reports will provide brief updates on environmental and social issue activities, identified in screening; mitigation actions undertaken; capacity building implemented; stakeholders engaged; results of the implementation of site/activity-specific ESAs and ESMPs; cases of non-compliance with ESMPs or ESMF; and they will flag possible challenges and allow for immediate adjustments and assistance in the implementation of the ESMF and ESMPs.



Furthermore, the PIU will provide an annual review of ESMF implementation, with the aim to: (a) assess the project performance in complying with ESMF procedures, lessons learnt, and improve future performance; and (b) assess the occurrence of, and potential for, cumulative impacts due to project-funded activities. These reports will be the main source of information for the World Bank supervision missions and national authorities.

Also, a third-party monitoring consultant will be appointed to assess implementation of the ESMF which will include assessment of safeguards compliance as per the ESMF using site specific ESMPs, additional plans etc. The safeguards assessment will assess whether:

- The ESMF process is being correctly adhered to, (i) relevant mitigation measures have been identified and implemented effectively, (ii) whether these need to be adjusted to reflect changing circumstances; and
- The extent to which all stakeholder groups are involved in the implementation of proposed activities.

In addition, an example of how and what should be included in the monitoring of each sub – project is given.



Table 11 Template for Monitoring Plan

MONITORING PLAN									
Phase	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored/ type of monitoring equipment?	When is the parameter to be monitored- frequency of measurement or continuous?	Monitoring Cost		Responsibility		Supervision observation and comments (to be filled out during supervision with reference to adequate measuring reports)
					What is the cost of equipment or contractor charges to perform monitoring?				
					Install	Operation	Install	Operation	
Construction phase									
Operation phase									
Decommissioning phase									



10. IMPLEMENTATION ARRANGEMENTS

Institutional and Implementation Arrangements

Policy level sector coordination will be organized through the (extended) IMWC. To ensure broad government ownership and long-term leadership of the approach, and to support cross-sector coordination, the project will seek high level coordination through the IMWC²⁸. In principle, the IMWC will be responsible for general policy coordination, approval of annual work plans and budgets, adoption of project operations manual and review of semi-annual and annual implementation progress reports, including audit reports, and inter-ministerial coordination. The FLOWS program manager will work with the IMWC Secretariat in preparing documentation for IMWC meetings.

A FLOWS Program Technical Committee (PTC) will be established and responsible for providing technical oversight of project implementation as well as reviewing and recommending project work plans and budgets to the IMWC. The PTC will meet on a quarterly basis or more frequently as need arises and provide technical and practical work planning coordination among the implementing agencies. This committee will be comprised of IMWC Secretariat, Directors of the principal departments and agencies, Hidromorava RWC management, as well as municipalities involved in project implementation and external experts and operate in an advisory role to the IMWC on project matters. The PTC will supervise the Technical Working Group (TWG) and serve as members represent their departments when engaging on cross-agency tasks.

Technical Working Group. The Technical Working Group that has been established throughout project preparation will continue to strengthen the PMT during implementation. While there is clear responsibility for implementation with the hired professional staff that form the PMT (Program Manager and component Coordinators), they will not work in isolation. Civil servants' staff of each of the implementing agencies will continue throughout project implementation as focal points for the various activities for coordination. The cooperation between the implementing agencies will be set out in the MoU defining the roles and responsibilities of each institution, as well as specific ToR for the different bodies. Details of these arrangements will also be provided in the POM.

Project Management Team (PMT): Given the complexity and multi-sector nature of the proposed operation, it is proposed that a multi-sector PMT be housed in the MIE, with participation of the other implementing agencies. The PMT will oversee day to day implementation and administration of the project within parameters of POM and annual workplan and budget. It will be a fully integrated unit, comprised of externally hired experts, and links with the relevant departments in the agencies through the TWG.

The PMT will be led by a Program Manager, who will be supported by several Component Coordinators, who will focus on the implementation of activities under their respective components and support the Program Manager with the management of interlinked components. The Program Manager reports to the Permanent Secretary for MIE. Tentatively the component coordinators are:

- iii. Coordinator Component 1 – Water Resources Management Specialist
- iv. Coordinator Component 2 (infrastructure, components 2.1 and 2.2) – Water Engineer
- v. Coordinator Component 2 (investment grants, citizen engagement, component 2.3) – liaison/grant management specialist.

²⁸ IMWC is a standing sector-coordination body, chaired by the Prime Minister and comprised of the IMWC member ministries – Office of the Prime Minister, MIE, Ministry of Economic Development (MED), Ministry of European Integration (MEI), and Ministry of Finance (MoF) with participation of representatives of the donor community as observers.



The project will provide funding to contract professional and support staff to form the PMT, facilitate its operations and ensure that certain specialized tasks are professionally executed by people with the required background and knowledge, including professional safeguards staff (environmental and social safeguards specialists, fiduciary staff (a procurement specialist and a financial management specialist), support staff (communications, admin support, translator/data entry clerk, M&E specialist). Also, short term expertise to the PMT is foreseen on specific topics that are required for quality of implementation but that do not require full time presence, such as engineering, legal expertise, hydromet/irrigation/dam design expertise, IT services, etc.

Following resource efficiency and aid effectiveness principles, the PMT will share common services with the parallel Greening Land for Development (P172992), also under MIE. The common services will include the fiduciary, safeguards and communications/M&E specialist functions, as illustrated below. These fiduciary, safeguards and communications specialists will form an integral part of both PIUs and will be hired on full time basis within the PMT. While serving both projects they do not form a separate unit.

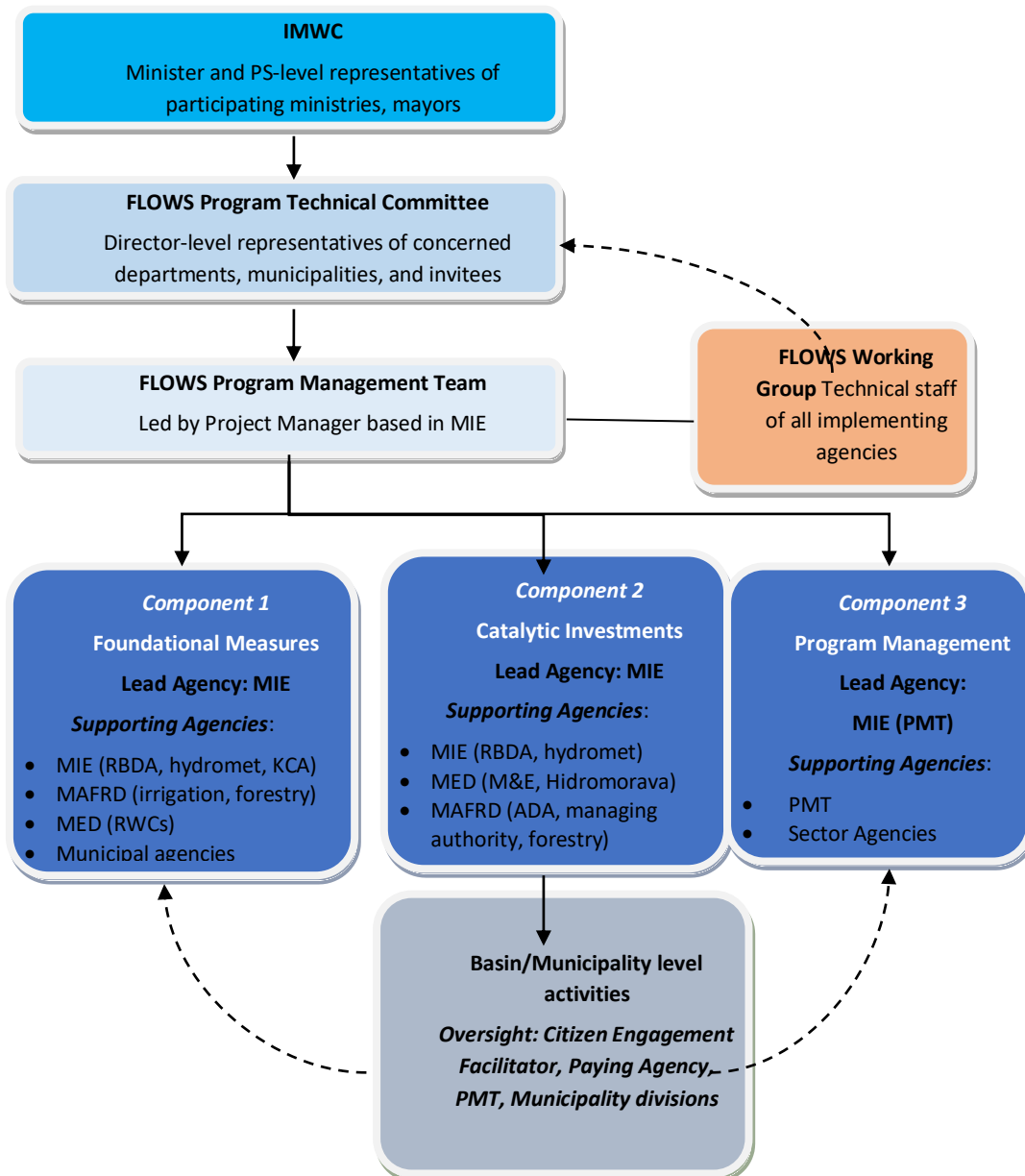




Figure 18 FLOWS Implementation Arrangements

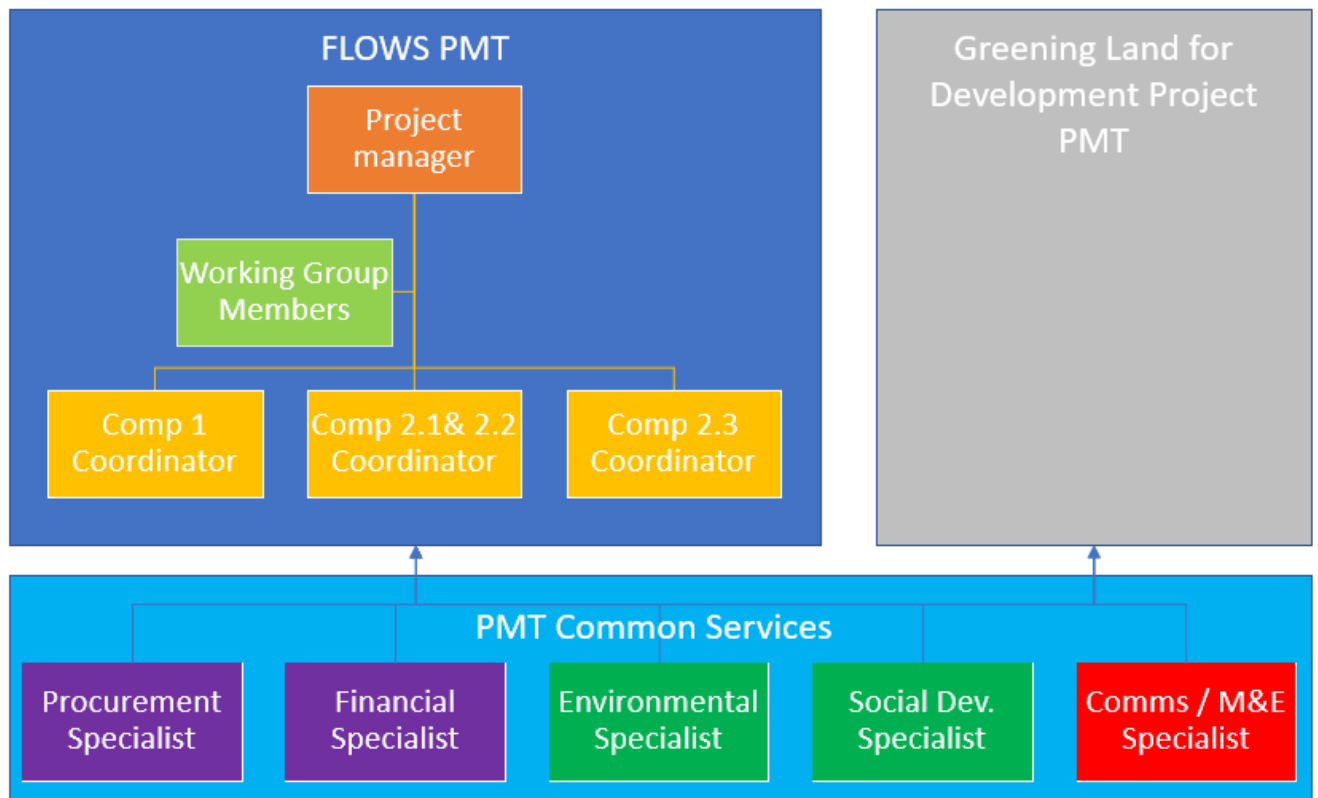


Figure 19 FLOWS PMT Internal Implementation Arrangement

Partnership arrangements have been established with active partners in the water sector: among others the SDC, SIDA, EU, UNDP. Particularly SDC is currently preparing a long-term capacity building program in the water sector that will closely dovetail with FLOWS; and technical assistance activities will need to continue to be harmonized. Overall, SDC program objectives are in strengthening the national level institutional framework, through IMWC and RBDA. These are very important for the implementation of FLOWS and the project will support the SDC program, while not duplicating its technical assistance in this area. Coordination will take place through the existing donor and implementers (of water projects) coordination mechanisms and through continued close collaboration between SDC and World Bank teams.

Results Monitoring and Evaluation Arrangements

While the PMT will be primarily responsible for M&E, the municipalities and regional water companies will serve as liaison with the PMT at the local level. The PMT will monitor activities and report project progress by reporting on project indicators, as presented in the Results Framework in section VII. The M&E reports will be presented as part of the regular progress reports. The PMT will collect and present data and reports for semi-annual reviews by the Project Steering Committee (PSC) and respective local and national agencies responsible for project implementation, in conjunction with Bank missions. A mid-term review will be conducted to evaluate implementation progress and identify potential issues in need of attention and resolution.

Sustainability

Technical Sustainability: The technical sustainability of FLOWS-I activities is being addressed by ensuring that the physical infrastructure supported (e.g. the works for hydromet, Hidromorava RWC



investments) are built to good technical design, construction, and operational standards, with adequate dam safety, instrumentation and operational decision support considerations. For the Kike Kremenata technical studies have already started by qualified consulting firms. The WRIPS is designed to set up a long-term knowledge base for the country and component 1.2 activities will improve systematic hydro-climatological monitoring and inflow/flood forecasting. Catchment management investments are based on technologies and approaches that have already proved successful and sustainable in Kosovo, and innovative approaches will be vetted. The preparation of new water investments will also be done in a manner that ensures technical sustainability of these investments to the extent possible.

Environmental Sustainability: The project is designed to reduce natural resources and environmental sustainability threats to the country, including climate change-exacerbated floods and droughts. This is expected to be accomplished through sustainable land and water management investments that reflect both stakeholder participation and priorities and scientific inputs. Given that it is difficult to effectively manage what is not measured, the project seeks to invest in integrated and sustainable water resources management, water quality and groundwater monitoring to build a solid knowledge base for water security interventions and management. Investments will follow the ESMF provisions, developed during project preparation; the preparation of WRIPS will include support for environmental assessments, and the support to “Kike-Kremenata” Storage infrastructure will include a detailed ESIA.

Social Sustainability: The project is also being conceived at a time where Kosovo has a major focus on jobs, especially for the rural poor. It is expected that project activities, especially those related to catchment management and storage will provide opportunities for the rural poor to benefit from short-term jobs, as well as longer-term livelihood improvements and improved resilience to recurrent natural disasters. Women’s livelihoods would likely be improved by the project through: enhancing incomes and income opportunities (e.g. suitable livelihood investment grants); increasing empowerment (acquiring skills through capacity development, accessing services, participating in decision-making bodies and assuming leadership roles in community-based institutions and common interest groups).

