

# Environmental and Social Management Plan (ESMP)

for the  
'The Upgrade of the Water Distribution Network in  
Municipality of Kamenica'

Prepared under  
Fostering and Leveraging Opportunities for Water Security -FLOWS

February 2025

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## ABBREVIATIONS

AC	Asbestos Cement
BoQ	Bills of Quantities
CoC	Code of Conduct
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FLOWS	Fostering and Leveraging Opportunities for Water Security
GBV	Gender Based Violence
GM	Grievance Mechanism
GRM	Grievance Redress Mechanism
HDPE	High-density polyethylene
O&M	Operation and Maintenance
OHS	Occupational Health and Safety
PE	Polyethylene
PPEs	Personal Protective Equipment's
PMT	Project Management Team
PS	Pumping Station
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
WB	World Bank
WTP	Water Treatment Plant

## SUMMARY

This sub-project for the 'The Upgrade of the Water Distribution Network in Municipality of Kamenica' is a component of the Fostering and Leveraging Opportunities for Water Security (FLOWS<sup>1</sup>) Program, funded through a credit from the World Bank.

It falls under Sub-Component 2.2 - Investments in Water Infrastructure and Services Addressing the Water Crisis, which is part of Component 2 - Addressing Water Crisis with Catalytic Investments.

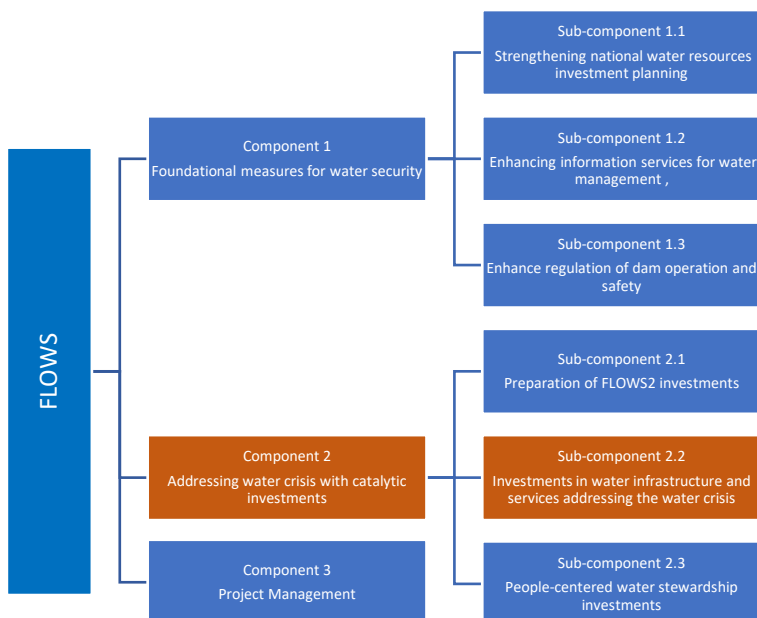


Figure 1. FLOWS components and subcomponents

The beneficiary of this subproject is the Regional Water Company 'Hidromorava' a joint-stock company, established on 2007, responsible for managing and operating water and wastewater systems in the Anamorava region.

RWC 'Hidromorava' oversees operations through its three units located in Gjilan, Viti, and Kamenica. Specifically, Kamenica unit serves the municipality of Kamenica, the Gjilan unit serves the municipalities of Gjilan, Ranilug, Novo Berd, and Partesh, while Viti unit covers the municipality of Viti.

This subproject, referred as the 'Contract', is designated for the unit in Kamenica involving the upgrade of the water distribution network in Kamenica city and its suburb.

Additionally, this Contract includes a small section of the Gjilan network located in Perlepnica village.

<sup>1</sup> [https://www.mit-ks.net/repository/docs/2020\\_03\\_24\\_170402\\_KOSOVO\\_ESMF\\_19032020\\_final\\_2.pdf](https://www.mit-ks.net/repository/docs/2020_03_24_170402_KOSOVO_ESMF_19032020_final_2.pdf)

Table 1: Summary sheet

Name of the subproject:	'The Upgrade of the Water Distribution Network in Municipality of Kamenica'
Subproject specification:	Upgrade of the water distribution network in Kamenica city and its suburb Upgrade of the water transmission line - Line 0 - in Perlepnica/Gjilan
Subproject location:	Kamenica Perlepnica/Gjilan
Number of beneficiaries	22.868 Kamenica 82.980 Gjilan
Sector and type of subproject:	Water sector Water supply system
Implementing of the subproject:	RWC 'Hidromorava' FLOWS/PMT
Implementation modality:	Directly implemented by RWC 'Hidromorava' through Contractors
Size of the subproject:	11595 m pipeline construction works in Kamenica 187,7 m in Perlepnica /Gjilan
Estimated Cost of subproject:	EUR 883.000
Field Visit (Yes/No; Include Date):	Yes July, October, 2023 February, March, April, July, December 2024
Was Consultation Carried out? (Yes/No):	Yes
Proposed Class of sub-project (Low to High):	Moderate

## 1. INTRODUCTION

The Environmental and Social Management Plan (ESMP) for the 'Upgrade of the Water Distribution Network in Municipality of Kamenica', has been developed in compliance with the Environmental and Social Management Framework (ESMF) of the Fostering and Leveraging Opportunities for Water Security (FLOWS) Program and the World Bank's environmental and social standards.

This ESMP was prepared by PMT to support of Regional Water Company 'Hidromorava' for the specific works to enhance the water supply reliability, improve the efficiency of water distribution network and reduce the non-revenue water in Kamenica municipality. ESMP outlines the measures to be taken to mitigate the adverse environmental impacts of a project activities for all phases, during its construction, operation, and decommissioning phases.

This document complies with the World Bank's Environmental and Social Framework (ESF) and Kosovo's environmental laws and regulations.

The subproject involves civil works, necessitating adherence to ESS1 (Assessment and Management of Environmental and Social Risks and Impacts). A comprehensive approach will be taken to assess, mitigate, and monitor potential risks to the environment and communities throughout the project's lifecycle.

Given that the project will involve contractor and workers, ESS2 (Labor and Working Conditions) will also be applied and ensure fair labor practices, the protection of workers' rights, and the establishment of safe and healthy working conditions.

The generation of waste from work activities and consume of resources, calls for the application ESS3 (Resource Efficiency and Pollution Prevention and Management) to focus on promoting efficient resource use, minimizing waste, and preventing pollution, ensuring the environmental impact is controlled and mitigated.

Moreover, the construction activities and use of equipment may increase community exposure to risks and impacts, thus requiring the implementation of the ESS4 (Community Health and Safety) to address the health and safety risks and impacts on the community, effectively.

Furthermore, open and transparent engagement with the subproject's stakeholder is an essential element of good international practices, therefore, ESS10 (Stakeholder Engagement and Information Disclosure) is applicable to ensure the environmental and social sustainability of the subproject, enhance acceptance and make a significant contribution to successful design and implementation throughout the subproject life cycle.

ESS5 – Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement – after thorough analysis, it has been determined that the subproject does not involve land acquisition, restrictions, or the need for involuntary resettlement. Therefore, this standard is not applicable to this subproject.

In addition, the ESS6 is not relevant because the subproject does not include and will not affect biodiversity or living natural resources.

The ESS7 and ESS9 are not relevant because there are no indigenous peoples, cultural heritage in the subprojects' area, and the subproject does not involve any financial intermediaries that may be affected and have relationships in the subproject.

While there are no cultural heritage areas near the project sites, ESS8 remains relevant to this project due to its involvement in excavations and earth movements. A management approach is necessary for any chance findings related to the project, ensuring their proper handling and documentation.

As a result, the subproject is obliged to comply with the Labor Management Plan (LMP) regarding labor working conditions and Occupational Health and Safety (OHS) standards to address any related issues. Additionally, the Social Engagement Plan (SEP) will be followed for consultation and information disclosure.

Furthermore, it is important to note that the Environmental and Social Management Plan (ESMP) will be disseminated to stakeholders and made available on the websites of FLOWS, RWC 'Hidromorava', Municipality of Kamenica and the World Bank.



## 2. SUBPROJECT BACKGROUND

This subproject aims to enhance the water supply system managed by Hidromorava company. Under this Contract the plan includes upgrading the pipeline distribution network in municipality of Kamenica serving 22.868 residents.

Additionally, the contract encompasses a small section of transmission pipeline in Perlepnica which will also enable benefit for 105.848 residents of Gjilan municipality.