Financial and Economic Sustainability: The economic sustainability of the project investments is demonstrated to some extent by the economic analysis carried out. Financial sustainability is also demonstrated by the financial analysis carried out for the project. There is a need for sustained commitment to project-related sectors – both for operations and maintenance of investments, but also scaling-up investments in water and other natural resources information, institutions, and infrastructure. To address the issue of long-term financial sustainability of the Hidromorava and hydromet investments, the project continues to collaborate closely with technical assistance programs focusing on the institutional and financial aspects of infrastructure management.

Institutional Sustainability: The program’s hybrid approach, using exiting coordination mechanisms and explicitly engaging departmental staff in the PMT, supports a move away from traditional PIUs. This, in combination of focusing on multi-sectoral collaboration presents an opportunity to focus on improving the long-term institutional capacity of key land and water related institutions to perform their core mandate. For example, the integration of different actors on setting the water resources agenda for the future through the WRIPS overcomes the frequent gridlock caused by parallel planning processes. In addition, the government will be better equipped to make decision that incorporates climate change impacts with improved hydromet data collection and analysis capacity.



These new capacities and activity paradigms should help the institutional sustainability of investments under this program.

11. CAPACITY BUILDING

Capacity building for all relevant stakeholders of the FLOWS project (**Component 1&2**) is particularly necessary and needs to be systematically integrated at scale at both national and local level. Instead of focusing only on strengthening citizens' motivations and capacity to engage, attention must also be paid to the willingness and capacity of state actors, especially public officials, for assuring effective citizen engagement. The Project's implementation team's response to citizens' needs and opinions is just as important because it constitutes the other half of the equation and what it does shapes the outcome of the interaction. Building governmental capacity is also important to ensure the sustainability of engagement processes beyond the life of a project intervention. Tools include:

- Training for main stakeholders;
- Workshops for all stakeholders;
- Seminars for all stakeholders.

For more information on identified stakeholders please check Annex 9 (**Stakeholder Engagement Framework**).

11.1. Modes of training

The MIE will be responsible for providing trainings for the main stakeholders, farmers and water users which will be directly included in implementation of the project activities covered under Component 1&2. Trainings will be conducted through combination of formal classroom trainings and practical on-site training. These trainings will made available guidelines and support in all aspects in environmental and social works, in order the main stakeholders to be capable of carrying out and conducting their respective duties. The trainings which will be covered under component 1 will be conducted on the whole territory of Republic of Kosovo, i.e. in each seat of the all 7 Districts in Kosovo (District of Ferizaj, District of Gjakova, District of Mitrovica, District of Peja, District of Prishtina and District of Prizren). The trainings covered under component 2 will be conducted only in Morava e Binces Basin i.e. in all Municipalities covered in the Basin. In the following table are given the topics on which the training for the main stakeholders will be conducted.

Table 12 Main topics for training of main stakeholders

COMPONENT	SUB-COMPONENT	TOPIC FOR TRAINING
Component 1: Foundational measures for water security	Sub-component 1.1 - Strategic investment planning	1. Development of national water resources investment plan for better management and water loss reduction investments (climate change scenarios, updated water demand projections, ecological status of rivers and nature-based solutions)
	Sub-component 1.2 - Enhance integrated water management capacity	1. Introduction of integrated water resources planning and management, and support for core water resources management functions
	Sub-component 1.3 - Investments in strategic water security measures	1. Training for technical assistance to improve water information systems from data production, analysis and dissemination 2. Training for institutionalizing dam safety surveillance measures 3. Training for emergency preparedness and response measures in face of flood risks and potential dam failures



		<ol style="list-style-type: none"> 4. Training for technical assistance to improve irrigation water management and operational systems 5. Training for introduction of good agricultural practice, pest management, agro-ecological measures, proper use of the irrigation system 6. Training of farmers about waste management 7. Training for introduction of good agricultural practices, agro-ecological measures and proper use of the irrigation system 8. Training for establishment of farming practices and production methods, which reflect the concern for conservation and landscape protection
Component 2: Catalytic investments in Morava e Binces Basin	<i>Sub-component 2.1 - Strategic investments in water infrastructure and services</i>	<ol style="list-style-type: none"> 1. Enhance the capacity of the main stakeholders for improvement of the quantity and quality of irrigation and drinking water supply in response to the region's ongoing drought crisis, and flood protection infrastructure 2. Training for improvement of the performance and efficiency of water use in RWC Hidromorova 3. Training for operation of leak detection and pressure management technical assistance and equipment, network rehabilitation, flow and pressure meters, smart water meters, customer GIS database development and public awareness activities 4. Training for monitoring of implementation of the Waste management plan, Hazardous Material Management Plan and Spill Prevention Control
	<i>Sub-component 2.2 - Agro-environment and rural livelihood investments</i>	<ol style="list-style-type: none"> 1. Supporting sustainable management of natural resources and agriculture practices 2. Restoring, preserving and enhancing ecosystems dependent on agriculture and forestry, while addressing the challenge of climate change 3. Efficient use of water and increasing productivity and quality 4. Building capacity and gaining practical experience for the implementation of the agro-environmental and protection measures (beneficiaries, advisory and administration)
	<i>Sub-component 2.3 – Participatory basin planning and implementation of small-scale investments</i>	<ol style="list-style-type: none"> 1. Training for development of the key aspects of River Basin Management, including questions related to administrative arrangements, the characterization of the river basin, identification of different water uses, pressures and impacts assessment, economic analysis, water body status assessment and the development of a Program of Measures 2. Training for integrated and sustainable management of natural resources (forest, pastures, water and agricultural lands) at micro-catchment²⁹ (MC) level initially in three municipalities (Kamenica, Ranillug and Gjilan) 3. Stakeholder identification and engagement, along with GRM establishment, maintenance and monitoring training will be provided to the facilitators, and PMT staff, including conflict resolution

11.2. Workshops

The workshops should be constituted of few courses for periods of maximum 3 days. Such workshops help the technical staff to be trained for some precise technical or administrative work

²⁹ Micro-catchments (MCs) need to be defined before appraisal stage. MCs are smaller catchment areas within a watershed defined by hydrological boundaries. The average size of an MC and its population needs to be determined.



in the field of water quality monitoring, water losses, improvement of water infrastructures, monitor of agriculture products, proper use of fertilizers etc. These workshops are also important in order to strengthen the communication skills of the stakeholders to communicate between and with other stakeholders. This is also of crucial importance for full implementation of Component 1 where emergency response should be established.

The workshops which will be covered under component 1 will be conducted on the whole territory of Republic of Kosovo, i.e. in each seat of the all 7 Districts in Kosovo (District of Ferizaj, District of Gjakova, District of Mitrovica, District of Peja, District of Prishtina and District of Prizren). The workshops covered under component 2 will be conducted only in Morava e Binces Basin i.e. in all Municipalities covered in the Basin. In addition is given the table with proposed workshop themes for each component.

Table 13 Main topics for workshop for stakeholders

COMPONENT	SUB-COMPONENT	TOPIC FOR WORKSHOP
Component 1: Foundational measures for water security	Sub-component 1.1 - Strategic investment planning	/
	Sub-component 1.2 - Enhance integrated water management capacity	1. Data collection, management and analysis for water resources planning and management by hydromet department and cadastral agency
	Sub-component 1.3 - Investments in strategic water security measures	1. Workshop for technical assistance to improve irrigation water management and operational systems 2. Workshop for introduction of good agricultural practice, pest management, agro-ecological measures, proper use of the irrigation system 3. Workshop for farmers about waste management 4. Workshop for introduction of good agricultural practices, agro-ecological measures and proper use of the irrigation system 5. Workshop for establishment of farming practices and production methods, which reflect the concern for conservation and landscape protection
Component 2: Catalytic investments in Morava e Binces Basin	Sub-component 2.1 - Strategic investments in water infrastructure and services	1. Workshop for improvement of the performance and efficiency of water use in RWC Hidromorova 2. Workshop for operation of leak detection and pressure management technical assistance and equipment, network rehabilitation, flow and pressure meters, smart water meters, customer GIS database development and public awareness activities 3. Workshop for monitoring of implementation of the Waste management plan, Hazardous Material Management Plan and Spill Prevention Control
	Sub-component 2.2 - Agro-environment and rural livelihood investments	1. Workshop for supporting sustainable management of natural resources and agriculture practices 2. Workshop for restoring, preserving and enhancing ecosystems dependent on agriculture and forestry, while addressing the challenge of climate change 3. Workshop for efficient use of water and increasing productivity and quality 4. Workshop for building capacity and gaining practical experience for the implementation of the agro-



		environmental and protection measures
	Sub-component 2.3 – Participatory basin planning and implementation of small-scale investments	<ol style="list-style-type: none"> 1. Workshop for development of the key aspects of River Basin Management, including questions related to administrative arrangements, the characterization of the river basin, identification of different water uses, pressures and impacts assessment, economic analysis, water body status assessment and the development of a Program of Measures 2. Workshop for integrated and sustainable management of natural resources (forest, pastures, water and agricultural lands) at micro-catchment³⁰ (MC) level initially in three municipalities (Kamenica, Ranillug and Gjilan)

11.3. Seminars

With this tool all stakeholders will have an opportunity for data dissemination and information, in general for the central and local government, but also for other state, non-state institutions, identified companies, NGOs and policy makers. This tool is an effective platform where all work which is done or should be implemented, in order of full implementation of the Component 1&2 will be presented. The seminars can be organised as discussions on circle tables, informative sessions, panel discussion, poster presentation, power point presentation etc.

Two seminars is planned to be organized. The first one which will be covered under component 1, will be conducted in each seat of the all 7 Districts in Kosovo (District of Ferizaj, District of Gjakova, District of Mitrovica, District of Peja, District of Prishtina and District of Prizren). For component 2 one seminar will be organized in the biggest municipality in Morava e Binces Basin i.e. Gjilan Municipality

2. ESTIMATED BUDGET

The MIE will be responsible for conducting procedure for environmental and social assessments, preparation of required plans, arrangement of experts, conducting training for strengthening and capacity building on local, regional and national level for implementation of the project investments, obtaining necessary permits and other relevant activities depending on the nature of the project proposal, its complexity, scale, and so on.

During construction and operation, MIE is also responsible for providing funding for installation and other activities to minimize any hazardous environmental impacts to be included in the subproject costs. The amount of required funding will depend on the techniques/technologies used for implementing mitigation measures and their scale, number, variety and other factors. In this phase it is difficult to prepare exact budget estimates, so it should be included in the procurement plan.

Indicative estimated budget for implementation of measures proposed in the ESMF in the following table are presented:

Table 14 Indicative budget for social issues

No	Measures for Social aspects	Phase	Indicative budget
1	Creation of Stakeholder Engagement Plan for each sub-project (investment) in compliance with Stakeholder Engagement Framework	Pre – construction	1500 €

³⁰ Micro-catchments (MCs) need to be defined before appraisal stage. MCs are smaller catchment areas within a watershed defined by hydrological boundaries. The average size of an MC and its population needs to be determined.



		phase	
2	Creation Resettlement Action Plan	Pre – construction phase	6000 €
3	Creation of a Social Impact Assessment, as part of ESIA, or a separate document, for the sub-projects (investments) that will have significant impacts on the local population, their livelihood, health and safety.	Pre – construction phase	4000 €
4	Creation of a Social Impact Assessment, as part of ESMP, for the sub-projects (investments) that will have significant impacts on the local population, their livelihood, health and safety.	Pre – construction phase	1500 €
5	Creation of a Community Health and Safety Impact Assessment document	Pre – construction phase	3000 €
6	Traffic Management Plan	Construction phase	2000 €
7	Rapid risk hazard assessment (RRHA)	Construction phase	1500 €
8	Emergency Response Plan (ERP)	Construction phase	1500 €
9	Traffic Management Plan	Operational phase	2000 €
10	Rapid risk hazard assessment (RRHA)	Operational phase	1500 €
11	Emergency Response Plan (ERP)	Operational phase	1500 €

Table 15 Indicative budget for environmental issues

No	Measures for Environmental aspects	Phase	Indicative budget
1	Preparation of ESIA for sub projects (investments) with high risk	Pre – construction phase	25 000 €
2	Preparation of Preliminary ESIA for sub projects (investments) with substantial risk	Pre – construction phase	10 000 €
3	Preparation of ESMP for sub projects (investments) with moderate risk	Pre – construction phase	7000 €
4	Preparation of ESMP - Check list for sub projects (investments) with low risk	Pre – construction phase	3000 €
5	Preparation of Waste Management Plan (for each sub project activities, where is proposed)	Pre – construction phase	2500 €
6	Preparation of an Asbestos Management Plan (for each sub project activities, where is proposed)	Pre – construction phase	2500 €
7	Preparation of Hazardous Material Management Plan and spill prevention control (for each sub project activities, where is proposed)	Pre – construction phase	2500 €



8	Arrangement of biological expert for biodiversity monitoring (for each sub project activities, where is proposed)	Pre – construction phase	~250 € per expert man/day
9	Water for dust suppression	Construction phase	1m ³ : ~ 0. 5 €
10	Transport of waste	Construction phase	1 km: ~ 0.5 €
11	Collection bins for waste	Construction phase	Will depend on types and their capacities (400 € for 1100 l, 800 € for 4000 l)
12	Protection fence for dust protection	Construction phase	1m ² : ~1 €
13	Water quality measurements (water used for irrigation)	Operational phase	400 € per measurement point
14	Preparation of Waste Management Plan (for each sub project activities, where is proposed)	Operational phase	2500 €
15	Preparation of Hazardous Material Management Plan and Spill Prevention Control (for each sub project activities, where is proposed)	Operational phase	2500 €



Annex 1 PROCEDURE FOR EIA IN ACCORDANCE WITH THE KOSOVO LEGISLATION

Under Kosovo Law on Environmental Protection No. 03/L-025 and Law on EIA No. 03/L-024, the EIA procedures include the following steps:

PREPARATION AND DELIVERING OF THE APPLICATION: The Applicant shall prepare an Application to start the EIA together with follow-up information and documentation to be delivered to the MIE (Article 11). The required information/documents to be included in such Application are: (1) name, address, legal status of the applicant and the name of the project; (2) documents determined by the MIE, according to the type and nature of the projects or activities; (3) a completed questionnaire, determined by the same MIE, covering a description of the proposed project, a description of the location, and a description of the potential impacts of the proposed project on the environment.

CHECK OF THE APPLICATION: The MIE shall check the information, documentation and questionnaire included in the application (Article 12) and determine, within 10 days from the date of its delivering, if it is completed as per legal requirements and on the basis of the criteria defined in Annex III to the EIA Law, and if it needs an EIA ministerial approval (or if a simple Municipal Environmental Consent is sufficient). If the documentation accompanying the application is incomplete, the MIE shall request from the applicant additional information and documentation and shall designate the date by which it must be delivered (no specific terms have been indicated by the Law). If the applicant does not submit the additional information and documentation by the designated date, the MIE shall reject the application. If the applicant does not agree with the decision taken by the MIE, he has the right to appeal within the term of 8 days, from the day he receives the MIEP's decision. The appeal shall be performed by the same MIE.

CHECK OF THE KIND OF REQUIRED ENVIRONMENTAL CONSENT: the obligations for the MIE authorisation (environmental consent) are defined by the Article 7 of the Law No. 03/L-214 "on Environmental Impact Assessment". This article prescribes that all project listed in Annex I of the Law "on Environmental Impact Assessment" are obliged to undergo an EIA, while an environmental consent is required for every public or private project listed in Annex I or Annex II of the same Law, which is likely to have significant effects on the environment by virtue, inter alia, of its nature, size or location. The MIE shall also check if the EIA report is not required in compliance with the list specified in Annex 1 (Article 12). In the case the MIE should confirm that the EIA is not required, it could transmit the corresponding application to the affected Municipality in order to initiate the procedure for issuing an Environmental Municipal Permit.

ISSUING A SCOPING NOTIFICATION: If the Application is accepted, the responsible officer of MIE issues a Scoping Notification to the Applicant (Article 13) within 30 days of receipt of a request from the same Applicant for an Environmental Scoping Report [ESP] including the request for: (1) description of possible alternatives; (2) description of significant impacts; (3) reasons for identifying these impacts; (4) description of protection measures. The issue of a scoping notification shall not prevent the MIE from requiring additional information at a later date.

PREPARATION AND DELIVERING OF SCOPING REPORT: The Applicant shall present this information to the MIE in a brief Scoping Report (Article 14), not exceeding 3 pages in length, which shall be included in the EIA report being also considered as its executive summary.

PREPARATION AND DELIVERING OF THE EIA: In addition to the Scoping Report the Applicant shall present to MIE the EIA with the contents specified in Article 15. The EIA Report shall be compiled by duly licensed legal and natural persons (Article 16) authorized in accordance with the Administrative Instruction No.07/11 "on licensing compilers of Environmental Impact Assessment". The Applicant



shall submit 4 written copies of an EIA Report and 1 electronic copy to the MIE (Article 17) together with a proof that he has paid the required fee, determined by the Administrative Instruction No.11/11 “on the determination of the amount of the fee for services relating to the environmental impact assessment”.

REVIEW OF THE EIA BY EXPERTS: Within 5 days from receipt of the EIA Report, MIE shall send 3 hard copies of the EIA Report and 1 electronic copy to the responsible consultative bodies for reviewing the EIA Report (Article 18) in accordance with: (1) adequacy of project description including alternatives; (2) adequacy of identification and evaluation of environmental impacts; (3) adequacy of mitigation measures; (4) adequacy of proposed monitoring schemes; (5) other criteria. For the review of EIA reports on particular projects, the Kosovo Environment Protection Agency will provide all necessary information which is in its possession and which is necessary for that review. In addition to the experts involved in the EIA review, the MIE may, as necessary, contract external experts having proven expertise in EIA (Article 19) that shall present their opinions, in writing, to the MIE by a date that shall be specified by the same Ministry.

ISSUING THE DRAFT DECISION FOR EIA: The MIE, after reviewing the EIA Report, taking in consideration results of consults by environmental authorities shall prepare and issue its draft Decision, which will be presented, in writing, to the applicant (Article 18).

ORGANISATION OF THE PUBLIC DEBATE: The main conclusions and recommendations included in the EIA Report and in the proposal decision for environmental consent shall be subject to public debate (Article 20) that shall be planned, organised and implemented by the Applicant to collect the corresponding opinions and remarks from the public. The Public Consultation Plan (PCP) prepared by the Applicant shall determine the location, date of the public debate, the mechanisms and times for informing the public, and the locations where the Non-Technical Summary of the EIA Report and the proposal decision will be displayed (Article 20).

APPROVAL OF THE PUBLIC CONSULTATION PLAN: MIE shall approve such Public Consultation Plan and the public debate cannot be held until the Applicant has received approval, in writing, from the same MIE (Article 20).

IMPLEMENTATION OF THE PUBLIC DEBATE: Applicant shall make the EIA report available to the public (Article 17) in compliance with the Administrative Instruction No. 09/11 “on information, public participation and interested parties in the environmental impact assessment procedures”, informing the public, through public information media, including an announcement in at least one daily newspaper, of the date, place and time of the public debate and providing the foreseen documents (Article 20) and implement the public debate within 20 to 30 days after the Applicant, the environmental authorities and the public concerned, have been informed.

REVIEW THE EIA ON THE BASIS OF THE REMARKS FROM PUBLIC DEBATE: Within 10 days from the date on which the public debate was concluded, the MIE shall review the remarks and opinions which emerged in the public debate (Article 21). On the basis of the received remarks and opinions, the MIE may request the Applicant to change or complete designated elements of the EIA Report which was submitted. The applicant shall make the changes required and submit the EIA Report, changed and completed, by the date designated by the MIE. If the Applicant does not meet the MIE request, the same Ministry shall suspend the procedure of review.

PREPARATION OF THE PROPOSAL-DECISION FOR THE ENVIRONMENTAL CONSENT.

The results of consultations and the information gathered pursuant to provisions of the EIA Law shall be taken into consideration in reaching the decision on the environmental consent (Article 22).



The proposal decision on Environmental Consent shall be prepared by the responsible body of the MIE within 70 days from the receipt of the EIA Report. Within a term of 10 days from the presentation of the proposal decision on Environmental Consent, the MIE shall decide whether to grant or refuse an Environmental Consent and convey this decision in writing to the applicant and to the Municipality/municipalities in whose area the project will be situated

INFORMATION OF THE PUBLIC ABOUT THE ENVIRONMENTAL CONSENT.

After taking decision of grant or refuse an environmental consent has been taken, the MIE shall inform the public of the decision by local advertisement (Article 22) and shall make available for public inspection a statement containing: (1) the content of the decision and any eventual foreseen conditions; (2) the main reasons and considerations on which the decision was based including, if relevant, information about the participation of the public; (3) a description, where necessary, of the main measures to avoid, reduce and, if possible, offset the major adverse effects; and (4) legal advice for regular means for appeals of the validity of the decision and the procedure.

MUNICIPALITY ENVIRONMENTAL PERMIT (MEP) PROCEDURE

After being noted by MIE that the planned intervention triggers the municipal environmental permit procedures, the following steps need to be taken, in accordance with the Administrative Instruction No. 10/2012 for the Release of Municipal Environmental Permit:

1. An applicant prepares the EIA Report and submits it to a municipality as part of the Municipal Environmental Permit request. EIA Report is defined in the AI and it is a (very) reduced EIA limited to 10 pages. (The report compiler can be a private person or a legal entity which means it does not need to be EIA licensed.)
2. Upon receiving a request, the Mayor establishes the Professional Commission.
3. The Commission will within thirty (30) days provide an opinion on approval on MEP, based on which the Chairperson of the Municipal Assembly will decide on MEP approval or rejection.
4. MEP is issued for a period of 10 years and can be transferred to another person with the previous approval of the municipality.
5. MEC can be terminated in the case:
 - The project realisation does not commence one (1) year form the decision validity;
 - MEP requirements are not met;
 - Fail to act on the request of inspector.
6. In order to extend MEP validity, the investor must request so from the respective municipality at least two months before the expiration date.



Annex 2 ENVIRONMENTAL AND SOCIAL SCREENING (QUESTIONNAIRE FOR ENVIRONMENTAL AND SOCIAL RISK CATEGORISATION)

Name of the project/ subproject activities				
City/Municipality:				
Name of applicant				
Contact:				
ENVIRONMENTAL AND SOCIAL CHECKLIST QUESTIONNAIRE (must be filled out for every application)				
No	Environmental and social Risk Questions	YES/NO	Unknown	Notes
1	Does the proposed activity include new construction and extension of activity?			
2	Does the proposed activity include rehabilitation activities?			
3	Does the proposed activity belong in Annex I of the Law on Environmental Impact Assessment (list of Projects for which full EIA is mandatory)?			
4	Does the proposed activity require other type of EA under the national legislation?			
5	Does the proposed activity require specific public consultations under the national legislation?			
6	Does the project use natural resources such as land, water, materials or energy, particularly any resources which are non-renewable or in short supply?			
7	Is the project activity performed in or potentially affects an archaeological or cultural heritage site?			
8	Will the project activity be a source of dust, pollutants or some hazardous, toxic or harmful substances in the air?			
9	Will the project be a source of greenhouse gases or ozone depletion substances?			



10	May the project cause microclimate changes?			
11	Will the project be a source of noise and vibration?			
12	Will the project generate significant quantities of waste (hazardous, non-hazardous, inert waste)?			
13	Will the Project involve the use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?			
14	Will the project generate additional waste water?			
15	Are there any risks of contamination of surface waters?			
16	Are there any risks of contamination of ground waters?			
17	Are there any activities which will lead to physical changes of the water body?			
18	Will the project contribute to pollution of international waters?			
19	Are there any risks of physical changes of the terrain, soil pollution, sediment loads, erosion, etc.?			
20	Will the project involve the use of pesticides or fertilisers?			
21	Are there any areas at or around the location that are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the Project?			
22	Will the project be located in or near some sensitive or protected area?			
23	Are there any areas or features of high landscape or scenic value at or around the location which could be affected by the Project?			
24	Will this project affect some critical habitats (forest, wetlands, marshlands, aquatic ecosystems)?			
25	Will this project affect some endangered plant/s?			
26	Will this project affect some endangered animal species?			
27	Is there a right of way issue or need for land acquisition?			
28	Are there any routes or facilities at or around the location which are used by the public for access to recreation or other facilities, which could be affected by the Project?			
29	Are there any transport routes at or around the location that are susceptible to congestion or which cause			



	environmental problems, which could be affected by the Project?			
30	Does the Project location cover a previously undeveloped area where there will be a loss of green field land?			
31	Are there existing land uses within or around the location e.g. homes, gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying that could be affected by the Project?			
32	Are there areas within or around the location which are densely populated or built up, that could be affected by the Project?			
33	Will the implementation of the project cause physical displacement of individuals, families or businesses?			
34	Will the project require a temporary or permanent land acquisition?			
35	May the project cause an impact on community assets?			
36	May the project cause an impact on community health and safety?			

Project Categorisation prepared by ESIA Specialist: _____

Signature of responsible person: _____ Date: _____

Categorization of the Risk	<input type="checkbox"/> Low risk	<input type="checkbox"/> Moderate risk	<input type="checkbox"/> Substantial risk	<input type="checkbox"/> High risk
	The Applicant need to prepare:	The Applicant need to prepare:	The Applicant need to prepare:	
	ESMP - Check list	ESMP	Preliminary ESIA	ESIA
Approval				

Project Categorisation issued WB E&S Specialist: _____

Signature of responsible person: _____

Date: _____



Annex 3 GUIDELINES FOR ESMP CHECK-LIST



The following check list is developed for low and moderate risk category project. This format provides the key elements of an Environmental and Social Management Plan (ESMP) in order to satisfy the requirements defined in the Environmental and Social Management Framework, i.e. requirements under ESS1.

The checklist has one introduction section and three main parts:

- The introduction part includes general information about the proponent/grant applicant, information about proposed project activities, as well as responsible persons for preparation of the ESS Check-list and its approval.
- **Part 1** includes institutional and administrative information for the sub-project and specifies the terms, the institutional and legislative aspects, the technical project content, the potential need for capacity building program and the description of the public consultation process.
- **Part 2** includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity.
- **Part 3** is a monitoring plan for activities during project construction and implementation. It retains the same format required for standard World Bank ESMPs. It is the intention of this checklist that Part 2 and Part 3 be included as bidding documents for contractors.

ESMP Checklist (Parts 1-3) will be updated and supplemented for each sub-project as needed to comply with the ESMF.

INTRODUCTION PART



GENERAL INFORMATION ABOUT THE PROJECT AND PROPONENT/GRANT APPLICANT

Proponent/Grant Applicant's name:	
Address (street and number, postal code and city):	
Project name	
Main project activities	
Responsible person completing the ESS Check-list:	
ESMP Check-list completion date:	

PART 1: INSTITUTIONAL & ADMINISTRATIVE

Country				
Project title				
Scope of project and activity				
Institutional arrangements (Name and contacts)	Project Management Team		Municipalities	
Implementation arrangements (Name and contacts)	Safeguard supervision	Local Counterpart Supervision	Local Inspectorate	Contractor

SITE DESCRIPTION

Name of site			
Describe site location		Annex 1: Site information (figures from the site) [] Y [] N	
Who owns the land?			
Geographic description			

LEGISLATION

Identify national & local legislation & permits that apply to project activity	
--	--

PUBLIC CONSULTATION

--	--



Identify when/where the public consultation process took place		
INSTITUTIONAL CAPACITY BUILDING		
Will there be any capacity building?	[] N or [] Y if Yes, ESMF includes the capacity building information	

PART 2: ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following:	Activity	Status	Additional references
	A. Construction and rehabilitation activities	[] Yes [] No	See Section A, B, C, D below
	B. Performance of activities in the rivers or theirs surrounding	[] Yes [] No	See Section A, B below
	C. Toxic material	[] Yes [] No	See Section A, C below
	D. Affected forest, wetland and or protected area	[] Yes [] No	See Section A, B, C, D below
	E. Temporary or permanent acquisition of private land	[] Yes [] No	See Section E below
	F. Affecting Cultural heritage or other site relevant to culture of the local population	[] Yes [] No	See Section F below
	G. Moderate and intensive transport of materials and people on a distance over 1km, and near (max 300m) and/or through settlements or socially important locations such as Schools, Religious objects, Recreational locations, Hospitals	[] Yes [] No	See Section G below
	I. Workers influx (workers with a need of temporary accommodation during construction)	[] Yes [] No	See Section H below



ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
A. Construction and rehabilitation activities	Air quality and climate changes	<ul style="list-style-type: none"> • Implementation of good construction practices; • Spraying with water (manually or with sprinklers) on construction sites, storage area, roads; • Placing of a protection fence or temporarily protective walls on the construction sites; • Stabilising or covering the heaps of inert materials; • Daily removal of the excavated earth and other waste material in covered transportation vehicles; • Implementation of measures for waste management, especially organic waste; • Optimisation of transport activities; • Proper maintenance of equipment and mechanisation; • Use of fuels with less polluting emissions; • Mandatory washing of tires; • Daily cleaning of access roads; • Implementing procedures for handling of construction materials, etc.
	Recourse efficiency	<ul style="list-style-type: none"> • Identify opportunities and alternatives for resource efficiency, relating to the project in accordance with GIIP, • Use pre-mixed concrete, asphalt and construction materials from existing borrow pits and plants which own environmental permits, under National (and local) regulation. • Water supplying for technical purposes to be done on the basis of signed agreement with authorised company or on the basis of water permits in accordance with Article 72, Water Law No. 04/L-147, for usage of water from wells, rivers, streams; • Efficient water use; • Use of energy efficient equipment during construction; • Selection of usable fraction of waste and reuse as construction material, etc.
	Noise	<ul style="list-style-type: none"> • Implementation of good construction practices; • Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102); • All construction equipment and mechanisation will comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment; • Select silenced compressors or use quieter hydraulic equipment; • All mechanical equipment should be silenced appropriately and regularly maintained; • Construction works in/or in close vicinity of the settlements will not be permitted during the night, etc.



	Water	<ul style="list-style-type: none">• Implementation of good construction practices;• Setting of earth embankments or barriers for diverting the flow to be performed only if there is no other way to perform the construction work;• Construction activities to be carried out during the dry season;• Downstream and upstream of the water bodies, no dry trough or flood should arise as a result of the construction work;• During construction to, continuously maintain the biological minimum of water, i.e. during possible diversion of the river to provide a water flow that will not affect the downstream water users;• Water pumping management should be done in accordance with water permit for use and water permit for discharging.• The possible dewatering of the excavated ditches to be discharged in a controlled manner, i.e. in a way that will minimize the physical impacts on the morphology of the recipient or the pumped water to be used as a technical water for reduction of dust emission;• Implement soil erosion control measures in order to avoid surface run off and prevent siltation,• If there is a risk of discharge of high quantity of sediment into watercourses, to install clarifiers (sediment traps);• Placement of mobile toilets to be at distances of more than 100 meters from water body and drainage lines. The same should be adequately managed by the certified Company;• Waste water from the construction activities should be collected and pre - treated prior their final discharge in the recipient, i.e. to be managed in accordance with Article 72, Water Law No. 04/L147-Waste water Discharge Permit, issued by the Ministry of Infrastructure and Environment or other relevant administration, responsible for water management (Water department);• Washing of mixers for prefabricated concrete that contain concrete with alkali cement or cement residues is not allowed as well as washing of the equipment and vehicles in the rivers or in their vicinity;• Provide leak prevention equipment near the construction site for urgent cleaning;• Implementation of measures for waste and hazardous material management, etc.
	Waste management	<ul style="list-style-type: none">• Implementation of good construction practices;• Preparation of Waste Management Plan for all activities in accordance with Article 18, Law on waste Law No. 04/L-060,• The plan should be addressing issues such as location and methods of storage, transport and disposal, as well procedure for waste management, measures for monitoring and periodic audits.