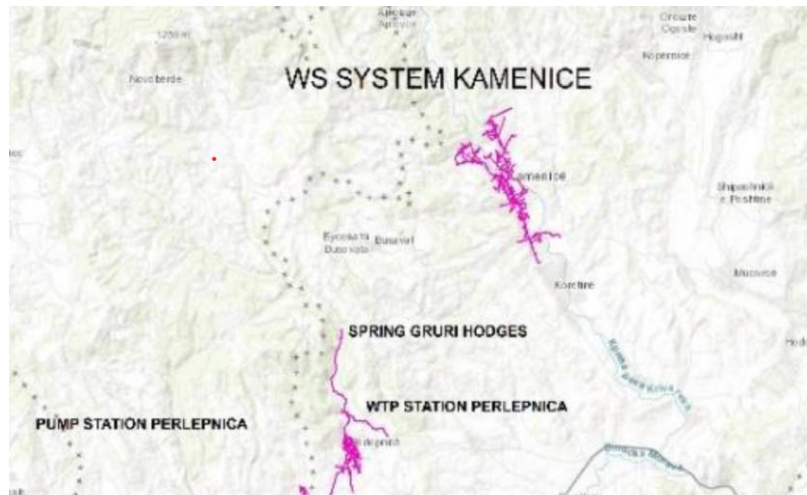


Figure 2. Overview map of the project area

### 2.1. Existing situation of the targeted area

#### Water supply system of Kamenica

Kamenica city relies on groundwater wells as its primary water source, strategically located within the city limits to facilitate efficient distribution.

The city's water infrastructure includes five pumping stations: Station 1-Kamenica, Station 2-Kamenica, Station 3-Kamenica, Station 4-Bashqja, and Station 5-Çameria (see Figure 3 below).

These stations are essential for pumping water from the groundwater wells to the reservoirs and subsequently to the consumers. The total water supply capacity of groundwater wells is 16,45 l/s.

The water distribution infrastructure includes two reservoirs positioned symmetrically on opposite sides of the city, each with a capacity of 200m<sup>3</sup>, ensuring balanced water supply infrastructure. Additionally, there is an abandoned reservoir with a capacity of 600m<sup>3</sup>, likely decommissioned due to issues such as unfavourable elevation and constant overflow.

The pipeline network in Kamenica is primarily composed of polyethylene (PE) pipes, which account for around 57% of the total length. The network also includes steel and asbestos cement (AC) pipes. The pipelines vary in diameter, ranging from 32mm to 225mm, reflecting the diverse capacities and distribution requirements across the city.

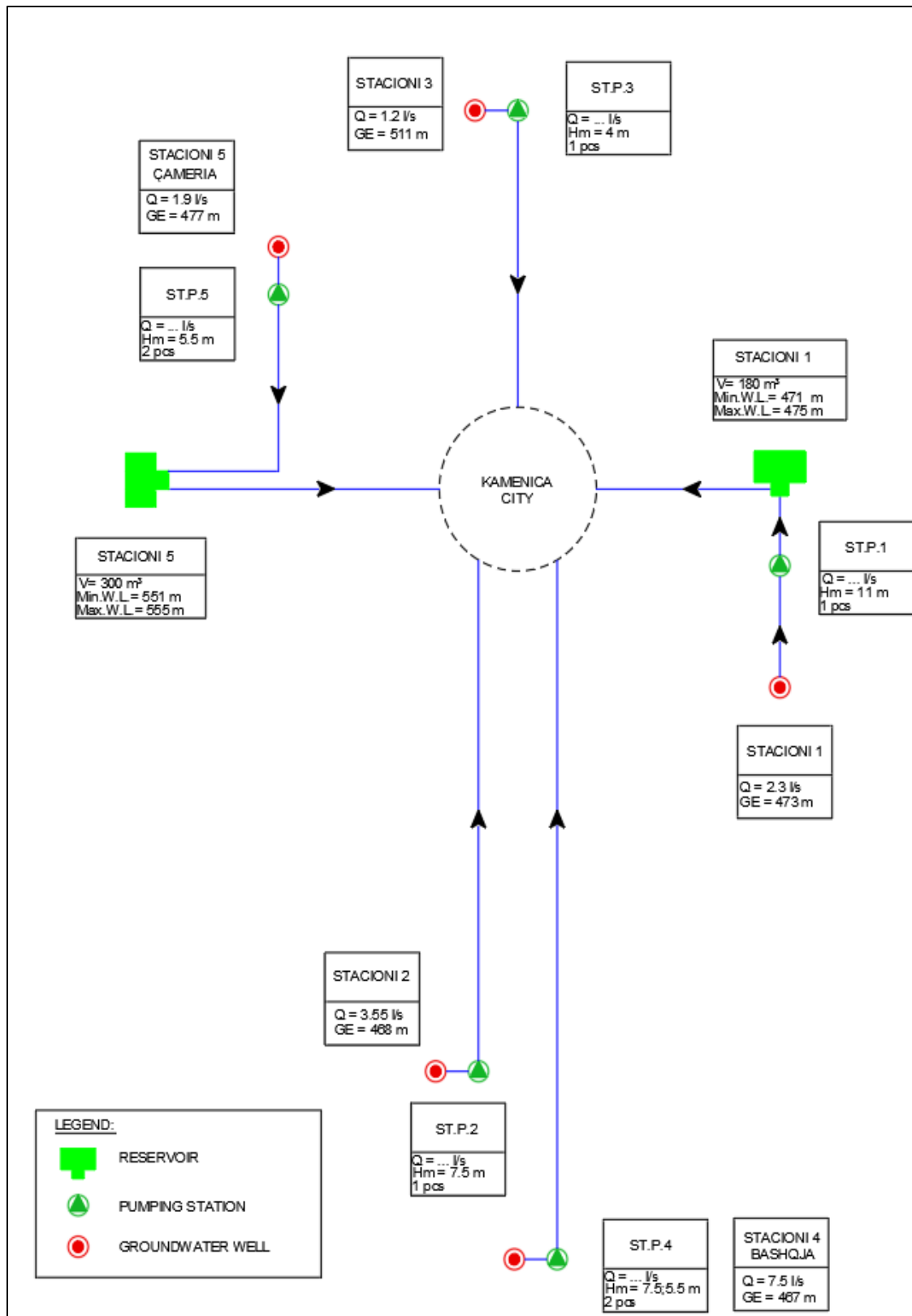


Figure 3. Schematic view of the water supply system of Kamenica

## 2.2. Planed activities

The subproject activities under this Contract involve:

1. Upgrade of the water distribution **pipeline network** in Kamenica;
2. Upgrade of the water transmission line in Perlepnica – **Line 0**;

### 2.2.1. UPGRADE OF THE WATER DISTRIBUTION PIPELINE NETWORK IN KAMENICA

The part of the network within the scope of the project is located at the south part of the city and cover almost 1/3 of the city's network. Pipes are mainly network elements and connected to each other. The location of the project area in Kamenica is shown in Figure 4 below.

The existing distribution networks of RWC Hidromorava have been developing over the past 60 years and the current average age of the entire distribution networks is about 30 years. This initiative is crucial due to the aging infrastructure, marked by deterioration and leakages.

The current water main pipeline, constructed of AC pipes, is slated for replacement with modern/more environmentally friendly material with PE (polyethylene) pipes and of larger diameter. The new pipeline routes will run parallel to the existing AC pipeline, which will remain intact, eliminating the creation of asbestos waste.

This subproject involves upgrading over 11,5 km of water distribution pipelines in Kamenica city center and its suburbs. The dimensions and length of the pipes are detailed in the table below:

Pipe Diameter (∅)	Type	Total (m)
50	HDPE	10
63	HDPE	8754
90	HDPE	2831
TOTAL		11595

The subproject will adhere to the existing alignments of the current water pipelines and will involve activities such as workplace mobilization and management, demolition, excavation and pipe installation. To facilitate smooth operations throughout the construction period, measures will be implemented including traffic management, road maintenance, safety precautions, and repair of any damage.

Following this, the demolition works entail preparing the route for the installation of the new water pipeline. This involves tasks such as removing asphalt and concrete, ensuring the safe storage of materials. These efforts are essential to clear the path for the new pipeline installation while minimizing disruptions and ensuring public safety.

The excavation works involve opening channels for laying the new water pipes, considering factors such as soil category, terrain conditions, and traffic density. Both mechanical and manual excavation methods need to be employed, with meticulous attention to securing, maintaining, and levelling the channels.

Supplying and distributing sand for pipe bedding and covering, as well as limestone sand for road restoration, are critical steps to ensure the durability and stability of the installed pipelines and road segments. Proper compaction and layering techniques are employed to achieve the desired specifications and structural integrity.