	Soil	<ul style="list-style-type: none">• Construction activities to be performed in a period of low rainfalls in order to minimise the possibilities of flooding and spreading of sediment;• Access areas for heavy machinery to be restricted to the construction zone and access roads;• The topsoil (humus) should be properly removed before the excavation begins, stored and used after the completion of the activities, for the purpose of re-cultivation and stabilisation of the slopes;• The removed soil heaps should be stabilised or covered (with textile) and temporary stored in places located away from the river banks or erosion-prone sites;• In case of soil contamination by accidental spillage, the contaminated soil layer should be removed and treated as hazardous waste in accordance with law obligations;• In a case of revealed contaminated soil on the construction sites, the Contractor should have determined and prepared procedures for appropriate storage and handling of contaminated soil, in accordance with the relevant standards as well through communication with the Ministry of Infrastructure and Environment;• Implementation of procedures for handling of construction materials and waste, etc.• Proper management of generated waste in accordance with the law obligation;• Implementation of measures for waste water management, etc.
B. Performance of activities in the rivers or theirs surrounding	Water quality and quantity	<ul style="list-style-type: none">• Implementation of good construction practices;• Providing water permit in accordance with Article 72, Water Law No. 04/L-147 for working into or in close vicinity of the watercourses and all activities to be done in accordance with the requirements in the permits;• The construction activities in the watercourses to carry out during the dry season;• The construction area next to the watercourses to be only large as it is strictly necessary to perform the construction works and in regard with the permit provided by the water administration;• If there is a risk of discharge of high quantity of sediment into watercourses, to install clarifiers (sediment traps) etc.
C: Toxic material	Hazardous Substances and Materials	<ul style="list-style-type: none">• Preparation of Hazardous material management plan and spill prevention control prior to commencement of construction activities addressing issues such as location and methods of storage, transport and disposal, as well procedure for its management;• The Contractor should obtain all necessary authorisations and/or licenses for storage and use of dangerous substances from local authorities, as well should implement procedure for reception of hazardous material and ensuring that the hazardous material are properly transported, packaged and marked and store as hazardous material;• Preparation of Waste Management Plan for all activities in accordance with Article 18, Law on waste Law No.04/L-060,



		<ul style="list-style-type: none"> The plan should be addressing issues such as location and methods of storage, transport and disposal, as well procedure for waste management, measures for monitoring and periodic audits. Preparation of an Asbestos Management Plan which will clearly identify the locations where the asbestos containing material is present, its condition and propose procedures for access to the locations where it is present and to propose measures to avoid damage, etc. Asbestos from demolition building and replaced pipe should be marked as hazardous waste and when is possible it is recommended to be appropriately contained and sealed to minimise exposure.
D Affected forest, wetland and or protected area	Nature protection	<ul style="list-style-type: none"> In the preparation phase of the project, monitoring of the ecosystems, habitats and species in the project areas should be provided, especially in the water bodies; On the basis of the results by the performed bio monitoring, the potential project-related adverse impacts should be identified and assessed and to apply the mitigation hierarchy so as to prevent or mitigate adverse impacts from projects that could compromise the integrity, conservation objectives or biodiversity importance of such an area. <p>In addition, it is recommended:</p> <ul style="list-style-type: none"> To apply good construction practices that would avoid pollution, eutrophication and modification of aquatic habitats; Protecting the riparian vegetation, because it will be an important buffer zone and protection of rivers; Prevention of interventions in the riverbed; Cutting of the plants and destruction of the habitats for the purpose of tracing new access roads, storage the raw materials or waste should be avoided; Disturbance of species, especially disturbance of nesting and roosting sites should be avoided, etc.
E Temporary or permanent acquisition of private land or business/income affected	Economic and Physical Displacement	<ul style="list-style-type: none"> Check RPF for further explanation and steps and prepare RAP if needed
F Affecting Cultural heritage or other site relevant to culture of the local population	Cultural Heritage	<ul style="list-style-type: none"> Prepare Cultural Management Plan



<p>G Moderate and intensive transport of materials and people on a distance over 1km, and near (max 300m) and/or through settlements or socially important locations such as Schools, Religious objects, Recreational locations, Hospitals</p>	<p>Community Health and Safety</p>	<ul style="list-style-type: none">• Conduct Community Health and Safety Assessment• Prepare Traffic Management Plan
<p>H Workers influx (workers with a need of temporary accommodation during construction)</p>	<p>Labor standards</p>	<ul style="list-style-type: none">• Follow LMP to make sure that Labour accommodation conditions are met. RAP if needed for the land to be occupied



Annex 4 Fostering and Leveraging Opportunities for Water Security (FLOWS) Project TERMS OF REFERENCE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA), ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) AND PREPARATION OF PRELIMINARY RESETTLEMENT ACTION PLAN (pRAP), AND RESETTLEMENT POLICY FRAMEWORK (RPF)

PREAMBLE: Due to the revision in the project scope, the investment for proposed dam component has been deferred to the next stage of project preparation. Resultantly, for this phase of the project, only Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) have been prepared. The consultants will prepare an Environmental and Social Impact Assessment (ESIA) and Preliminary Resettlement Action Plan (pRAP) according to the Terms of Reference given below, which were duly approved by the Bank.

1. TASK OUTLINE

- **Long-term Project:** Fostering and Leveraging Opportunities for Water Security (FLOWS) Program. This project is built around two mutually reinforcing pillars: (i) strengthening institutional capacity for transforming integrated land and water resources management foundations, and (ii) catalytic multi-sectoral investments in one target area.
- **Project Development Objective:** to (i) strengthen national capacity for managing Kosovo's water resources for water security, and (ii) in selected basin areas, improve integrated land and water resource management practices and services, in a resilient manner.
- **Overall Approach:** inclusive and systematic process and support to national level enabling environment for cross-sector collaboration, combined with "sandbox" approach in a smaller geographic area in the Morava e Binces Basin with catalytic investments and for learning implementation lessons
- **Task Title:** Preparation of Environmental and Social Impact Assessment (ESIA) and preliminary Resettlement Action Plan (pRAP) for the Kremenata Reservoir and Auxiliary facilities (hydropower plant, water treatment plant, pipeline, access roads etc.); Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) for all other investments under project component 2 & 3 including subcomponent CERC, where exact location of the interventions are still unknown
- **Beneficiary Country:** The Republic of Kosovo
- **Contracting Authority:** The Ministry of Infrastructure and Environment of the Republic of Kosovo
- **Beneficiary Institution:**
The Ministry of Infrastructure and Environment (MIE). The Responsible person for any technical guidance and coordination: Ms. Nezakete Hakaj, Nezakete.Hakaj@rks-gov.net, Head, Industrial Pollution Division, Environmental and Water Protection Department, MIE, and the project completion is: November 2019
- **Tentative budget:**



2. BACKGROUND INFORMATION AND PROJECT CONTEXT

As concluded in the 2018 Kosovo Water Security Outlook report (World Bank, 2018), Kosovo is water stressed with the lowest level of water resources developed with infrastructure. As a first step towards achieving Kosovo's long-term national water strategy, the Government of Kosovo is working with the World Bank to develop a multi-sector investment program to respond to immediate challenges while developing the building blocks for improved water future of Kosovo taking an integrated, systematic approach.

Fostering and Leveraging Opportunities for Water Security (FLOWS) project will implement a range of investments and measures, particularly multi-sector investments that complement ongoing single-sector initiatives. It would last six years with estimated total investment of \$51.4 million, with \$40 million supported by an IDA credit while another €10 million (\$11.4 million equivalent) supported by an EU-IPA grant. All physical investments are in the Morava e Binces basin, except some of the cross-cutting, small scale investments such as hydromet equipment and dam safety surveillance equipment. The project will implement both the basin specific investments as well as the national investment planning. The project will be flexibly designed to adapt to priorities emerging from the basin planning process, and overall support water security, climate change adaptation and preparing investments for future programmatic investments.

The project has following components.

Component 1: Foundational measures for water security (IDA \$4M)

This component will support national level knowledge base development, institutional capacity building for river basin management institutions, and plans for collaborative and harmonized river basin development interventions.

Sub-component 1.1 Planning and prioritization of strategic investments: this sub-component will help operationalize the national strategy and complement institutional support. The aim of this sub-component is to plan and prepare the future of water-related investments in Kosovo, including a ready pipeline.

Sub-component 1.2 Preparation of future integrated water management capacity: this sub-component will complement sub-component 1.1 in supporting the development of critical skills to advance the water security agenda and build human capital through programs such as training, a young professional program, when possible strengthening national institutions, and peer-to-peer exchange.

Sub-component 1.3 Promotion of sector innovation and water security pilots: this sub-component will help formulate and establish/pilot a water security challenge fund that supports agencies, companies, CSOs, individuals, and academia to implement and test scalable innovations in the broad field of water security in fields of evidence-based decision-making, watershed protection, service improvements, and achieving water or energy/commercial savings.

Component 2: Catalytic investments in Morava e Binces Basin (IDA \$36 M and Euro IPA Grant €10 M)

This component will finance integrated basin development and management in the selected sub-basin that covers: 1) development of River Basin Management Plan for Morava e Binces Basin, and integrated upstream watershed and landscape management that can strengthen water security and resilience, protecting source water, reducing erosion, enhancing



environmental services, and improving ecological services in an integrated approach; 2) the design and development of critical water infrastructures, particularly Kremenata Dam and services improvements to enhance the quantity and quality of irrigation and drinking water supply; 3) rural livelihood measures that will improve irrigation to enhance agriculture productivity and develop tourism industry to improve livelihoods in targeted areas.

Sub-component 2.1 Collaborative River basin planning and watershed management: this sub-component will focus on the one hand on supporting integrated sustainable development planning of the natural/water resources in the Basin; and building local capacity and rehabilitating the upper watershed of Kremenata reservoir that can protect source water, reduce erosion, enhance environmental services, reduce legacy hazards (e.g. Artana mine) and improve ecological services in an integrated approach.

Sub-component 2.2 Strategic investments in water infrastructure and services: this sub-component will expand access to and performance of multi-purpose storage infrastructure and associated water services for irrigation, residential and industrial use. Hence the component will finance: 1) A multi-purpose storage reservoir (Kremenata Dam); this is a long-term priority for Kosovo as it provides for several key water functions in this dry part of the country. Kremenata Dam is a rock-fill dam, will have a reservoir size of 10 million m³, a height of 52m (to be confirmed by current studies). Investments in the dam will be accompanied by investments in auxiliary and services infrastructure which include water treatment plant, pipeline, potentially a small hydropower plant, and short distance access roads; 2) investments to introduce modern irrigation water systems and services in target areas (with EU IPA funding, also subject to prioritization under the irrigation masterplan currently under preparation under the ARDP program), and 3) investments to expand, rehabilitate and modernize domestic water supply systems, including measures to improve performance and efficiency of water use in RWC Hidromorova ; 4) institutionalizing dam safety surveillance programs including necessary training and targeted investments within the basin; 5) investments targeting flood and drought management infrastructures.

Sub-component 2.3 Rural livelihood investments: this sub-component will improve rural livelihoods who derive their income primarily from agriculture and environmental services. To increase income opportunities, the project would focus on improving quality of agricultural products to meet the standards required, introducing water-saving irrigation systems to intensify and diversify the production focusing on higher value crops, further developing sustainable value chains and strengthening the linkages to markets, including the local tourism industry.

Component 3: Contingency Emergency Response Component (CERC)

Since the project addresses water security and most of Kosovo's natural disaster risks relate to water, it is proposed that a Contingency Emergency Response Component (CERC) is added to the project. While this has thus far not been discussed in any detail with Government, it is considered an appropriate tool, particularly given the institutional weaknesses in Government to act swiftly. This CERC will enable emergency response via implementation of key activities by the appropriate agencies to respond to an emergency, should it happen during project implementation.



The Environmental and Social Assessment for the project requires preparation of two set of studies; based on the availability of technical information on the (i) nature and scope of proposed project activities and, (ii) their exact location. Except for the Kremenata dam and its auxiliary facilities (water treatment plant, pipeline, potentially a small hydropower plant, and short distance access roads; (all defined under subcomponent 2.2), exact location for other investments are not known at this stage. The project is in the process of preparing separate Feasibility studies for these remaining investments to determine preliminary level design details, which will also identify the exact location of these activities. The project will therefore prepare following set of studies for the purposes of environmental and social assessment:

- (i) ESIA for Kremenata dam and its auxiliary facilities (water treatment plant, pipeline, potentially a small hydropower plant, and short distance access roads;
- (ii) ESMF for all other investments including CERC
- (iii) In addition, a preliminary Resettlement Action Plan is needed for Kremenata Dam and its auxiliary infrastructures while the Resettlement Policy Framework RPF is required to guide and manage resettlement or economic displacement because of land take for other investments whose exact location are still unknown.

For the approval of the project and activities that it will support and the concession of the permit for the implementation of the identified works, an Environmental and Social Impact Assessment (ESIA) is required to be approved by the Ministry of Infrastructure and Environment (MIE) in accordance with the Law No. 03/L-214 *“on Environmental Impact Assessment”*, to the Administrative Instruction No.08/2012 of MIE *“on determining of documentation for application for environmental consent according to nature of the project”* and to the Administrative Instruction No.16/2015 of MIE *“on information, public participation of interested parties in the proceedings of EIA”*. The ESIA study will also comply with the World Bank’s new Environmental and Social Framework (ESF) and the Ten Standards that are part of it.

ESIA should consider the natural environment (air, water and land); biological environment (flora and fauna), and human health and other social aspects (involuntary resettlement, local residents, and physical cultural resources). Through the proposed ESIA study, MIE desires to ensure Environmental and Social analysis of the Project, including its pre-construction (planning and design), construction, operation and maintenance, and de-commissioning phases, and to assess environmental and social consequences in line with the World Bank’s ESF and the ten Standards. The study is aimed at screening and assessing the proposed project interventions against adverse environmental and social risks and impacts and recommending, where necessary, avoidance, appropriate mitigation and enhancement measures, and course of action for implementation.

3. PROJECT AREA AND SALIENT ENVIRONMENTAL AND SOCIAL CHARACTERISTICS

Majority of the project investments are located in Kamenica and Ranilluge municipalities, which are part of the Morava e Binces basin located in the east of the country that borders Serbia. It is the smallest of the four basins but has relatively more environmental assets and agricultural potential. The basin is characterized with hills, forests and pasturelands with some areas available for agriculture.

The Basin's major rivers possess good water quality and also present great potential for tourism. Morava e Binces though is the driest basin and suffers from significant flood and drought risks



causing profound damages to people and country's economy. 'Morava e Binces' is a river that originates in mountains of 'Crna Gora' in Macedonia north of Skopje (close to the border between Macedonia and Kosovo) and south of the Municipality of Viti. It flows in north-easterly direction through the Southeast of Kosovo, to join the Western Morava River in Serbia. The Western Morava River flows into the Danube which in turn flows into the Black Sea. The length of the river in Kosovo is approximately 50 kms. The river flows through complex topography, changing from mountainous headwaters into flat areas near Viti, to hilly geographical configurations near the Serbian border, with moderate heights on the sides.

The basin is suffering from hydrological drought, ecosystem degradation, and reduction of ecosystem services, increased and new forms of pollution and water-related diseases. Relatively good water quality in the basin receives untreated industrial and hazardous waste from Artana mine, located at the municipality of Novo Brde. The mine is located on the Kriva Reka, which is a tributary of the Morava in the northern part of the basin. Therefore, effluents from Artana mine is a serious water quality threat to the rivers in the basin. Together with ongoing deforestation and land degradation, watershed protection is important for environmental function and ensuring adequate water quality and quantity throughout the year. Agricultural sector as the major income earner for population in the basin, is dependent on natural resources including water but productivity levels are significantly below optimum due to water shortages, quality issues and dilapidated infrastructure. One of the obvious impacts of climate change in Kosovo is likely the shortage of water due to lesser snowfall and earlier meltdown of snowcaps (the only major water storage) in Kosovo. Dam height, currently being finalized, will determine the size of water lake and potential land mass to be submerged. Area to be inundated is forested land with bushes, and medium to fully grown trees.