In summary, the outlined activities encompass a comprehensive approach to construction, spanning mobilization, demolition, excavation, material supply, and structural installation, all aimed at ensuring the successful implementation of the water supply project while adhering to safety, quality, and regulatory standards.



Figure 4: Layout of Water Network Lines in Kamenica

## 2.2.2. UPGRADE OF THE WATER DISTRIBUTION PIPELINE IN PERLEPNICA – LINE 0

Line 0 is the main feeder of Perlepnice WTP. The starting point of the transmission lines is the raw water pumping line that transports water from Perlepnica Pump Station (PS) to Perlepnica Water Treatment Plant (WTP). So, the Line 0 functions as the raw water transmission line from Perlepnica PS to Perlepnica WTP.

With this Contract it is planned to replace the existing HDPE pipeline with a diameter of  $\varnothing 500\text{mm}$  to accommodate expanded water treatment capacities from Perlepnica PS to the Perlepnica WTP. With the anticipated increase in raw water demand for the Water Treatment Plant (WTP), the installation of a new HDPE  $\varnothing 630\text{mm}$  pipeline, spanning a length of 187,7 meters, will ensure efficient transport capacity of raw water from the Perlepnica dam reservoir through the dam gallery to the pumping station. This upgrade is crucial to enable the WTP to effectively handle and process the higher volume of raw water required for distribution to the Perlepnica, Gjilan and surrounding areas. The general layout of this pipeline is illustrated below.

Table 3. Hydraulic specifications of the Line 0

Start Point	Perlepnica Pumping St
End Point	Perlepnice WTP
Pipe Diameter	630
Pipe Type	HDPE
Pressure Class (ATM)	10,00
William - Hazen Coeff., C	150
Pipe Length (m)	187,70
Design Flow (m <sup>3</sup> /day)	33.696,00
Design Flow (l/s)	390,00
Flow Velocity (m/s)	1,61
Total Head Loss (m)	0,57
Hydraulic Grade at the Start Point (m)	553,00
Maximum Water Level at the End Point (m)	605,00
Required Pump Head (m)	52,57

Table 4. Main Lines under the project in Perlepnica

Pipe Diameter ( $\varnothing$ )	Type	Total (m)
630	HDPE	187,7
TOTAL		187,7

The plan profile view of Pipeline 0 is illustrated below:



Figure 5. Plan profile views of Pipeline 0 from Perlepnica PS to Perlepnica WTP



Figure 6: Aerial view – Planned Line 0 (187,7m)

Table 5: Geological Formations of Line 0

	Start	End	Lithology
LINE 0	0+000	0+187	Phyllites

Table 6: Hydrogeological Formations of Line 0

	Start	End	Hydrological Section	Lithology
LINE 0	0+000	0+187	Aquiclude without considerable intergranular or fissured porosity (eg. sandstone, sandstone+ mudstone/ siltstone, conglomerate, metamorphic rock, volcanic rock, pyroclastic rock)	Metamorphic rock, undivided

### 2.3. Nature of works

The activities under this Contract for the pipeline networks will include but are not limited to the following:

1. 'Workplace' mobilization and 'workplace' management.
  - Setting up equipment for alternative electricity supply (generators, cables, etc.);
  - Organizing and regulating traffic in coordination with municipal representatives and Traffic Police throughout the construction period;
  - Proper maintenance of roads in the workshop;
  - Implementing safety measures within the workshop;
  - Repairing damage to roads and greenery and restoring them to their original condition.
  
2. Demolition works for the preparation of the route for the installation of the new water pipeline<sup>2</sup>.
  - Cutting and removing asphalt along the road where the installation of the new pipeline is planned.
  - Removal of concrete cubes (in a safe place), located in front of business premises and residential houses, along the road where the installation of the new pipeline is planned.
  - Removal of concrete cubes that are considered damaged and cannot be returned to the workshop along the route where the new water pipe is planned to be installed.
  - Cutting and removing the concrete layer along the road or in front of houses, businesses or on the sidewalk where the installation of the new water pipe is planned. The concrete must be removed and transported to a permitted municipal dump site.
  - If any fences, located in front of business premises and residential houses along the road where the new pipe installation is planned, will need to be carefully removed.
  - If any advertisements currently placed in front of business premises along the road where the new pipe is to be installed will be removed and relocated to a safe location.
  - If any electric poles set in concrete along the road where the new pipeline is planned to be laid will be relocated. This process will be carried out in close coordination with KEDS company authorities to ensure proper handling and storage.
  
3. Excavation works for opening the channel and covering the channel.
  - The excavation works entail opening channels and covering them for the installation of new water pipes. This includes excavating channels in category III and IV soil for various pipe profiles, such as DN-50mm, DN-63mm and DN-90mm in Kamenica while DN-630mm in Perlepnica. The lengths, widths, and depths of the channels vary depending on the terrain. Some of these works will be conducted in areas with heavy traffic, necessitating the securing, maintenance, and final levelling of the channels. **Excavation is estimated to be primarily conducted with excavators (90%) and manually (10%). The estimated Corridor of Impact (Col), determined by factors such as pipe width, gap from the existing pipe, excavator operation, and backfilling, spans approximately 100cm for pipe diameters up to 90mm. For pipe DN 630mm, the Col expands to approximately 193cm. The duration of work in a specific section, causing disturbance to people and traffic, will not exceed 6 hours.**
  - Due to the presence of **narrow spaces** in certain areas, special attention is required for **employing techniques that enable safe and efficient excavation** within confined spaces.

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<sup>2</sup> The Contractor is obliged to collect all data related to the installations in the workshop (above ground and underground, including but not limited to: electric and telephone cables, water and sewage pipes, etc.) and take care to protect them from possible damages during the implementation of the contract. The Contractor must cooperate with the enterprises for the provision of public services, with the municipal authorities to provide all the necessary information about the existing infrastructure.

- Supply, distribution and levelling of sand under the pipe and for covering the pipe. The supplied can be from crushed stones (stone crushers) or fraction from the rivers.
- Covering the channel with soil/crushed material. -Covering the channel should be done layer by layer and include the compaction of the soil /material with adequate machinery. This position also includes the removal of excess soil from the workshop, the separation of stones and other material that can damage the installed pipes
- Supply, distribution and compaction of 0-60mm buffer limestone sand for asphalt for road segments where the asphalt has been removed; compressing it in layers of max 20-30 cm, while the thickness of the layer should be 30 cm.
- Removal of excess soil (removal material): Loading and transport of excess soil/material from the site (removal material from pipe channels, removal material from wells, removal material from check valves) transport to the permitted municipal dumpsite.

#### 4. Pipeline & Fitting –Montage works.

- The pipeline and fitting montage work involve the purchase, installation, and transportation of HDPE 100 - RC pipes with specifications SDR 17 and PN 10 bar. The subproject includes HDPE pipes in various diameters (DN 50, DN 63, DN 90 and DN 630). Additionally, the subproject encompasses the purchase, installation, and transportation of PE material equipment, various types of tees, reducers, electro fusion fittings, butt fusion and end caps.
- Purchase, transport, and installation of metal wire signal tape to be positioned 20 cm above the water pipe.
- Purchase, transport and installation of cast iron fittings for main manholes, complying with DIN EN ISO 9000-2000 standards and certified according to DIN-DVGW quality tests. **All fittings must be protected from corrosion with a minimum 250 µm thickness epoxy coating**, adhering to DIN 3476(P) and DIN 30677 standards. All **valves and fittings must be produced for use for drinking water** with flanges, meeting DIN EN 1092-2 standards. Working pressure of valves and fittings should be 10 bar. The devices (bolts, nuts, rubber washers, etc.) for connecting the phase parts are included for all positions and they **must be corrosion resistant**.

5. Purchase, installation, transport and installation of the telescopic mechanism for operating the valves installed on the ground with all the necessary elements for operation and protected by plastic wraps.

6. Supply, transport and installation of cylindrical caps for control valves. -The cap must be manufactured according to the DIN 40 56 standard. The cap must be manufactured from GG 20. The body is bituminized and protected from corrosion - the dimensions of the cover must be as follows: - the diameter of the lid: the upper part - 120 mm, while the bottom part - 170 (with circular shape).

7. Air valves - Purchase, transport and installation of: air valves VV DN 50; gate valves (short body) DN 50; different fittings FF DN 80/600, FFR 80/50, TEE 80/50, HDPE AF DN-90; The Ø100 PE drain pipe with screened opening for draining the manhole with pipe length: L=15.0m'.

8. Washout valves. -It includes purchasing, transporting, and installing gate valves (DN 50), along with various fittings (such as FF DN 50/900, TEE 63/63, and HDPE AF DN-63. Additionally, Ø100 PE drainpipes with screened openings are to be installed for draining manholes, with a pipe length of 15m.

9. Hydrants. -Purchase, transport and installation of hydrants: TEE PE DN 160/90mm, DN 90/90mm, Elektro-Muff DN 160mm and 90mm; HDPE AF DN-90; Telescopic Valve DN 80mm; Cup For Telescopic Valve DN 80mm; Duckfoot Band, 90°, DN 80mm; FF, DN 80mm, L=800mm; Hydrant, DN 80mm.



10. Testing and disinfection of installed water pipes. - It involves pressure testing and cleaning procedures adhering to technical standards and regulations. Pressure tests follow the guidelines outlined in the German Guide DVGW W 400-2, while cleaning and disinfection procedures adhere to DVGW Rule W 291.

11. Structural works - Concrete works.

Concreting of wells - The subproject involves the concreting of wells, specifically the supply and construction of reinforced concrete manholes with class C 25/30, impermeable to water, for various components such as air valves, washout valves, control valves, and hydrants. The dimensions for discharge manholes, and air manholes are specified in the subproject details.

Anchor blocks/ thrust blocks -The subproject involves the supply and construction of reinforced concrete blocks for anchoring and protecting water pipes, bends, and supporting phasonic parts for various infrastructure elements.

12. Damage to the infrastructure and return to the previous state.

- Repair and restoration of any infrastructure installations damaged or destroyed during the subproject, including above-ground and underground utilities like electric and telephone cables, water, and sewage pipes.
- Supply, transportation, and installation of two-layer asphalt with emulsion paint on road segments where asphalt has been cut and removed.
- Supply, transportation, laying, and compaction of buffer, sand, and circulating layer for restoring existing concrete cubes and placing new concrete blocks.
- Supply, transport, and installation of concrete layer on road segments where concrete has been cut and removed.
- The installation of concrete or metal fences in front of business premises and residential houses along the planned pipeline route will be carried out.
- Advertisements in front of business premises along the planned pipeline route will be carefully restored, reassembled, and tested as needed.
- Electric poles along the planned pipeline route will be relocated and restored in coordination with KEDS to ensure proper handling and safety.

13. Connecting the network - existing pipes to the new installed network.

Connecting the existing network of water supply pipes with the new installed pipes, until the water supply is fully operational.

### 3. ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS

The FLOWS Program activities of the Component 2 will take place in the Morava e Binces River Basin. This river basin covers municipalities of Gjilan, Novobërd, Viti, Kllokot, Partesh, Kamenica and Ranilug. In this basin, characterized by low rainfall and high-water stress levels, drought has severely affected water quality, leading to water rationing in major towns and villages. The decline in water quality has made it unsuitable for economic activities, including irrigation, leading to strict rationing measures and depletion of drinking water supply in certain areas.

#### 3.1. Geographic characteristics

The municipality of Kamenica lies in the east of Kosovo. It is bordered to the southwest by Ranilug, to the west by the municipality of Novobërd, to the northwest by Pristina and to the north and east it borders Serbia. It covers an area of 523 km<sup>2</sup> (52,310 hectares), comprising 60% hilly-mountainous terrain and 40% flat terrain.

Kamenica, is approximately 27 km from Gjilan, and 75 km from Pristina.

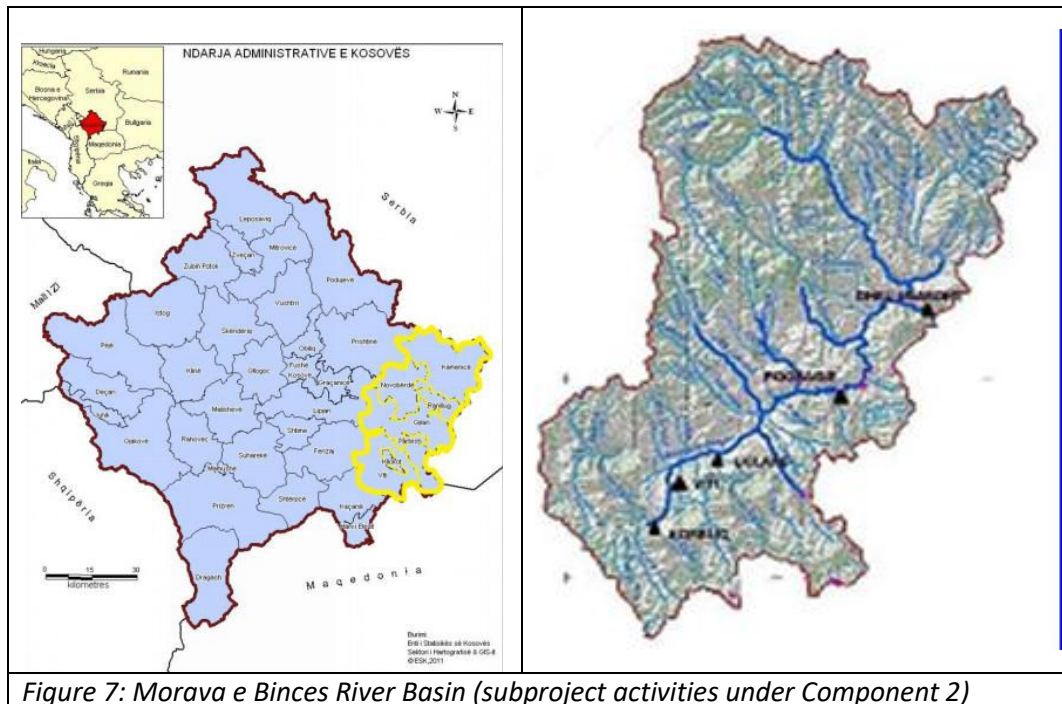


Figure 7: Morava e Binces River Basin (subproject activities under Component 2)

The municipality of Kamenica is traversed by several rivers, including Krivareka, Hogosht River, and Morava e Binçes. The Krivareka River collects water from various smaller rivers and is a tributary of the Morava e Binçes, which runs through the city of Kamenica. The flow of the Krivareka River is typically higher during March, February, and May, with smaller flows occurring in August and September. In the western part exists a lake in village Ruboc.

#### 3.2. Air Quality and Noise

The municipality of Kamenica faces several challenges regarding air quality. Like the municipality of Viti, it lacks air pollution monitoring stations, making it difficult to assess and control the environmental

impacts. Additionally, the rapid increase in vehicle numbers, many of which are older models without catalytic converters, contributes to pollution through emissions such as CO and CO<sub>2</sub>. In terms of heating, Kamenica relies heavily on wood, with approximately 6,500 families using it as their primary source of energy. Other heating sources in the municipality include coal, oil, fuel oil, and gas. The absence of a heating system further complicates the situation, amplifying the challenges in managing air quality..

### 3.3. Climate

Kamenica experience a continental climate, with an average annual temperature of 10.9°C. The warmest month is August, reaching 37°C. Conversely, the coldest month is January, with average temperatures of -2, 3°C. Annual rainfall in Kamenica is ~673mm. Average precipitation ranges from 499 - 675 l/m<sup>2</sup>.

### 3.4. Water quantity and quality

In Kamenica, the Krivareka River serves as the wastewater discharge point, leading to water quality issues from the effluent produced by over 25,000 residents. This pollution highlights the need for improved sewage treatment and management practices.

The Morava e Binçes basin has six monitoring stations spread across two rivers. Two stations are reference points, checked twice yearly, while the other four are situated along the river and monitored eleven times annually. The Krivareka River has two monitoring stations. The first station shows high water quality, but pollution increases at Marevc village due to discharge from the Artana mine, leading to decreased pH levels and higher concentrations of heavy metals. Sedimentation causes turbidity and a brownish tint to the water, but the flow helps remove metals due to elevated pH. Conversely, the second station in Domoroc indicates poorer water quality, with higher levels of pollutants like turbidity, ammonia, and nitrites<sup>3</sup>.

### 3.5. Hydrology

Kamenica is situated near the Morava e Binçes River and its tributaries, boasting extensive hydrographic networks. Kamenica's hydrographic network includes various rivers and streams such as Berivojcë, Koretin, Topanicë, Shipashnic, Desivojcë and Kremenata among others.

### 3.6. Floods

Flood events in Kamenica municipality are common, particularly along rivers and streams such as Krivareka, Hogosht River, and Shipashnice. Severe flooding in 2014 led to infrastructure damage, agricultural losses, and contamination of drinking water in this municipality.