The consultancy will involve preparation of Environmental and Social Impact Assessment (ESIA) of the interventions described in the updated detailed designs for the –Kremenata Dam (including auxiliary facilities) that will meet the various needs of water for Kamenica and Rranilug municipalities in the Eastern part of Kosovo, their surrounding market centers and rural villages, irrigation needs, and any other use that may be determined. The consultants will also prepare an Environmental and Social Management Framework (ESMF) for all other project subcomponents where infrastructure will be developed but their exact location at this stage is unknown. The ESIA, and ESMF should meet the World Bank's new Environmental and Social Framework (ESF) requirements. Project component 2 identifies the investments to be financed under the project. There are however possibilities that the Government of Kosovo may expand without World Bank support some of the project infrastructure or infrastructure services to enhance the project benefits. Such infrastructure development is referred as the 'Associated Facilities' under the Bank's ESF (complete definition is available in paras 10-13 on page 16 – 17). The consultants will provide the relevant environmental and social analysis for the associated facilities in the relevant documents (ESIA and ESMF).

In addition, a preliminary Resettlement Action Plan needs to be prepared to address land acquisition impacts on individual Project Affected Person (PAP). For the land acquisition impacts for all other project sub-components, Resettlement Policy Framework will be prepared to manage and guide land acquisition as a result of the investments in other project-subcomponent. To achieve this, the Consultant is expected:



a. To finalize an Environmental and Social Impact Assessment (ESIA) of the planned interventions, it is necessary to compare different scenarios. The studies will be based on environmental and social data and background information, taking into consideration the technical inputs and data provided by the detailed designs for the Kremenata Dam, and information available on auxiliary facilities including the information related to the current and future water demand taking into consideration residential, irrigation, hydropower needs, environmental flow requirements, and any other use that may be appropriate, as well as the hydrology, topography and geology review and information quality assessment. The ESIA shall consider the adoption and implementation of adequate and specific preventive, mitigation and rehabilitation measures and will be implemented in parallel with the Feasibility Study to Review the 1984 Detailed Design for Kremenata Dam so that the same Feasibility Study could take into consideration the technical recommendations and proposed measures of the ESIA to mitigate the identified environmental-social impacts. This ESIA will be based upon this ToR designed to meet Government of Kosovo and EU legislation and the World Bank environmental and social due diligence requirements as stipulated in the ESF and 10 Environmental and Social Standards.

b. Preliminary Resettlement Action Plan for the investments in Kremenata Dam, will be prepared based on social data and background information, taking into consideration the technical inputs and data provided by the designs for the Kremenata Dam, including information on inundation area, existing land ownership and information on any other use that may be appropriate. The pRAP shall be updated for specific PAPs and compensations once the final footprint is determined in detailed design, which will not be available for the pRAP. The pRAP shall still describe all methodologies, indicative resettlement needs and costs, clarify resettlement principles and guide implementation of the land acquisition for the Kremenata Reservoir sub-project. Once the subproject footprint is defined and the necessary information becomes available, a preliminary RAP will be operationalized to address land acquisition impacts for each individual PAPs. The Kremenata Reservoir related – the dam - works will not commence until the specific RAP had been implemented, upon prior finalization and approval by the Bank

c. Separate RPF will be prepared as instrument to meet the ESS 5 standard (Standard on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) to cover and guide resettlement activities for subprojects whose locations are still unknown.

4. SCOPE OF WORK

The main purpose of this ToR is to commission experienced, qualified and skilled consultants to assist MIE in conducting (i) an ESIA and(ii) a pRAP for the dam and auxiliary facilities, (iii) ESMF and (iv) RPF (for all other investments other than the dam and auxiliary facilities) for the investment component of FLOWS project in Kosovo.

Throughout the period of preparation and finalization of the four outputs the consultants will engage relevant stakeholders as appropriate. The engagement will be on national level and regional level (municipalities of Kamenica, Ranillug and Gjilan) for the ESMF and the RPF (will include sector specific CSOs, think tanks, public institutions, media) whereby for ESIA the consultants in addition will include direct neighboring communities - grassroot community level. For the preliminary RAP consultation will be with the potentially affected persons only whereby the draft plans and final ones will be disclosed for access for wider public. The draft documents that will be satisfactory to the bank will be disclosed locally and nationally and the consultant will facilitate consultations (for Project Implementing agency and the stakeholders) in national, regional and local level as



appropriate. The stakeholder feedback that is technically, financially feasible will be incorporated into the draft document and the final ones will be disclosed again.

To meet the above needs of the Client the Consultant will be expected to carry out the following tasks:

4.1 ESIA Study

4.1.1 Study Objective

The proposed study is being commissioned to ensure environmental and social due diligence analysis (Risks and Impacts) of the proposed sub-project including the pre-construction, construction, and operation and maintenance phases, and to assess environmental and social risks and impacts in line with the World Bank's Environmental and Social Framework (ESF) as well as compliance with the national legal, regulatory and policy framework on environment and social aspects.

The ESIA will consider the natural environment (air, water, and land); biological aspects (flora and fauna), human and community level health and safety; social aspects (involuntary resettlement, loss of livelihoods, loss of common property resources and physical cultural resources. labor and working condition legislation framework and practices); climate change (including floods and droughts) and its implications, and also induced impacts as well as the cumulative impacts of other development projects in the area. The ESIA will consider natural and social aspects in an integrated way.

4.1.2 Specific Tasks for the Consultant

To achieve the broad aim of ensuring safeguards' analysis, the consultant will:

A. Review the Project details

Review the proposed developments and their geographic, ecological, social, and temporal context, including any offsite investments that may be required. Work closely with MIE to define area of influence on the basis of the project scope and extent. It will be important to distinguish the catalytic investments in Morava e Binces from other investments and to apply a systems approach to the combined set of investments in addition to studying all parts separately for their potential impact.

B. Review of the Legislative and Regulatory Framework

Review the national policy, legal, and administrative framework within which the ESIA is to be carried out. Also review the WB ESSs and the ESF and their relevance status for the Project. Also state the actions taken/planned in response to each ESS that is relevant.

C. Scoping

Scoping is the first step of the ESIA and is essentially the process of identifying the significant issues relating to the proposed action and of determining the scope of the issues to be addressed in the ESIA. The key tasks include: i) carry out reconnaissance field visit(s); ii) plan, organize, arrange and hold stakeholder consultations according to the Stakeholder Engagement Plan (SEP) developed for the project (and as proposed and agreed as appropriate with the client); iii) identify the key aspects to be studied during the detailed ESIA, iv) finalize ESIA Tools in consultation with the stakeholders for approval of MIE and the World Bank; v) prepare work plan for the subsequent ESIA tasks; and vi) prepare the Environmental and Social Scoping Study (ESSS) and the Environmental Scoping Statement compiling the process and outcome of the scoping tasks described above in accordance with the Kosovan legislation requirements. Review the definition of area of influence and revise if necessary.



D. Project Planning and Analysis of Alternatives

Provide input to the MIE and its design consultants for inclusion of waste disposal facilities, land use planning, reserved forest area, natural habitat, protected areas, important biospheres, wetlands, places of cultural and archaeological interest (both tangible and intangible) shifting of common property resources/utilities, relocation of public facilities, OHS aspects, and access roads to public facilities to be incorporated in the project planning and design.

Systematically compare feasible alternatives to the proposed project location, design, and operation - including the "without project" situation - in terms of their potential environmental and social risks and impacts; and state the basis for selecting the particular project design.

E. Detailed Baselines Studies and Analysis

Assess the dimensions of the study area and review relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Also study current and proposed development activities within the project area but not directly connected to the project. Also analyze the trends in the key environmental and social parameters of the area. Data should be relevant to decisions about project location, design, operation, or mitigation measures.

Review the primary and secondary data collected and available with MIE, local government archives, and collect additional data if required on the following aspects:

Physical Environment: The data on physical environment should cover physiography, climate, climate variability, geology and seismology, soils, hydrology and river dynamics, groundwater, flooding, erosion and sedimentation, soil quality, river-bed sediment quality, water quality, air quality, noise, and others. It should also discuss trends underway independent of the project which could change baseline conditions over the life of the project, including trends in land use changes. Generation of baseline data on ambient air quality, noise levels, water quality and soil quality will be required in and around the project area considering the sensitive locations.

Biological Environment: The data on natural vegetation should cover trees, shrubs, herbs, scrub, grasses, medicinal plants, forests, others; fauna - mammals, birds including migratory birds, reptiles, amphibians, insects, fish and red listed species; biodiversity; protected and non-protected areas including hunting, poaching, illegal fishing; wetlands; fish; ecosystems and ecosystem services, habitat fragmentation and others. The trends underway independent of the project which could change baseline conditions over the life of the project should also be covered.

Social Environment: The socioeconomic baseline cover population and demography; land use and natural resources including agriculture, fishing, livestock, grazing; other economic activities e.g. sand quarrying, tourism, trade, services; social infrastructure and services including education, health, communications, others; access and security; community organizations; vulnerable groups and poverty situation; gender aspects; recreation areas/potential; cultural heritage; archaeology; objects of special interest, e.g. cultural practices, graveyards and monuments; and others. The survey will include inventory of private and Government properties, infrastructure, industries and places of religious and cultural importance.

F. Stakeholder Consultations

Continued stakeholder consultations are required during the project preparation and implementation with the affected communities and relevant stakeholders. The related Communication and Public Consultation Plan (CPCP) will be finalized during the Inception Period of the project and will be part of the Environmental and Social Scoping Study (ESSS). Facilitating Free



Prior Informed Consent (FPIC) is the objective of these consultations. In addition, the following two major consultation meetings are to be held at project sites:

- During initial stages of ESIA studies, conduct interagency and consultation meetings, including consultations for obtaining the informed views of the affected people; women, disabled, and other vulnerable, etc. and local non-governmental organizations (NGOs). During these consultations present the communities with a brief of the project and various entitlements they are eligible to.
- Hold consultations after preparing draft ESIA reports – with affected communities as well as institutional stakeholders. Before these consultations a) give an advertisement, well in advance, in the English and vernacular print media, b) prepare a brief of project and of the proposed mitigation measures, both environmental and social, for distribution to all likely participants well in advance for their informed participation.
- Document all the consultations in detail along with all feedback and clarifications.

G. Environmental Risks and Impacts

The Consultant shall identify environmental and social risks, positive and negative impacts likely to result from the proposed project, interpreting “environmental” throughout the ESIA study to include impacts on Physical environment, Natural Environment and social environment. All the project components and activities with potential environmental and social impacts will be analyzed. In reference to assess impacts on wildlife present in the project area and surroundings, the consultants will look into habitat degradation, habitat fragmentation especially if there are biological corridors, impact assessment on terrestrial and aquatic biodiversity, impacts on fisheries, and the need for environmental flows etc. For the purposes of improving resource efficiency, the ESIA will also provide water balance studies for the project at a basin level with estimates for all construction activities related uses, net positive or negative impact by taking into account both basin level surface and groundwater resources and sensitivity analysis carried out for dry season. The ESIA will also map out ecosystem and ecosystem services in the project area (as discussed in the section on baseline studies and analysis) and present project impacts on ecosystems services. Lake area behind the dam is a forested land, and when submerged may release GHG emissions. The impact assessment chapter will estimate the quantities of GHG emissions from the reservoir for the life of the project. The consultants will also present analysis on use of resources like raw material, energy and water for construction, and present mitigation plan where considerable stress on their use is expected, and measures for the project to use for improving resource efficiency. Of particular attention will be the borrow areas, use of water, and energy specifically required for the project related construction works. The consultants will ensure that the analysis in the study helps in minimizing impact on the overall quantity and quality of these resources with the introduction of cleaner, greener and efficient processes in terms of pollution and resource management.

The project works will involve substantial excavation, demolition and construction with potential impacts on cultural heritage/ chance finds. The ESMF and ESIA will present detailed procedures on care, handling and management of any chance finds or mitigation of impact on any other tangible cultural heritage. Following this, the Consultant will describe the likely changes in the prevailing environmental conditions that may be brought about by the project



Where adverse effects are indicated, discuss measures for minimizing, avoiding, reducing and/or offsetting these, and opportunities for enhancing natural environmental values will be explored. Both direct and indirect effects will be considered, and the area of influence indicated. The extent and quality of available data, key data gaps and uncertainties associated with predictions will be described. Topics that do not require further attention will be specified. Any impacts that are irreversible and/or cannot be avoided or mitigated shall be identified.

H. Social Impacts

Assess the impacts of land acquisition (if any) and land use change (even if it is government land) on the livelihoods of the affected people and their socio-economic conditions through detailed census surveys and identify the options for resettlement of affected people and restoration of their livelihoods through focused consultation with affected groups. Assess the impact of proposed developments on the access to public facilities, community health and safety, gender and employment. Assess Kosovo framework for employment and requirements for the labor conditions and Assess/Estimate number of employees that will be needed for the future works. Whether and how local work force can be utilized or what serviced could be purchased locally. Robust socio-economic baseline of all these affected people will form the backbone of this assessment. The assessment should not limit the surveys to the impacts cited here but list all the direct and indirect impacts due to the proposed project.

I. Cumulative Impacts

Number of proposals are under Government's consideration for water storage development in the Morava e Binces basin. This development could potentially adversely impact the fragile ecosystem in the basin. These proposed schemes could result in changes to flow regime, water quality and the productivity and aquatic species composition of rivers.

The overall goal of CuIA is to better understand the environment and social impacts and opportunities for water storage development in the Morava e Binces basin consistent with the principles of sustainability. The geographical scope of the CuIA will be the whole Morava e Binces. Given the critical role of water resources in the project area, this study will seek to support the efforts of the GoK to integrate water storage development into an overall long-term sustainability of the Morava e Binces.

The specific objectives of this assignment are:

- To identify key objectives and indicators for sustainable management of the Morava e Binces Basin covering environmental, social and economic values,
- To establish analytical tools to support ongoing sustainable planning,
- To describe the cumulative impacts of water storage development in the Morava e Binces Basin under different scenarios,
- To contribute to awareness and develop capacity in river basin management.

CuIA focuses on a number of priority areas:

- (i) **River flows/water balance analysis:** Describe impacts on flows, hydrology and water balance in the basin. Identify management objectives and estimate potential impacts based on the current and proposed river water uses including for industrial purposes.



- (ii) **Terrestrial and aquatic ecology:** Estimate cumulative impacts of water storage development in the basin on terrestrial and aquatic ecology and rivers itself. The rivers support number of fauna and flora in the basin.
- (iii) **Social impacts:** Estimate positive as well as stresses of social significance resulting from water storage development, showing gender disaggregated impacts. These may include impacts on livelihoods and economic activity; loss of land, and the resulting alienation from a home and source of subsistence; health (as a result of changes in water flows); influx of skilled and unskilled labor (Number, size, skill levels of local/outside labor force, measures for shifts in livelihoods, and sustainability of livelihoods); increased traffic flows; increase in tourism; additional incidents of disease, alcohol and drugs problems, crime as a result of increase in visitors/workers; and the capacity of local communities and municipality governments to cope with these changes.

I. Environmental and Social Management and Monitoring Plan (ESMMP)

Based on the identification of environmental impacts and mitigation measures, the Consultant will formulate an Environmental and Social Management and Monitoring Plan (ESMMP) for the ESIA study, which shall include environmental issues, mitigation measures, location of implementation of particular mitigation measure, timeframe, monitoring and institutional responsibility.