### 3.7. Soil Erosion

In the municipality of Kamenica, erosion is a significant concern, resulting in the loss of agricultural land and damage to households. Approximately 48% of the municipal area, covering 25,050 hectares, faces a high risk of erosion, with strong and very strong erosion being prevalent. Specifically, 11,550 hectares are categorized as experiencing very strong erosion, highlighting the severity of the risk. This heightened risk is attributed to a combination of natural factors and human activities

### 3.8. Geology

Kamenica municipality exhibits significant litho-isographic diversity, with complex tectonic terrain characterized by various geological processes such as erosion, landslides, and soil collapse.

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<sup>3</sup> [https://www.ammk-rks.net/assets/cms/uploads/files/Publikime-raporte/Shqip\\_WEB.pdf](https://www.ammk-rks.net/assets/cms/uploads/files/Publikime-raporte/Shqip_WEB.pdf)

The subproject main pipeline will run parallel to the existing one, with no changes in runoff patterns that could impact the water distribution networks in Kamenica.

Geological assessment of pipeline routes in Kamenica identifies different formations including sandstone, conglomerate, claystone, limestone, tuffs, proluvium, river terraces, and alluvium.

Region 1	Sandstone, conglomerate, claystone, limestone, tuffs.
Region 2	Proluvium - conglomerate of rock fragments, sandy - silty deposits.
Region 3	River terraces - gravel, sand.
Region 4	Alluvium - gravel, sand, silt.

Table.7: Geological Formations of Kamenica Network

### 3.9. Waste Management

Waste management practices in Kamenica are overseen by the public-private company 'Ekohigijena' with waste disposal at the Gjilan landfill. However, the landfill's condition is unsatisfactory, necessitating improvements to prevent surface water and landfill wastewater mixing.

### 3.10. Flora & Fauna

Kamenica boasts rich wildlife, including endangered species requiring protection. Plans are in place to safeguard these areas and the species inhabiting them.

Endemic, near-endemic and threatened species of plants and animals are not existing in the subproject area which is urban area and there is no impact on biodiversity in the sub-project area during the implementation.

### 3.11. Cultural Heritage

The Municipality of Kamenica is home to various cultural and historical landmarks, such as castles, forts, Illyrian-Dardan churches, and other places of worship, reflecting the region's diverse history and requiring concerted preservation efforts. The significant sites include such as the Kulina Illyrian site, the castle in Kopernica, Shehu's Tomb in Topanica, the tomb in Rogacica, and the Moqari Monastery.

A total of 44 cultural heritage sites (21 archaeological and 23 architectural) are included in the MCYS list of sites under permanent/temporary protection.

Investment locations are away from archaeological sites, while provisions are included to address potential chance findings or archaeological discoveries during project implementation.

## SOCIO-ECONOMIC CHARACTERISTICS

### 3.12. Demography

According to 2024 Census, Municipality of Kamenica has a population of 22,868 with a density of <100 individuals per square kilometres. Many residents are living abroad the country. In Kamenica, the majority of the population is comprised of Albanians, who make up 89.90% of the total residents. The Serb community is the second-largest ethnic group, accounting for 8.26%, representing the most significant minority in the area. The Roma population follows as the third-largest group, making up 1.66% of the inhabitants. The remaining ethnic groups, including Bosniaks, Turks, Ashkali, Gorani, and others, collectively constitute just 0.18% of the total population.

The population is mostly rural. Regarding the type of population (urban or rural), the population in Kamenica is predominantly rural.

Kamenica population by age groups (Census 2024)

Kamenica	Age groups	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44
Total	22868	1143	1258	1330	1515	1901	1645	1534	1286	1247

Kamenica	Age groups	45 to 49	50 to 55	56 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85+
Total	22868	1528	1682	1789	1553	1300	928	588	415	226

The demographic distribution of Kamenica municipality reveals a relatively young population, with a significant proportion of individuals in the 0–19 age group. The population count for this segment steadily increases from 1,143 in the 0–4 category to 1,515 in the 15–19 category, indicating a strong presence of children and adolescents. The highest population is seen in the 20–24 age group (1,901), which may suggest a substantial number of young adults, possibly students or early-career professionals. However, the numbers decline gradually after this peak, with the 25–29 and 30–34 age groups seeing a slight decrease. This could be indicative of migration patterns, where younger individuals may seek opportunities elsewhere.

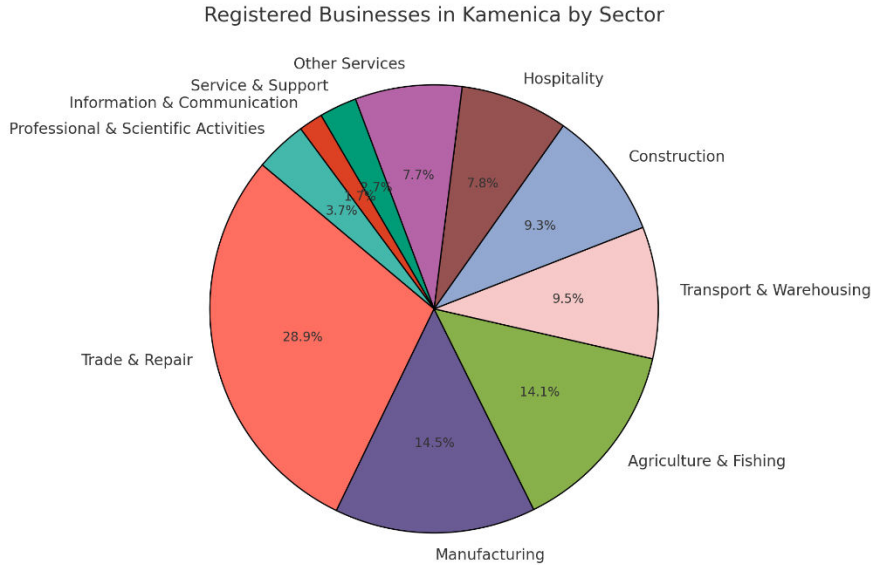
The older population (aged 60 and above) shows a declining trend, with significantly lower numbers in the 75+ categories. The 85+ category has the lowest count (226), emphasizing a relatively lower life expectancy or possible migration of elderly individuals. The drop in numbers across older groups suggests either a natural demographic aging process or an outward migration trend among working-age adults that affects elderly retention. Overall, Kamenica's demographics suggest a youthful base with a potential challenge in retaining the middle-aged and elderly population, which could impact long-term economic and social structures.

### 3.13. Economy

The local economy of Kamenica municipality, is primarily driven by agriculture, small-scale manufacturing, and trade. Agriculture remains a key sector, with local farmers engaged in crop cultivation, livestock farming, and dairy production. In recent years, there has been a gradual shift towards agribusiness and sustainable farming practices to boost productivity and market competitiveness. Small and medium-sized enterprises also play a crucial role in the economy, particularly in sectors such as retail, construction, and wood processing. However, like many other regions in Kosovo, Kamenica faces economic challenges, including high unemployment rates and limited industrial development. Efforts to attract investment and develop infrastructure, particularly in renewable energy and tourism, are seen as potential drivers for future economic growth. Cross-border trade with neighbouring regions also contributes to the local economy, offering opportunities for businesses to expand their markets and increase revenue.

The local economy of Kamenica consists of 1,533 active registered businesses, categorized into different types and sectors. The majority, 1,121 businesses, operate as individual businesses, followed by 392 limited liability companies. Additionally, there are 16 general partnerships, 3 joint-stock companies, and 1 agricultural cooperative.

In terms of economic sectors, the largest share of businesses, 417, are engaged in wholesale and retail trade, repair of motor vehicles, and motorcycles. The manufacturing industry follows with 209 businesses, while 203 businesses are involved in agriculture, forestry, and fishing. The transportation and warehousing sector has 137 businesses, whereas 134 operate in construction. The hospitality sector (hotels and accommodation services) includes 112 businesses, while 111 businesses provide various other services. Additionally, 39 businesses are engaged in service and support activities, and 25 businesses operate in the information and communication sector. Lastly, 54 businesses are engaged in professional, scientific, and technical activities.



This diverse business environment highlights the economic structure of Kamenica, with a strong presence in trade, agriculture, and small-scale manufacturing, while also showing potential growth in services and construction.

The subproject, located in Kamenica city, is easily accessible via asphalted roads and encompasses both public and private residential areas.