For each significant negative impact or major risk, the Consultant shall recommend and describe a measure to avoid or mitigate (reduce to acceptable levels) or when unavoidable, to compensate for the damage. In the description, the text shall include an estimate of capital and recurring costs and shall identify the party/parties responsible for implementation.

The complete set of recommended measures in the ESMMP shall also be presented in a summary table. The environmental and social management plan shall be written in such a way as to allow it to form a part of any contract documentation for operation of the facility.

4.2 Environmental and Social Management Framework (ESMF)

Environmental and Social Management Framework (ESMF) will be prepared for the following proposed project interventions.

- 1) investments to introduce modern irrigation water systems and services in target areas (with EU IPA funding, also subject to prioritization under the irrigation masterplan currently under preparation under the ARDP program),
- 2) investments to expand, rehabilitate and modernize domestic water supply systems, including measures to improve performance and efficiency of water use in RWC Hidromorova;
- 3) institutionalizing dam safety surveillance programs including necessary training and targeted investments within the basin;
- 4) investments targeting flood and drought management infrastructures,
 - 5) improving quality of agricultural products to meet the standards required, introducing water-saving irrigation systems to intensify and diversify the production focusing on higher value crops, further developing sustainable value chains and strengthening the linkages to markets, including the local tourism industry,
 - 6) CERC will enable emergency response via implementation of key activities by the appropriate agencies to respond to an emergency, should it happen during project implementation, and
 - 7) Technical Assistance;



The ESMF will be based on the data that is either available in the prefeasibility studies or it will be prepared in parallel to prefeasibility and feasibility studies.

The purpose of the ESMF is to provide guidance to implementers to ensure the EA process is carried out in compliance with the national legislation and the Bank's ESF. ESMF should set out the principles, rules, guidelines and procedures to screen, assess, manage and monitor the mitigation measures of environmental and social impacts of the project activities/subcomponents; and should serve as guidance for development of infrastructure checklists or simplified site-specific Environmental and Social Management Plans (ESMPs), and according to the potential risks' and impacts' significance of each proposed activities. The framework will establish clear methodologies for the evaluation of investments to be financed and ensure that the activities are environmentally and socially sound and sustainable and are in compliance with the WB's ESF. In this context for the TA component, the ESMF will include indicative ToR for environmental social due diligence for this component. Further, for CERC, ESMF will provide screening checklist and guidance on the requirements for developing site-specific ESMP for the potential activities to be financed under CERC. Since activities that could be financed under CERC are undefined at this stage, the consultants will develop a negative list of activities that could potentially result in adverse impacts on environment and human population. Generally, these activities will qualify for High environmental risk rating under the Bank's new ESF.

Scope of work

The assessment includes the following:

- a) Identify and describe in detail the nature and extent of environmental and social risks and impacts as a result of the proposed activities,
- b) Establish an environmental and social screening checklist for the activities,
- c) Establish a methodology and procedure for undertaking screening of potential investment proposals, and determine if further assessment is required,
- d) Propose mitigation measures for each category or type of activities/infrastructure to be considered during the implementation of the project, including corresponding cost of recommended measures
- e) Establish environmental and social due diligence - specific monitoring indicators, formats and methods to measure extent and quality of compliance
- f) Carry out discussions and/or interviews with a wide range of concerned stakeholders including the affected population and concerned government agencies and take into account the recommendations obtained discussions and interviews in the final recommendations of the assessment.
- g) In the ESMF, for the subcomponent on agriculture and irrigation scheme development, the consultants will assess the potential increase in the use of chemical fertilizers and pesticides and introduce the concept of integrated pest management. In this respect, the consultants will include a chapter in the ESMF on integrated pest management. The consultants will also prepare as part of ESMF hazardous waste management plan and OHS and community safety plan for the proposed works at Artana mines.



4.3. Preliminary Resettlement Action Plan (pRAP)

The purpose of the pRAP is to clarify resettlement principles and guide implementation of the land acquisition for the Kremenata Reservoir sub-project under the Component 2 of the Fostering and Leveraging Opportunities for Water Security (FLOWS) during project implementation. {see ESS5 (Land acquisition, restrictions on land use, and involuntary resettlement) }. Once the subproject footprint is defined and the necessary information becomes available, a preliminary RAP will be operationalized to address land take impacts for each individual PAPs. The Kremenata Reservoir related works will not commence until the RAP has been implemented, upon prior finalization and approval by the Bank.

The objective of this output (4.3) is to prepare a preliminary Resettlement Action Plan (RAP) for Kremenata reservoir and its auxiliary infrastructures based on an assessment of land take impacts. Specifically, the Consultant is expected to:

- Prepare the pRAP based on the most accurate and available information on potential PAPs, which are defined as “those who may be relocated, or whose assets may be taken, or livelihood affected because land take, by the project, and conduct a valuation of the assets and incomes;
- Describe the policy and regulatory context (e.g. laws, regulations, and procedures) of Kosovo on resettlement and land acquisition. The description should contain a section demonstrating their relevance to the World Bank’s ESS 5 - Land acquisition, restrictions on land use, and involuntary resettlement
- Provide guidance on possible compensation and other resettlement assistance, as needed,
- Conduct consultations with potential PAPs and other key stakeholders about the project, and acceptable resettlement and other alternatives, as appropriate;
- Assist the implementing agency and local leaders in establishing the institutional set up for decision making and responsibilities for preliminary RAP update and implemented; and
- Develop arrangements for monitoring and evaluation, for the pRAP to be updated and implemented, including completion of a baseline socio-economic survey and follow up surveys of PAPs

The following sections of the RAP correspond to the scope of work to be completed.

Description of the project: General description of the affected areas.

- To the extent possible accurate Impacts: Identification of the: (i) components or activities that require land take, resettlement or restriction of access; (ii) zone of impact of the reservoir or related activities; (iii) alternatives/efforts considered to minimize land take, resettlement or restricted access; and (iv) mechanisms established to minimize land take, resettlement, displacement, and restricted access, to the extent possible, during project implementation.
- Socio-economic studies: This section summarizes the findings of socio-economic studies to be conducted with the involvement of potentially affected people if a RAP were to be developed. These generally include the results of to extend possible a census of the PAPs covering:



- Current occupants of the affected area as a basis for design of the RAP and to clearly set a cut-off date, the purpose of which is to exclude subsequent inflows of people into the area who may seek compensation and resettlement assistance;
- Standard characteristics of affected households, including a description of production systems, labor, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the potentially affected population;
- Magnitude of the expected loss, total or partial, of assets, and the extent of displacement, physical or economic;
- Information on vulnerable groups or persons, for whom special provisions may have to be made; and
- Provisions to update information on the affected people's livelihoods and standards of living at regular intervals so that the latest information is available at the time of their land take impact, and to measure impacts (or changes) in their livelihood and living conditions.

There may be other studies that the preliminary RAP can draw upon, such as those describing the following, as needed:

- Patterns of social interaction in the affected communities, including social support systems, and how they will be affected by the sub-project;
- Public infrastructure and social services that will be affected; and

Legal Framework: The analysis of the legal and institutional framework in Kosovo should cover the following:

- Scope of existing land and property laws governing resources, including state-owned lands under eminent domain and the nature of compensation associated with valuation methodologies; land market; mode and timing of payments, etc;
- Applicable legal and administrative procedures, including a description of the grievance procedures and remedies available to PAPs in the judicial process and the execution of these procedures, including any available alternative dispute resolution mechanisms that may be relevant to implementation of the resettlement for the Kremenata reservoir sub-project;
- Relevant laws (including customary and traditional law) governing land tenure, valuation of assets and losses, compensation, and natural resource usage rights, customary personal law; communal laws, etc related to land acquisition;
- Laws and regulations relating to the agencies responsible for implementing resettlement activities in the sub-projects;
- Gaps, if any, between local laws covering resettlement and the Bank's ESS 5 standard, and the mechanisms for addressing such gaps; and
- Legal steps necessary to ensure the effective implementation of RAP including, as appropriate, a process for recognizing claims to legal rights to land, including claims that derive from customary and traditional usage, etc which are specific to the project

The institutional framework governing implementation of a RAP:



- Agencies and offices responsible for land acquisition and as necessary resettlement activities and civil society groups like NGOs that may have a role in implementation;
- Institutional capacities of these agencies, offices, and civil society groups in carrying out implementation, monitoring, and evaluation; and
- Activities for enhancing the institutional capacities of agencies, offices, and civil society groups, especially in the consultation and monitoring processes.

Eligibility and entitlements: Definition of potentially displaced persons or PAPS and criteria for determining their eligibility for compensation and other, including relevant cut-off dates.

Valuation of and compensation for losses: The methodology to be used in the RAP for valuing losses, or damages, for the purpose of determining their replacement costs; and a description of the proposed types and levels of compensation consistent with national and local laws and measures, as necessary, to ensure that these are based on acceptable values (e.g. market rates).

Resettlement Measures: A description of the compensation and other resettlement measures that will assist each category of eligible PAPs to achieve the resettlement objectives. Aside from compensation, these measures should include as necessary programs for livelihood restoration, grievance mechanisms, consultations, and disclosure of information.

If applicable Site selection, site preparation, and relocation: If a resettlement site is an option, this section describes the alternative relocation sites as follows:

- Institutional and technical arrangements for identifying and preparing relocation sites, whether rural or urban, for which a combination of productive potential, locational advantages, and other factors is at least comparable to the advantages of the old sites, with an estimate of the time needed to acquire and transfer land and ancillary resources;
- Any measures necessary to prevent land speculation or influx of eligible persons at the selected sites;
- Procedures for physical relocation under the project, including timetables for site preparation and transfer; and
- Legal arrangements for recognizing (or regularizing) tenure and transferring titles to resettles.

If applicable Housing, infrastructure, and social services: Plans to provide (or to finance resettles provision of) housing, infrastructure (e.g. water supply, feeder roads), and social services to host populations; and any other necessary site development, engineering, and architectural designs for these facilities should be described.

If applicable Environmental protection and management. A description of the boundaries of the relocation area is needed. This description includes an assessment of the environmental impacts of the proposed resettlement and measures to mitigate and manage these impacts (coordinated as appropriate with the environmental assessment of the main investment requiring the resettlement).

Grievance procedures: The RAP should provide describe the mechanism for ensuring that an affordable and accessible procedure is in place for third-party settlement of disputes arising from land acquisition process. These mechanisms should take into account the availability of judicial and legal services, as well as community and traditional dispute settlement mechanisms.



Implementation responsibilities: The preliminary RAP should be clear about the implementation responsibilities of various agencies, offices, and local representatives. These responsibilities should cover: (i) delivery of compensation and rehabilitation measures and provision of services; (ii) appropriate coordination between agencies and jurisdictions involved in implementation; and (iii) measures (including technical assistance) needed to strengthen the implementing agencies' capacities of responsibility for managing facilities and services provided under the project and for transferring to PAPs some responsibilities related to RAP components (e.g. community-based livelihood restoration; participatory monitoring; etc).

Implementation Schedule: An implementation schedule covering all resettlement related activities from preparation, implementation, and monitoring and evaluation should be included. These should identify the target dates for delivery of benefits to PAPs a clearly defined closing date. The schedule should indicate how these activities are linked to the implementation of the overall project.

Costs and budget: The specific activities should provide detailed (itemized) cost estimates, including contingencies; timetable for expenditures; sources of funds; and arrangements for timely flow of funds. These should include other fiduciary arrangements consistent with the rest of the project governing financial management and procurement.

Monitoring and evaluation: Arrangements for monitoring and evaluation of RAP activities by the implementing agency, and the independent monitoring of these activities, should be included in the RAP section on monitoring and evaluation. The final evaluation should be done by an independent monitor or agency to measure RAP outcomes and impacts on PAPs' livelihood and living conditions.

The preliminary RAP should follow the structure as proposed in ANNEX preliminary RAP structure.

4.4 Resettlement Policy Framework

The objective of this assignment under this section is to prepare an acceptable Resettlement Policy Framework (RPF) based on an assessment of activities that may involve Land Acquisition, Restrictions on Land Use and Involuntary Resettlement. RPF will guide and manage resettlement or economic displacement because of land take for other investments whose exact location are still unknown.

The purpose of the RPF is to provide the implementing institution with rules and procedures for delivering the Project's interventions in a manner compliant with the ESF. The RPF will provide guidance and criteria for preparing RAPs, to identify social impacts and risks of proposed activities (both positive and negative), and to specify appropriate preventive actions and mitigation measures (including appropriate monitoring plan) to prevent, eliminate or minimize any anticipated adverse social impacts.

The RPF is aimed at ensuring that implementing institutions in this project use it in order to ensure compliance with the ESF as outlined in ESS 5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.

The RPF will be provided to guide potential Land Acquisition, Restriction on Land Use and Involuntary Resettlement for all sub-projects under the component two except the Kremenata Reservoir, for which a separate preliminary RAP will be prepared. The implementing agency submits, prior to appraisal, an RPF that contains the most recent and accurate information on potentially project affected persons (PAPs).



Specifically, the Consultant is expected to:

- Prepare the RPF based on the most accurate and available information on potential PAPs, which are defined as “those who may be relocated, or whose incomes or livelihoods may be displaced, by the project, and conduct a valuation of the assets and incomes;”
- Describe the policy and regulatory context (e.g. laws, regulations, and procedures) of the Government of Kosovo on resettlement and displacement. The description should contain a section demonstrating their relevance to the World Bank’s ESS5
- Provide guidance on possible compensation and other resettlement assistance, as needed, or when a Resettlement Action Plan (RAP) may need to be prepared;
- Conduct consultations with potential PAPs and other key stakeholders about the project, and acceptable resettlement and other alternatives, as appropriate;
- Assist the implementing agency and local leaders in establishing the institutional set up for decision making and responsibilities in case a RAP needs to be prepared and implemented; and
- Develop arrangements for monitoring and evaluation, and specifically if a RAP is to be implemented, including completion of a baseline socio-economic survey and follow up surveys of PAPs and host communities as appropriate if the potential sub-projects might cause displacement of communities.

The following sections of the RFP correspond to the scope of work to be completed.

Description of the project: General description of the affected areas.

Potential Impacts: Identification of the: potential sub-projects from the component 2 that require (i) Land Acquisition, Restrictions on Land Use and Involuntary Resettlement. (ii) zone of impact of activities; (iii) alternatives considered to avoid or minimize impact; and (iv) mechanisms established to minimize impact as per (i), to the extent possible, during project implementation.

Legal Framework: The analysis of the legal and institutional framework in Kosovo covering Land Acquisition:

- Gaps, if any, between local laws covering resettlement and the Bank’s ESS5 standard, and the mechanisms for addressing such gaps; and
- Legal steps necessary to ensure the effective implementation of RAP activities in the sub-projects, including, as appropriate, a process for recognizing claims to legal rights to land, including claims that derive from customary and traditional usage, etc and which are specific to the sub-projects.

The institutional framework governing implementation of a RAP, when needed, would generally cover:

- Agencies and offices responsible for resettlement activities and civil society groups like NGOs that may have a role in implementation;
- Institutional capacities of these agencies, offices, and civil society groups in carrying out implementation, monitoring, and evaluation; and
- Activities for enhancing the institutional capacities of agencies, offices, and civil society groups, especially in the consultation and monitoring processes.



Eligibility and entitlements: Definition of potentially displaced persons or PAPS and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates.

Valuation of and compensation for losses: The methodology to be used in the RAP for valuing losses, or damages, for the purpose of determining their replacement costs; and a description of the proposed types and levels of compensation consistent with national and local laws and measures, as necessary, to ensure that these are based on acceptable values (e.g. market rates).

Resettlement Measures: A description of the compensation and other resettlement measures that will assist each category of eligible PAPS to achieve the resettlement objectives. Aside from compensation, these measures should include programs for livelihood restoration, grievance mechanisms, consultations, and disclosure of information. As appropriate, depending of the investments.

Community Participation: Consistent with the Stakeholder Engagement Plan a strategy for consultation with, and participation of, PAPS

Grievance procedures: The RFP should provide describe the mechanisms for ensuring that an affordable and accessible procedure is in place for third-party settlement of disputes arising from resettlement. These mechanisms should take into account the availability of judicial and legal services, as well as community and traditional dispute settlement mechanisms.

Implementation responsibilities: The RFP should be clear about the implementation responsibilities of various agencies, offices, and local representatives. These responsibilities should cover: (i) delivery of compensation and rehabilitation measures and provision of services; (ii) appropriate coordination between agencies and jurisdictions involved in implementation; and (iii) measures (including technical assistance) needed to strengthen the implementing agencies' capacities of responsibility for managing facilities and services provided under the project and for transferring to PAPS some responsibilities related to RAP components (e.g. community-based livelihood restoration; participatory monitoring; etc).

Implementation Schedule: An implementation schedule covering all resettlement related activities from preparation, implementation, and monitoring and evaluation should be included. These should identify the target dates for delivery of benefits to PAPS and hosts and a clearly defined closing date. The schedule should indicate how these activities are linked to the implementation of the overall project.

Monitoring and evaluation: Arrangements for monitoring and evaluation of RAP activities by the implementing agency, and the independent monitoring of these activities, should be included in the RAP section on monitoring and evaluation. The final evaluation should be done by an independent monitor or agency to measure RAP outcomes and impacts on PAPS' livelihood and living conditions. The World Bank has examples of performance monitoring indicators to measure inputs, outputs, and outcomes for RAP activities; involvement of PAPS in the monitoring process; evaluation of the impact of RAP activities over a reasonable period after resettlement and compensation and using the results of RAP impact monitoring to guide subsequent implementation.



5. EXPECTED OUTPUTS

Following are the expected output of the consultancy contract:

- (i) An Environmental and Social Impact Assessment (ESIA) report including stand-alone Environmental and Social Management and Monitoring Plan (ESMMP) report, based on current data on demand and hydrology, and today's expectations on dam development of Kremenate Dam, hydropower plant and associated structures for supply of water to Kamenica and Rranilug and the surrounding areas, and
- (ii) Environmental and Social Management Framework (ESMF) report for project subcomponent 2 excluding Kremenate dam and auxiliary facilities.
- (iii) A preliminary RAP report for project subcomponent 1, the land acquisition impacts from the inundation from the dam (the reservoir) and auxiliary facilities.
- (iv) A RPF report for project subcomponent 2 excluding Kremenate dam and auxiliary facilities.

The specific output are the reports and deliverables foreseen in the section 6.3 of these ToR. Suggested table of contents for ESIA, ESMF, preliminary Rap and RPF can be found in Annex I. Key environmental and social aspects covered under the Environmental and Social Standards (ESSs) of World Bank's ESF are given in Annex II.

6. TIME SCHEDULE AND REPORTING REQUIREMENTS

6.1 PROJECT DURATION

4 months

6.2 ASSIGNMENT COMMENCEMENT AND TIME SCHEDULE

The assignment shall commence immediately after signing the contract. The Consultant shall submit a programme which shall be adopted in consultation with the Client.

6.3 REPORTS

The Consultant shall prepare and submit to the Client hard copies and one [1] electronic copy on USB for draft reports, and hard copies and five [5] electronic copies for final reports of the following:

Report No.	Report	Due date (No. of months from commencement date)	No. of copies
1	Inception Report (IR) including the review of available reference documents and baseline environmental and social data, outlining the detailed Work Plan	1.0	5



Report No.	Report	Due date (No. of months from commencement date)	No. of copies
2	Stakeholder Engagement Plan, Communication and Public Consultation Plan (CPCP)	1.0	5
3	Environmental and Social Scoping Study (ESSS) to become part of the overview of all environmental, social, legal, regulatory and economic baseline data	2.0	3
4	Draft Environmental and Social Impact Assessment (ESIA), draft ESMF, draft preliminary RAP, and draft RPF reports	3.0	3
5	Public Consultation Report (PCR)	3.0	3
6	Final Preliminary RAP	4.0	5
7	Final Resettlement Policy Framework Report	4.0	5
8	Final Environmental and Social Impact Assessment (ESIA) and ESMF reports	4.0	5
9	Environmental and Social Management and Monitoring Plan (ESMMP) – stand-alone report abstracted from ESIA report and tailored to be attached with bidding documents.	4.0	5

- A soft copy of the Reports named above will also be provided in MS WORD Format.

The Consultant will report to the Minister of Infrastructure and Environment (MIE), who will be assisted by an independent Panel of Experts for guidance and quality assurance. The Consultant will also be required to prepare quarterly reports to the Client. The reports should have enough details for the Client to have a clear picture on progress, constraints and solutions to the various activities of



the project. In addition to the quarterly reports, the Consultant will provide monthly briefings to the Client.

7. OBLIGATIONS OF THE CLIENT

7.1 Data and Reports:

The Client will assist on the following:

- a) Consultation with relevant stakeholders (Ministries / Departments and other institutions);
- b) Organization and implementation of the Public Consultation process in accordance with the Kosovan Law on EIA and related Administrative Instructions

7.2 Counterpart Staff

The Client will provide counterpart staff to work with the Consultant to facilitate channels of communication and as a means of capacity building.

7.3 Liaison

Ms. Nezakete Hakaj, Head, Industrial Pollution Division, Environmental and Water Protection Department, MIE will work as the client's focal person and will ensure that the Consultant has access to all available information required for timely execution of the assignment.

7.4 Immigration and Residence Permits

The Client will provide the Consultant any assistance required to obtain necessary immigration and residence work permits for the approved expatriate personnel and their dependents.

7.5 Facilities and items to be provided by the Consultant

The Consultant shall ensure that experts are adequately supported (back stopping) and equipped (notebooks). In particular, it shall ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities. The Consultant should cover also these costs: (i) Flights to Pristina and per diem; (ii) Transporting of the experts from the project office to the project sites etc.; (iii) Presentation of the final draft report in English and Albanian language.

8. OBLIGATIONS OF THE CONSULTANT

The Consultant is expected to be fully self-sufficient in all respects for undertaking the assignment including accommodation, office space, equipment and supplies, communication, and transport. The Consultant is also expected to produce Terms of Reference for the knowledge transfer to the counterpart staff to be approved by the Client before commencement of the assignment and provide on-the-job training to counterpart staff.

Costs associated to counterpart training should be included in a separate section of the financial offer.

9. IMPLEMENTATION ARRANGEMENTS

The Consultant will be engaged up to the submission and upon approval of the final report by the Client and the assignment will be administered through a lump sum contract arrangement.

10. REQUIREMENTS

10.1 Personnel



The Consultant shall provide a team of experts all of whom shall be adequately qualified and experienced in their respective fields. The following is a guide on the expected minimum staff requirements and minimum qualifications and experience of the personnel:

The Team Leader shall have a multi-disciplinary experience in the interventions on the detailed design works of dam projects. In particular, he/she should have:

Required skills:

- (i) At least a master's degree in Environmental Engineering/Sciences or Civil Engineering;
- (ii) Excellent communication
- (iii) Be affiliated to relevant professional bodies;
- (iv) Fluent in written and spoken English
- (v) Knowledge of Albanian language will be an asset

Specific Professional Experience:

- (vi) Minimum of 20 years relevant experience in leading position for the management of environmental projects;
- (vii) Delivered and accepted by the client at least 5 Environmental and Social Impact Assessment projects funded by international donors, clients/authorities, prepared and managed in a Key Position
- (viii) Proven capabilities in handling multi-disciplinary donor funded projects of this nature in South East Europe
- (ix) Work in similar projects in Kosovo will be an added advantage.

The other key experts of the Consultant's team will have the following profiles:

- a) *Senior Environmental Impact Assessment Expert*, with at least 8 years' relevant experience in the preparation of ESIA/ESMPs in Kosovo;
- b) *Environmental Impact Assessment Expert*, licensed for ESIA in Kosovo in accordance with the law requirements, with at least 5 years' relevant experience in the preparation and implementation of ESIA/ESMPs in Kosovo
- c) *Senior Social Expert* with a University Degree in Sociology, Psychology or similar, fluent in written and spoken English and Albanian, with at least 10 years of relevant working experience in areas related to the processes of public consultation, to relocation of affected inhabitants in development projects and to application of compensation measures and evaluation of willingness of the affected inhabitants;
- d) *Junior Social Expert* with a University Degree, in Sociology, Psychology or similar, fluent in written and spoken English and Albanian, with at least 2 years of relevant working experience in areas related to the processes of public consultation and community engagement
- e) *Biodiversity expert/ecologist* with a University degree in Ecology or biology and at least 10 years' experience in terrestrial, aquatic ecology, ecosystems and ecosystem services mapping and analysis, fisheries, protected areas management



10.1 Consultant

The consultant to be contracted shall comply with the following requirements; it:

- shall have a certified quality management system.
- shall have reference projects in preparation of ESIA's and RPFs/RAP in the last 5 years with prior experience of preparing ESIA's, RAPs for the World Bank or other IFIs.
- shall have excellent skills in written and spoken English. The ESIA, ESMF, preliminary RAP and RPF have to be prepared in English language. Non-sufficient English or non-understandable written English will lead to a non-approval of the study by the Beneficiary.
- Preferably possess Kosovo and/or regional experiences and be able to understand Albanian and Serbian languages (or provide translation of studies in Albanian and Serbian languages).

APPENDIX I. Suggested Contents for Preliminary RAP and RPF

A.1 Suggested Content and Chapters of the ESIA Report

The ESIA Report shall be concise and limited to significant environmental and social risks and impacts. The structure of the report shall include at least the following chapters:

1. Non-technical Executive Summary
2. Legal and Regulatory Environment
3. Project Description
4. Stakeholders engagement and analysis
5. Environmental and Social Baseline and analysis
6. Potential Environmental and Social Impacts and mitigation measures
7. Analysis of Alternatives
8. Environmental and Social Management and Monitoring Plan (ESMMP)
 - i. Implementation Arrangements
 - ii. Capacity Building
 - iii. Budget
9. Public Consultation
10. Appendices

A.2 Suggested Content and Chapters of the ESMF Report

The ESMF Report shall be concise and limited to significant environmental and social risks and impacts. The structure of the report shall include at least the following chapters:

1. Non-technical Executive Summary
2. Legal and Regulatory Environment
3. Project Description
4. Stakeholders engagement and analysis
5. Environmental and Social Baseline and analysis
6. Screening Process
7. Potential Environmental and Social Impacts and guidance on mitigation measures
8. Environmental and Social Management and Monitoring Framework



- a. Implementation Arrangements
- b. Capacity Building
- c. Estimated Budget

A.3 Suggested content for Preliminary RAP

ACRONYMS & ABBREVIATIONS

EXECUTIVE SUMMARY

1. INTRODUCTION

- 1.1 Project Description
- 1.2 Objectives and basic terms of preparation of the preliminary RAP
- 1.3 Methodology

2. LEGAL FRAMEWORK

- 2.1 Kosovo legislation for Land expropriation
- 2.2 Institutional Framework, role and responsibility of the affected and Interested Parties
- 2.2 ESS5 standards
- 2.2 Proposed measures to meet the standards where there is gap between Kosovo legislation and the ESS5 standards

3. CENSUS AND SOCIOECONOMIC STUDY

- 3.1 Census of land take and impacts
- 3.2. Socioeconomic and Livelihood profile of affected persons
- 3.3. Determining of vulnerable PAPs

4. PUBLIC CONSULTATION AND PARTICIPATION

- 4.1 Consultation and participation of affected persons Public Consultation and Participation Plan (PCPP)
- 4.2 Method for consultation and participation

5. ELIGIBILITY CRITERIA FOR VARIOUS CATEGORIES OF AFFECTED PEOPLE

- 5.1 Eligibility for affected people Compensation and Method to Determine the Cut – Off Dates
- 5.2 Methods of valuing affected assets

6. CALCULATIONS FOR COMPENSATION PAYMENTS PER CATEGORY OF LOSS

- 6.1 Compensation for Land
- 6.2 Determination of Crop Compensation Rates
- 6.3 Compensation for Buildings and Structures as necessary
- 6.4 Organizational elements and procedures for delivery of entitlements

7. GUIDELINES FOR RESETTLEMENT ACTION PLANS

- 7.1 Linking resettlement implementation to civil works

8. GRIEVANCE REDRESS MECHANISMS

- 8.1 Consensus, Negotiations and Conflict Resolution



8.2 Monitoring and Evaluation

9. ESTIMATED BUDGET

A.4 Suggested content for the RPF

ACRONYMS & ABBREVIATIONS

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 Project Description

1.2 Objectives and basic terms of preparation of the RPF

1.3 Methodology

2. LEGAL FRAMEWORK

2.1 Kosovo legislation for Land expropriation

2.2 Institutional Framework, role and responsibility of the affected and Interested Parties

2.2 Safeguard policies

2.2 Resettlement Instrument Preparation and Implementation

3. PUBLIC CONSULTATION AND PARTICIPATION

3.1 Consultation and participation of affected persons Public Consultation and Participation Plan (PCPP)

3.2 Method for consultation and participation

4. GUIDELINES FOR RAP

4.1 Process for Screening and Review of RAP

4.2 Screening Checklist

4.3 Preparation of individual resettlement action plans (RAPs)

5. ELIGIBILITY CRITERIA FOR VARIOUS CATEGORIES OF AFFECTED PEOPLE

5.1 Eligibility for affected people Compensation and Method to Determine the Cut – Off Dates

5.2 Methods of valuing affected assets

6. GUIDANCE FOR CALCULATIONS FOR COMPENSATION PAYMENTS PER CATEGORY OF LOSS

6.1 Compensation for Land

6.2 Determination of Crop Compensation Rates

6.3 Compensation for Buildings and Structures

6.5 Organizational elements and procedures for delivery of entitlements

7. GUIDELINES FOR RESETTLEMENT ACTION PLANS

7.1 Timeframe for RAP

7.2 Linking resettlement implementation to civil works

7.3 Process for Screening and of RAP- Preparation

8. GRIEVANCE REDRESS MECHANISMS

8.1 Consensus, Negotiations and Conflict Resolution

8.2 Monitoring and Evaluation



APPENDIX II: Reference to Key Aspects Covered in the World Bank Environmental and Social Framework - Environmental and Social Standards (ESSs)

1. The ESIA will address issues related to the relevant ESSs as follows:
 - a. *ESS 1) Assessment and Management of Environmental and Social Risks and Impacts.* The ESF shall contain the following:
 - i. An overall assessment of the World Bank and Kosovo's Environment and Social Assessment policies, legal, and administrative conditions in terms of completeness and appropriateness.
 - ii. A general assessment of the kinds of environmental and social impacts and risks that might be associated with the different types of activities that might be supported.
 - iii. Baseline data on relevant socio-economic and environmental parameters for the project area.
 - iv. The environmental and social screening criteria may include, but not be limited to: siting, design, technology selection, construction techniques and phasing, degree of associated environmental and social impacts, and operating and maintenance procedures. Such comparative analysis should address (and quantify where possible): the environmental and social risks and impacts, the feasibility of impact mitigation; capital and recurrent costs; the suitability of options under local conditions; related institutional, training and monitoring requirements. State the basis for selecting the proposed design, including the minimization of risk.
 - v. Environmental and Social risks and impacts for potential activities - from identification and selection, through the design and implementation, to the monitoring and evaluation of results. The ESIA/ESMP will include environmental and social risks and impacts; developing mitigation measures and monitoring activities; outlining roles and responsibilities for implementing ESIA/ESMPs; detailing labor management requirements; outlining stakeholder engagement; quantifying the costs and benefits of alternatives; and incorporating the estimated costs of implementing the ESIA/ESMP.
 - b. *ESS 2) Labor & Working Conditions.* The Project could encompass the following categories of workers: direct workers, contracted workers, community workers, and primary supply workers. Direct workers could be either government civil servants or those deployed as 'technical consultants' by the project. The former will be governed by a set of civil services code, the latter by mutually agreed contracts. Community workers are quite likely as there could be community based civil works, details will be identified during preparation. Primary supply workers also need to be identified. And contract workers will be employed as deemed appropriate by contractors, sub-contractors, and other intermediaries, details of which will be known as and when activities' implementation begins. The expectation is that the majority of labor will be locally hired with the exception of a few skilled workers. The ESIA will contain:
 - i. Labor Management Procedures (LMP) that will detail the requirements for labor management in each of the types of activities to be financed.
 - ii. Environment Health and Safety (EHS) Plan including ESH checklists, codes of conduct; safety training etc.
 - iii. Assessment of impacts in terms of gender equality and women's empowerment.
 - iv. Social and environmental mitigation hierarchy based on the WBG EHS Guidelines and the ESIA into civil works contracts financed by the project. All civil works contracts will include industry



standard Codes of Conduct that include measures to prevent Gender Based Violence/Sexual Exploitation and Abuse (GBN/SEA).