**3.14. Agriculture**

The municipality of Kamenica, with its total area of 41,611 hectares, utilizes 47% of the land for arable farming and pastures, while 48% is covered by forests. This means that approximately 90% of the municipality’s territory has potential for agricultural and livestock use. The entire territory is composed of lands with quality classes ranging from II to VII. Class VI covers the largest portion of the territory, with 48.2% (20,002 hectares), followed by class V with 14.3% (5,957 hectares), class III with 11.45% (4,761 hectares), and other classes as shown in figure IV. Class V, VI, and VII quality are mostly found in the hilly-mountainous areas of the municipality, while lands with class II, III, and IV quality are used for farming. Agriculture plays an important role in the development of the local economy and can help reduce unemployment, ensure food security by improving citizens’ well-being, and reduce the import of agricultural products that can be produced. Kamenica has resources for the development of fruit, livestock

farming, beekeeping, meat production, and poultry, as well as forest resources that enable the cultivation of wild fruits and medicinal plants, which can play a significant role in agricultural development.

### 3.15. Culture and Religion

The 2024 census of Kamenica Municipality highlights a religiously diverse community, with a predominantly Muslim population, making Islam the dominant faith. The second-largest group is the Orthodox Christian community, primarily from the Serbian minority, comprising about 8.3% of the population. The Catholic community is small, and there is a minor presence of other religious groups. Additionally, some residents identify as non-religious, while others chose not to disclose their religious beliefs.

## 4. ENVIRONMENTAL AND SOCIAL SCREENING

The assigned risk for the subproject is moderate. Environmental and social screening was conducted using the FLOWS ESMF screening form, as detailed in Table 11 in Annex 2.

The subproject activities in Kamenica are confined to public properties, primarily streets, and partially entail activities with potential environmental and social impacts.

Occupational Health and Safety (OHS), environmental, and social measures for local population protection will be integrated into the contract and tender documents to minimize disruptions to the community.

The completion of subproject activities is anticipated to have positive environmental and social impacts, as it will provide beneficiaries access to safe and sufficient water supply.

## 5. RISK LEVEL AND MITIGATION INSTRUMENTS

The subproject assigned risk is moderate, thus, it requires the preparation of an ESMP as detailed in the ESMF for FLOWS. Some environmental and OHS impacts may be triggered. Therefore, RWC 'Hidromorava' with the PMT support will include environmental and social requirements for Contractor including all OHS requirements in the contract and tender documents:

### **Social Risk and Impacts:**

- Temporary damage to public roads such as asphalt. Therefore, Contractor is obliged to restore the damaged assets to the previous condition. No Land acquisition is anticipated.
- Temporary disruption of access to the home/ economic activities due to the activity implementation. Therefore, the Contractor is obliged to inform the PAPs of the duration of disruption and make efforts to minimize them.
- Community Health and Safety/Public safety during the implementation;
- Safety risks associated with open trenches;
- Safety risks to children where construction carried out in the road;
- Risk of employing children (under age of 18 years) for work activities;
- Increased levels of noise and vibration due to heavy vehicles and equipment, which are a nuisance to the community around the site;
- Increase in road traffic and temporary inaccessibility;
- Lack of worker's awareness and knowledge on social safeguard issues on gender, SEA and GBV;
- Accidental destruction of other public infrastructure such as electricity grids;
- Damage to the utilities and services located underground (electricity, internet, telephone, etc.)

### **Potential Environmental risks and Impacts:**

- Air pollution due to gaseous emissions from vehicles and equipment.
- Dust generation during maintenance work's excavation, backfilling and compaction of soil;
- Waste production including solid wastes, hazardous waste (asphalt, cement) due to excavation and replacement of old pipes lines and domestic waste. Therefore, contractor is obliged to provide well maintained equipment and follow the mitigation measures that included in the Waste Management Plan, ESMP clauses for Contractor and BoQ's in the tender documents;
- Increased levels of noise and vibration due to heavy vehicles and equipment, which are a nuisance to the community around the site;
- Accidental oil spills from machineries and vehicles causing soil and groundwater contamination.

### **Potential OHS risks and Impacts:**

- Work related accidents and injuries from lifting pipes and excavation activities;
- Work related accidents and injuries from vehicles running into workers;
- Coming into contact with hazardous chemicals which may cause skin and eye irritation such as cement, asphalt;
- Falling into excavated zones or tripping;
- Poor onsite sanitation or water supply;
- Risks from physical exhaustion;
- Environmental risks (heat exposure, rainfall, etc.);



- Risks from accidental electrical shocks from electrical poles;
- The risk of employing children (under age of 18 years) for work activities;
- Collapse of excavated trenches, soil on unstable ground.
- Road accidents while transporting materials and equipment and waste to and from the site;
- Manual handling risks of injuries;
- Air/dust emissions and noise emissions while conducting excavation work and using machineries.

#### **Risks and impacts during operation and maintenance**

- OHS risks such as vehicles accidentally running into workers during operation or maintenance;
- Lack of maintenance and impacting the community (i.e. water cuts);
- Road blocking/traffic during maintenance work;

#### **Resources and Services' access restrictions:**

The activities will be conducted section by section, and the excavations will be executed with the installation of the pipes in the same day for every section to avoid any access restriction issues, and alternative roads will be available for road users during implementation.

#### **The contractor shall:**

- Ensure all workers are older than 18 years old;
- Maintain occupational health and safety system in the site to protect workers from hazards and risks and provide adequate health and safety training, required PPE, first aid box;
- OHS training should include trainings on dealing with chemicals and handling machines and tools and first aid training;
- Provide the workers with potable drinking water, and shade during hottest hours;
- Avoid all forms of forced, involuntary, unpaid or compulsory labor;
- The daily working hours must not exceed 8 hours;
- The contractor has to ensure the workers have access to toilets, clean water, and designated areas equipped with soap for handwashing.

#### **Gender:**

The subprojects are a priority to all community's groups, men and women, and will serve all families living in the targeted areas without exclusion. It will contribute to ensure the access of water to the beneficiaries and improving the water supply, health and environment in the area.

#### **Gender Based Violence GBV, Sexual Exploitation and Abuse SEA and Sexual Harassment SH:**

The Contractor and workers should sign the Code of Conduct (CoC) and ensure workers respect and adhere to the Code of Conduct. CoC to respect the local community cultures, and adhere to the social safeguard issues on Gender, SEA/SH and GBV. Raise awareness on the GM system and how it can be used to report any GBV cases.

Contractor, supported by RWC 'Hidromorava' and FLOWS/PMT should provide the workers with required training and daily discussions (toolbox talk) in the OHS, GBV and SEA.

Contractor should provide the work sites with GM system for all workers including providing complaints box and means of raising awareness about the complaint mechanisms.

Additionally, Contractor should ensure that workers are aware of the complaint mechanisms available to them, such as providing information and raising awareness about how to report issues or grievances.

### Land Acquisition and Affected Parcels

RWC 'Hidromorava' has obtained the necessary approvals from the targeted communities and local authorities for the implementation of the subproject activities. At present, all works will be carried out on public property (public roads), negating the need for land acquisition. However, some of the planned works will be located along private properties. Property owners have already consented to the project by signing consent forms. This consent acknowledges that the existing water supply network, with its outdated infrastructure, water losses, inadequate pipe sections, requires significant replacement and expansion. The project aims to improve water service quality by upgrading the current system, ensuring that the main transmission and distribution lines can accommodate future growth and development. Additionally, the new network extension, which will run parallel to the existing one, will pass through the property. The consent form also clearly states that by granting approval to proceed with the works, the subproject ensures that any damages caused during construction will be fully compensated or restored to their original condition.

It's important to note that that no other infrastructure projects are planned along the pipeline routes during the implementation period.

Additionally, as needed, the Contractor will rent storage or workshop to store his equipment and work materials.

### Community health and safety

As previously mentioned, the subproject activities will be carried out on public property (public roads), and the community may experience the following impacts:

- Risk of accidents from open trenches, or temporary restriction of access, traffic, etc.
- Public access to work sites.

These potential impacts on community health and safety can be mitigated through:

- Establishing physical barriers around the work sites to protect the public.
- Install barriers, danger warning signs and restricted access signs to only authorized personnel, along with signs indicating potential dangers to the public.
- Carrying out work during daylight hours.

### Grievance Mechanism for Workers

The workers must use the general GM system highlighted in section #10 to submit any grievances pertaining to them. These complaints may include, but are not limited to, the following:

- If a worker believes they have been unfairly terminated or summarily dismissed from their employment.
- If there has been a violation or breach of the terms outlined in the employment contract.
- In the event of a work-related injury or accident, workers can submit grievances related to the incident or their treatment.
- If a worker experiences discrimination based on factors such as race, gender, age, or disability.
- Grievances related to instances of sexual harassment or inappropriate behaviour in the workplace.
- Concerns regarding wages, salaries, overtime pay, or other forms of compensation.
- Complaints alleging wrongful termination of employment.
- Grievances related to temporary suspension from work.
- If a worker believes they were coerced or pressured into waiving their rights or claims.