- v. A locally based Grievance Redress Mechanism (GRM) specifically for direct and contracted workers.
- c. *ESS 3) Resource Efficiency and Pollution Prevention and Management.* The ESIA will include discussions on resource efficiency, and pollution prevention and management, assessment of risks and impacts, and proposed mitigation measures related to proposed types of activities financed by the Project. These issues, including raw materials, water use, sanitation, air pollution, dust control, hazardous materials, and hazardous waste, will be incorporated into the ESIA/ESMP.
- d. *ESS 4) Community Health and Safety.* The Project will impact communities; therefore, the communities are expected to be involved in all aspects of activity implementation.
 - i. The ESIA will include assessment of related work health risks; works and road safety; HIV/AIDS and sexually transmitted diseases; excessive noise and dust levels, site safety awareness and access restrictions; and labor influx.
 - ii. The ESIA/ESMP will ensure that Fencing will be installed around all construction sites and areas where there is a risk to community health and safety.
 - iii. Activity monitoring plans will also be required to involve local community institutions.
- e. *ESS 5) Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.* While ESS 5 will be primarily addressed through the RPF, the selection criteria for activities to be financed by the Project will include land acquisition, land use, and resettlement issues.
- f. *ESS 6) Biodiversity Conservation and Sustainable Management of Living Natural Resources;* The ESIA will specifically deal with biodiversity issues in the project area; (protected areas, critical habitats, presence of endangered species, etc.) and include mitigation hierarchy in the ESMP.
- g. *ESS 8) Cultural Heritage.* Kosovo has number of notified cultural heritage sites:
 - i. the ESIA will have a chapter on Cultural Heritage that describes potential indirect impacts and proposed mitigation measures from project financed activities.
 - ii. The ESIA will also include a section under the chapter above on protection of Cultural Heritage as well as proper "chance find" procedures to be included in ESMP.
- h. *ESS 10) Stakeholder Engagement and Information Disclosure.* Project preparation has made preliminary attempts at identifying direct beneficiaries, which include farmers, local communities, women, youth, traders, workers, contractors and transporters.
 - i. The ESIA will include a Stakeholder Engagement Plan (SEP) to enable the project to identify elaborately different stakeholders and provide an approach towards reaching each of the sub-groups. The SEP will also identify impediments, if any, at reaching out to stakeholders as well as reflect/ build capacity of the client in engaging with stakeholders. The SEP will include:
 1. Stakeholder mapping of direct beneficiaries and other interested parties (i.e. government agencies/authorities, NGOs/CSOs, and rival/extremist groups).
 2. Guidance on how to conduct public consultation and prepare a document record of public consultations and other records that will indicate participation of interested and affected parties including: types surveys used to seek views of affected stakeholders; date and location of consultation meetings; a list of attendees, their affiliation, contact addresses and a summary.



3. Guidance on how project information will be disclosed to local communities.
4. A plan for providing capacity building to stakeholders on environmental and social risks and mitigation related to Project activities.
5. A Grievance Redressal Mechanism (GRM) to enable stakeholders to share their concerns/ comments / suggestions with project management.



Annex 5 INDICATIVE OUTLINE OF ESMP (WB ESF)

(a) Mitigation

The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:

- (i) Identifies and summarises all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
- (ii) Describes--with technical details--each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- (iii) Estimates any potential environmental and social impacts of these measures; and
- (iv) Takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage).

(b) Monitoring

The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP 6. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

(c) Capacity development and training

- To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g. for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen the environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

(d) Implementation schedule and cost estimates

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and



(b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

(e) Integration of ESMP with the project

The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of doing so will be integrated into the project's overall planning, design, budget, and implementation.



Annex 6 TEMPLATE FOR ESMP

Phase	Environmental and social impact	Mitigation measures	Cost		Responsibility		Supervision observation and comments (to be filled out during supervision)
			Install	Operation	Install	Operation	
Construction phase							
Operation phase							
Decommissioning phase							

Annex 7 TEMPLATE FOR MONITORING PLAN

Phase	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored/ type of monitoring equipment?	When is the parameter to be monitored- frequency of measurement or continuous?	Why is the parameter being monitored?	Monitoring Cost		Responsibility		Supervision observation and comments (to be filled out during supervision with reference to adequate measuring reports)
						Install	Operation	Install	Operation	
Construction phase										



Operation phase										
Decommissioning phase										



Annex 8 LIST OF PLANT SPECIES LISTED IN THE RED BOOK OF VASCULAR FLORA AND FAUNA OF THE REPUBLIC OF KOSOVO, FROM THE MORAVA E BINCES RIVER BASIN

List of plant species listed in the Red Book of Vascular Flora of the Republic of Kosovo, from the Morava e Binces river basin

Source: The Red Book of Vascular Flora of the Republic of Kosovo (Millaku, F. (ed.) et al. 2013)

No.	Species name	Group	IUCN - XK	CITES	Locality
1.	<i>Galium rhodopeum</i> Vel.	Flora (Plants)	CR		Novobërdë
2.	<i>Ilex aquifolium</i> L.	Flora (Plants)	CR		Debelde
3.	<i>Laburnum alpinum</i> (Mill.) Bercht. & J. Presl	Flora (Plants)	CR		Novobërdë
4.	<i>Adonis vernalis</i> L.	Flora (Plants)	EN	App. II	Gllamë (Gjilan)
5.	<i>Gladiolus palustris</i> Gaudin	Flora (Plants)	EN		Llabjan (Novobërdë)
6.	<i>Knautia macedonica</i> Griseb.	Flora (Plants)	EN		Përlepnice (Gjilan)
7.	<i>Narcissus poeticus</i> subsp. <i>radiiflorus</i> (Salisb.) Baker	Flora (Plants)	EN		Llabjan (Novobërdë)
8.	<i>Quercus robur</i> L. subsp. <i>robur</i>	Flora (Plants)	EN		Drobesh (Viti)
9.	<i>Ranunculus illyricus</i> L. (Syn. <i>R. freynianus</i> Vel.)	Flora (Plants)	EN		Novobërdë
10.	<i>Armeria cariensis</i> var. <i>rumelica</i> (Boiss.) Boiss.	Flora (Plants)	VU		Novobërdë
11.	<i>Achillea ageratifolia</i> (Sibth. et Sm.) Boiss.	Flora (Plants)	NT		Novobërdë
12.	<i>Paramoltkia doerfleri</i> (Wettst.) Greuter & Burdet [Syn: <i>Moltkia doerfleri</i> Wettst.]	Flora (Plants)	NT		Novobërdë
13.	<i>Linum flavum</i> L.	Flora (Plants)	LC		Novobërdë

Notes:

The abovementioned abbreviations have the following meaning: **IUCN - XK** = Conservation status of species according to the Red Book of Vascular Flora of the Republic of Kosovo, based on IUCN (International Union for Conservation of Nature) rules and guidelines, **CITES** = Tells if species is enlisted into CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), **App. II** = Second Appendix of CITES – incorporates a list of species sorted by name, of all types of plants (Kingdom: *Plantae*), **CR** = Critically Endangered, **EN** = Endangered, **VU** = Vulnerable, **NT** = Near Threatened, **LC** = Least Concern, **Flora (Plants)** = vascular plant species.



List of animal species listed in the Red Book of Fauna of the Republic of Kosovo, from the Morava e Binces river basin

List of animal species listed in the Red Book of Fauna of the Republic of Kosovo, from the Morava e Binces river basin

Source: Red Book of Fauna of the Republic of Kosovo (Ibrahimi (ed.) et al. 2019)

No.	Species name	Group	IUCN - XK	CITES	Locality
1	<i>Ardea cinerea</i> (Linnaeus, 1758)	AVES	CR		Kamenicë
2	<i>Himantopus himantopus</i> (Linnaeus, 1758)	AVES	EN		Nosalje
3	<i>Vanellus vanellus</i> (Linnaeus 1758)	AVES	EN		Nosalje
4	<i>Triturus cristatus</i> (Laurenti, 1768)	AMPHIBIA	VU		Krilevë, Viti
5	<i>Alcedo atthis</i> (Linnaeus, 1758)	AVES	VU		Kamenicë, Livoq
6	<i>Baetis buceratus</i> (Eaton, 1870)	INSECTA	NT		Slivovë, Zhegër
7	<i>Baetis melanonyx</i> (Pictet, 1843)	INSECTA	NT		Morava e Binçës
8	<i>Ephemera parnassiana</i> (Demoulin, 1958)	INSECTA	NT		Viti
9	<i>Philopotamus variegatus</i> (Scopoli, 1763)	INSECTA	NT		Kamenicë
10	<i>Rhyacophila laevis</i> (Pictet, 1834)	INSECTA	NT		Marec, Kamenicë
11	<i>Barbus rebeli</i> (Koller, 1926)	ACTINOPTERYGII	NT		Morava e Binçës
12	<i>Ablepharus kitaibelii</i> (B. Vincent, 1833)	REPTILIA	NT		Novo Bërdë
13	<i>Podarcis tauricus</i> (Pallas, 1814)	REPTILIA	NT		Kamenicë
14	<i>Testudo hermanni</i> (Gmelin, 1789)	REPTILIA	NT	App. II	Marec, Kamenicë
15	<i>Allolobophora chlorotica</i> (Savigny, 1826)	OLIGOCHAETA	LC		Klllokot, Zhegër
16	<i>Aporrectodea caliginosa</i> (Savigny, 1826)	OLIGOCHAETA	LC		Klllokot, Zhegër
17	<i>Calopteryx splendens</i> (Harris, 1782)	INSECTA	LC		Morava e Binçës
18	<i>Bombina variegata</i> (Linnaeus, 1758)	AMPHIBIA	LC		Kamenicë
19	<i>Pelophylax ridibundus</i> (Pallas, 1771)	AMPHIBIA	LC		Kamenicë
20	<i>Lacerta viridis</i> (Laurenti, 1768)	REPTILIA	LC		Zabërxhë
21	<i>Vipera ammodytes</i> (Linnaeus, 1758)	REPTILIA	LC		Kamenicë
22	<i>Canis lupus</i> (Linnaeus, 1758)	MAMMALIA	LC	App. II	Novo Bërdë
23	<i>Erinaceus roumanicus</i> (B. Hamilton, 1900)	MAMMALIA	LC		Kamenicë
24	<i>Lepus europaeus</i> (Pallas, 1778)	MAMMALIA	LC		Klllokot, Kamenicë
25	<i>Martes martes</i> (Linnaeus, 1758)	MAMMALIA	LC		Kamenicë
26	<i>Mustela erminea</i> (Linnaeus, 1758)	MAMMALIA	LC	App. II	Kamenicë
27	<i>Mustela nivalis</i> (Linnaeus, 1766)	MAMMALIA	LC		Zhegër, Novobërdë
28	<i>Sus scrofa</i> (Linnaeus, 1758)	MAMMALIA	LC		Kamenicë
29	<i>Talpa caeca</i> (Savi, 1822)	MAMMALIA	LC		Zabërxhë, Mramor
30	<i>Vulpes vulpes</i> (Linnaeus, 1758)	MAMMALIA	LC	App. II	Kamenicë
31	<i>Dolichophis caspius</i> (Gmelin, 1789)	REPTILIA	DD		Kamenicë
32	<i>Ciconia nigra</i> (Linnaeus, 1758)	AVES	DD	App. II	Koretinë

Notes:

The abovementioned abbreviations have the following meaning: **IUCN - XK** = Conservation status of species according to the Red Book of Animals of the Republic of Kosovo, based on IUCN (International Union for Conservation of Nature) rules and guidelines, **CITES** = Tells if species is



enlisted into CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), **App. II** = Second Appendix of CITES – incorporates a list of species sorted by name, of all types of animals (Kingdom: *Animalia*), **CR** = Critically Endangered, **EN** = Endangered, **VU** = Vulnerable, **NT** = Near Threatened, **LC** = Least Concern, **DD** = Data Deficient, **AVES** = Taxonomic naming of the class of Birds, **AMPHIBIA** = Taxonomic naming of the class of ecto-thermic tetrapod vertebrates, **INSECTA** = Insects (from Latin *insectum*) are hexapod invertebrates, **ACTINOPTERYGII** = Taxonomic naming of the class of the bony fishes, **REPTILIA** = Taxonomic naming of the class of tetrapod animals, **OLIGOCHAETA** = Taxonomic naming of the class of animals that are made of many types of aquatic and terrestrial worms, **MAMMALIA** = Taxonomic naming of the class of vertebrate animals that are characterized by the presence of mammary glands.



Annex 9 STAKEHOLDER ENGAGEMENT FRAMEWORK





Annex 10 LABOR MANAGEMENT PROCEDURES





Annex 11 INFORMATION ON ESMF DISCLOSURE

Minutes of Meeting

Fostering and leveraging opportunities for water security (flows)
Environmental and Social Management Plan

During public discussion held in Municipality of Kamenica in 27/02/2020, ESMF and other related documents were presented by Pëllumb Gjinolli, these were the main topics that were elaborated:

- Project components
- Environmental and Social standards according to World Bank
- Project components
- Possible Environmental and social Impact Assessment
- Social Impact
- Grievance Mechanism
- Environmental and Social management and monitoring framework
- Implementation arrangements
- Capacity building
- The foreseen budget

After the presentation, Mr.Gjinolli, notified participants that they can still access and send their comments regarding the ESMF, where the document can be downloaded from the following link <https://mmpk.rks-gov.net/en/publikimet/68/njoftime>

Relevant questions asked by the participants who were present in the discussion:

1. Sami Morina

Can the Krivareka river be included in this project?

P.G.J. it was already included in analysis

2. Haqif Agaj

Are other rivers as well analyzed apart from Kremenata?

P.G.J. Yes, to my knowledge the experts involved in the review and the update of the feasibility study which was prepared during '80s have also taken into consideration Hogosht and Desivojce rivers.

3. Nexhmije Kallaba

Is there any chance/risk that we as a community would not benefit from the project, what are the possibilities that project will be transferred to other regions of Kosovo?

P.G.J. I don't think that there is such risk, since the project was designed based on the needs assessment, water strategy of Kosovo (2017) and in full coordination with all actors. So the project is designed for this region (Morava e Binces basin)

4. Leotrim Spahiu

Are collectors and the wastewater treatment plant envisaged in this project?

P.G.J. As said during presentation this project has the sub-components which will be detailed in later stage.





Republika e Kosovës
Republika Kosova
Republic of Kosovo

Komuna e Kamenicës
Opstina Kamenica
Kamenica Municipality



Evidenca e pjesëmarrësve në takim me datë / Evidence of participants: 27 Shkurt 2020

Nr.	Emri / Name	Mbiemri / Surname	Kontakti / Contact	Nënshkrimi / Signature
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3	Mimoza	Fejzullahu	044-632-340	<i>[Signature]</i>
4	Mexhid	Fajllan	044-311-397	<i>[Signature]</i>
5	Morgjine	Morina	044-726-640	<i>[Signature]</i>
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12	Haxhi	Agaj	044-231-665	<i>[Signature]</i>
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