GM shall adhere to the following principles:

- All workers should be informed about the GM at the time they are hired, and details about how it operates should be easily available, for example, included in worker documentation or on notice boards.
- Workers must know to whom they can turn in the event of a grievance and the support and sources of advice that are available to them. All line and senior managers must be familiar with their organization's grievance procedure.
- The process should be regularly reviewed and *kept up to date*, for example, by referencing any new statutory guidelines, changes in contracts or representation.
- The process should ensure that a complaint is dealt with *confidentiality*. While procedures may specify that complaints should first be made to the workers' line manager, there should also be the option of raising a grievance first with an alternative manager, for example, a human resource (personnel) manager.
- Procedures should guarantee that any worker raising a complaint will not be subject to any reprisal.
- Procedures should allow for time to investigate grievances fully but should aim for swift resolutions. The longer a grievance is allowed to continue, the harder it can be for both sides to get back to normal afterwards. Time limits should be set for each stage of the process, for example, a maximum time between a grievance being raised and the setting up of a meeting to investigate it.
- A worker should have the *right to appeal* to the World Bank or national courts if he or she is not happy with the initial finding.
- In any meetings or hearings, the worker should have the *right to be accompanied* by a colleague, friend or union representative.
- Written *records should be kept* at all stages. The initial complaint should be in writing, if possible, along with the response, notes of any meetings and the findings and the reasons for the findings. Any records on SEA shall be registered separately and under the strictest confidentiality.
- Grievance procedures should be consistent with any collective agreements.

## 6. ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

### **Environmental and Social Risk Classification**

Impacts from the subproject 'The Upgrade of the Water Distribution Networks in Municipality of Kamenica' are primarily concentrated during the construction phase, attributable to activities such as the operation of heavy machinery, use of raw materials for civil works, noise and vibration emissions, waste generation, and potential risks stemming from incidents and hazards. Additional subproject related risks are those related to the communities and much less those related to labour and working conditions.

During the operational phase, the water supply network will demonstrate moderate positive effects, particularly in newly serviced areas with improved water supply services. These improvements are expected to lead to enhanced water efficiency, as well as improvements in both water quantity and quality.

Mitigation measures have been determined to reduce the impact of potential environmental and social risks during the subproject implementation, which are provided in Table 8.

### **Air pollution (dust generation and gaseous emissions) during construction and maintained activities will be mitigated by:**

- Use of well-maintained equipment and properly maintain machinery to minimize exhaust emissions of CO, suspended particulates and fumes.
- Spray water for dust control.
- Use dust sweeping methods to reduce dust.
- Covering trucks which transport construction and waste materials.
- Storing and covering excavated piles at less windy areas.

### **Increased levels of noise can be mitigated by:**

- Use of quiet/well-maintained equipment and regularly maintain equipment.
- Use operational noise mufflers.
- Limit noisy activities to normal day hours.
- Limit vehicle speed at critical locations.

### **Soil and ground water contamination (oil) that can be mitigated by:**

- Ensure no wastes or excavated materials are stored inappropriately to prevent contamination of ground and water sources.
- Provide secondary containment for all chemical contained vessel.
- Presence of suitable spill prevention kits.
- Proper storage of hazardous substances and away from soil and water sources and storage tank.
- Store chemicals, hazardous waste such cement according to their Material Safety Data Sheets (MSDSs).

### **Production and disposal of wastes can be mitigated by:**

- Ensure good housekeeping measures are kept.
- Ensure solid waste is regularly collected and stored at designated sites in plastic containers.
- Properly collect, transport and dispose of solid waste at designated permitted sites or landfill allocated by the local authorities.
- Properly covering trucks which transport collected waste to avoid spillage during transportation.

- Attach and submit the waste receipt from the assigned landfill authorities.

**Work related accidents and injuries can be mitigated by:**

- Provide OHS training to all employees involved in works.
- Provide PPE (protective masks, helmet, overall and safety shoes, and safety goggles, as appropriate); in high noise areas with earplugs or ear muffers; masks for work involving excavation, dust and emissions; goggles and gloves to prevent skin blisters and eye irritation from cement and asphalt;
- Ensure availability of first aid box. Details of the nearest hospital should be present on site.
- Following driving safety instructions i.e., trained drivers, following speed limits, using well maintained trucks.
- Ensure warning signs are added at a safe distance from workers and work place to ensure no worker is accidentally ran over by a vehicle.
- Maintain insurance for workers in subproject site according to the requirements and conditions of insurance in the bidding documents.
- The Contractor should keep daily reports on the movement of workers, approved and trained workers to perform the water network rehabilitation activity.
- The Contractor should protect workers and public by covering openings and establishing protected fencing, barricaded and guardrails around worksite locations.
- Contractor shall prepare and submit method of statement and OHS risk assessment for high-risk work activities.
- Ensure transport drivers are following good driving practices such as maintaining speed limit and wearing seat belts.
- Ensure workers are aware of proper lifting techniques to avoid back injuries.
- Ensure regular breaks and potable water are provided.
- Conduct work during daylight.

**Risk to workers from hazardous material can be mitigated by:**

- Train workers regarding the handling of hazardous materials.
- Handle, store and dispose hazardous materials and wastes as per their MSDSs.

**Providing employees with access to toilets and potable drinking water and soap.**

- Provide and implement safety precautions onsite during the implementation of the subproject.

**Risk of collapse of excavated trenches, soil on unstable ground can be mitigated by:**

- Shoring, shielding and support to all excavations.
- Provide supports to adjacent structures where necessary, sufficient to prevent damage arising from the rehabilitation work.
- Install safety excavation warning signs along trenches.
- Remove temporary supports progressively as backfilling proceeds.
- The contractor should support excavation sides to avoid collapse of excavation or fall of materials into the excavations and ensure safe access and egress to excavation for equipment and workers.
- Remove unnecessary materials from the side of excavation to prevent materials full in excavation trenches.
- Provide occupational health and safety training to all employees involved in works.

**Risk from lifting of water pipes which can be mitigated by:**

- Close the lifting area with fence to prevent access to the area during lifting works.
- Install warning signs for lifting activities at work location.

- Carry out lifting work by well trained, qualified lifting team.
- Provide workers with all suitable necessary PPEs and safety materials.
- Use well-maintained equipment for lifting that are appropriate for the weight.
- Secure loads when lifting and use strong and reliable fixation materials to make sure that the load is well tighten and no solid parts falls from the load during lifting.
- Ensure workers are standing at a safe distance from lifting zone.

**Risks from physical exhaustion:**

- Ensure regular breaks and potable drinking water is provided to all workers.

**Risks from Environmental risks (heat/cold exposure, rainfall, etc.):**

- Ensure checking weather conditions before conducting any work.
- Work should avoid rainy periods, extreme hot and cold weather.
- Ensure potable drinking water is provided and regular breaks.

**Risks from electrical shocks from electricity poles:**

- Ensure proper distance is kept from electrical poles.
- Ensure that electrical pole areas nearby are not surrounded with wet soil.
- Provide awareness to workers.
- Work in dry days.

**Damage to the utilities and services located underground (electricity, internet, telephone, etc.) which can be mitigated by:**

- Coordination with local authorities and locating service lines before starting work. Get detailed drawings of underground services.
- The area that will be scanned for underground services is needed to be obtained from the relevant government institutions before starting work.
- Before starting excavation, manual excavate is applied to avoid damaging the underground infrastructure.
- Ensure Contractor repairs any services or infrastructure that may be damaged during the implementation process within the specified repair time.

**Inadequate slope of the road after the excavation for the water network which can be mitigated by:**

- Levelling and surveying with a total station instrument should be performed to ensure proper storm water drainage and prevent flooding in the affected areas during the rainy season.

**Temporary disruption of access to the home/economic activities due implementation process which can be mitigated by:**

- Ensuring that the closure of street sections does not cause income loss to roadside businesses by providing alternative access.
- Conducting activities section by section to avoid disruption to people's daily routines.
- Coordinating with the public on the implementation timeline and informing them in advance to prevent delays or disruptions.
- Ensuring uninterrupted access to homes, markets, and daily subsistence areas.
- Providing temporary alternative access roads to homes, markets, and daily subsistence zones.

Additionally, the contractor is responsible for promptly restoring any public and private assets damaged during the subproject implementation process. This includes repairing any infrastructure, such as roads,

sidewalks, or utilities, that may be affected by the construction activities. The contractor must ensure that all restoration work is carried out to the satisfaction of the relevant authorities and property owners, and that any disruptions caused by the construction process are minimized as much as possible. Furthermore, the contractor should provide compensation or restitution for any damages incurred, in accordance with the terms of the project contract and applicable laws and regulations.

Table 8: Potential Environmental and Social Risks Impact and Mitigation Measures

Source of impact	Mitigation measures	Responsibility	Estimated Cost
<b>Environmental impacts</b>			
<b>General conditions</b>			
<ul style="list-style-type: none"> <li>- Notification of public and relevant institutions</li> <li>- Permits</li> <li>- Waste management</li> <li>- Damage of infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>- All relevant institutions (e.g. traffic police, construction, environmental and H&amp;S inspectorate, etc.) has been notified on the upcoming works. The public has received timely and relevant information through appropriate means and its geographical and temporal scope.</li> <li>- All legally required permits (construction, environmental and other) have been obtained before works commence.</li> <li>- Identifying licensed landfills for major waste streams – hazardous and non-hazardous waste.</li> <li>- Clearly document the scope and timing of the work.</li> <li>- The works on sections transecting utility infrastructure will be coordinated with utility services providers (electricity, sewerage, water supply, telecommunications, etc.).</li> <li>- Precise positions of present infrastructure/installations will be determined before works on a particular section commence.</li> <li>- Precise positions of the public institutions / private / community assets to be disturbed in the construction zone will be determined before works on a particular section commence. Before commencing any construction work or activity, if the construction company identifies that the work may cause damage to private property, the contractor must first address the issue with the private property owner, RWC Hidromorava, and the PMT. This ensures that proper consent is obtained, and appropriate measures are taken to restore any potential damage and provide compensation if necessary.</li> </ul>	Contractor	Construction cost
<ul style="list-style-type: none"> <li>- Use of construction material (concrete, gravel asphalt, etc.), water, energy, generation of waste.</li> </ul>	<ul style="list-style-type: none"> <li>- Identify opportunities and alternatives for resource efficiency, relating to the subproject in accordance with GIIP,</li> <li>- Use pre-mixed concrete and construction materials from existing borrow pits and plants which owns environmental permits, under the national (and local) regulations.</li> <li>- In case to be used new borrow pits, it is recommended after completing the works the same to be rehabilitated.</li> <li>- Efficient water use.</li> <li>- Use of energy efficient equipment during construction.</li> <li>- Selection of usable fraction of waste and reuse as construction material, etc.</li> </ul>	Contractor/ Supervisor	Construction cost
<b>Air quality and climate changes</b>			
<p>Generation of dust emissions, exhaust gases as a result of:</p> <ul style="list-style-type: none"> <li>- Preparation of construction sites (cleaning up of sites, demolition activities, etc.);</li> <li>- Construction activities;</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of good construction practices.</li> <li>- Spraying with water (manually or with sprinklers) on construction sites, storage area, roads.</li> <li>- Placing of a protection fence or temporarily protective walls on the construction sites.</li> <li>- Stabilizing or covering the heaps of inert materials.</li> <li>- Daily removal of the excavated earth and other waste material in covered transportation vehicles.</li> </ul>	Contractor/ Supervisor	<p>Construction cost</p> <p>Protection fence for dust protection</p> <p>Water for dust suppression</p>



<ul style="list-style-type: none"> <li>- Use of equipment, mechanisation and transport activities;</li> <li>- Generation of waste;</li> <li>- Storage, handling of materials and waste.</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of measures for waste management, especially organic waste.</li> <li>- Optimization of transport activities.</li> <li>- Proper maintenance of equipment and mechanisation.</li> <li>- Use of fuels with less polluting emissions.</li> <li>- Mandatory washing of tires.</li> <li>- Daily cleaning of access roads.</li> <li>- Implementing procedures for handling of construction materials.</li> </ul>		Transport of waste
<b>Noise and vibration</b>			
<ul style="list-style-type: none"> <li>- Equipment and mechanisation for construction and transport activities;</li> <li>- Construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>- Implement good construction practices.</li> <li>- Limit the noise emissions in accordance with the national requirements (Law on Noise Protection No. 02/L-102).</li> <li>- All construction equipment and mechanisation will comply with the requirements of EU Directive 2000/14/EC on noise emission in the environment.</li> <li>- Select silenced compressors or use quieter hydraulic equipment.</li> <li>- All mechanical equipment should be silenced appropriately and regularly maintained.</li> <li>- Construction works in/or in close vicinity of the settlements will not be permitted during the night, etc.</li> </ul>	Contractor/ Supervisor	Construction cost
<b>Water</b>			
<ul style="list-style-type: none"> <li>Performance of construction activities near water bodies</li> <li>Soil erosion as a result of construction activities;</li> <li>Risk of contamination from storage and usage of chemicals and auxiliary materials, fuels;</li> <li>Generation of waste and its temporary storage,</li> <li>Maintenance and servicing of the equipment, washing of the equipment;</li> <li>Incidental spillage on sites etc.</li> <li>Damage of the vegetation</li> </ul>	<ul style="list-style-type: none"> <li>- Construction area next to the watercourses to be only large as it is strictly necessary to perform the construction works</li> <li>- Construction activities should be scheduled during the dry season to minimize disruption to water flow and flooding risks.</li> <li>- Implement soil erosion control measures in order to avoid surface run off and prevent siltation.</li> <li>- If there is a risk of discharge of high quantity of sediment into watercourses, to install clarifiers (sediment traps).</li> <li>- Implement spill prevention and response measures to address any accidental releases of pollutants.</li> <li>- Provide leak prevention equipment near the construction site for urgent cleaning.</li> <li>- Implementation of measures for waste and hazardous material management.</li> <li>- Ensure proper cleaning and sanitation of all construction materials and equipment to prevent contamination of waterways, and prohibit washing of equipment or vehicles in rivers or their vicinity.</li> </ul>	Contractor/ Supervisor in coordination with Hidromorava and PMT	<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 toilets or rented will be defined in the agreement by the authorized company</p>
<b>Waste</b>			
<ul style="list-style-type: none"> <li>Generation of different types of hazardous and non-hazardous waste, as inert waste, municipal</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of good construction practices.</li> <li>- Preparation of Waste Management Plan for all activities in accordance with Law on waste No. 04/L-060 (amended and supplemented).</li> </ul>	Contractor/ Supervisor in cooperation	Construction cost

<p>waste, biodegradable waste, packaging waste, as a result of:</p> <ul style="list-style-type: none"> <li>- Clearing up and removal of vegetation on the sites,</li> <li>- Dismantling or demolition of some existing buildings, structures, equipment,</li> <li>- Use of construction materials;</li> <li>- Performance of construction and rehabilitation activity;</li> <li>- Use of equipment and mechanisation,</li> <li>- Presence of workers and etc.</li> </ul>	<p>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.</p>	<p>with Hidromorava and Municipalities</p>	<p>Preparation of Waste Management Plan</p>
<b>Soil</b>			
<ul style="list-style-type: none"> <li>- Degradation, erosion, compaction, destruction of the topsoil as a result of construction activities;</li> <li>- Storage of raw materials and waste on sites;</li> <li>- Soil contamination as a result of accidental spillage of fuel chemicals, hazardous waste,</li> <li>- Revealed contaminated soil on the subproject sites;</li> <li>- Generation of waste and waste water (possible pollution of ground waters in case of high level of aquifer).</li> </ul>	<ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- 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 MESPI.</li> <li>- 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.</li> <li>- Implementation of procedures for handling of construction materials and waste, etc.</li> <li>- Implementation of measures for waste water management. During the rainy season, construction activities should be scheduled during periods of low rainfall to minimize the risk of flooding and sediment spread.</li> </ul>	<p>Contractor/ Supervisor</p>	<p>Construction cost</p>
<b>Biodiversity and landscape</b>			
<ul style="list-style-type: none"> <li>- Earth work, risk of vegetation removal and other construction activities,</li> </ul>	<ul style="list-style-type: none"> <li>- Apply good construction practices that would avoid pollution.</li> <li>- The cutting down of plants and the destruction of habitats for storing raw materials or waste are strictly prohibited.</li> </ul>	<p>Contractor/ Supervisor</p>	<p>Construction cost</p>

<ul style="list-style-type: none"> <li>- Performance of construction activities near water bodies and possible water pollution;</li> <li>- Soil erosion;</li> <li>- Storage of materials and waste;</li> <li>- Generation of waste and waste water.</li> </ul>	<ul style="list-style-type: none"> <li>- Careful cleaning up of the construction site immediately after the completion of the construction activities, etc.</li> <li>- Setting up equipment and objects that will not disturb the landscape values of the sites.</li> <li>- Implementation of measures for water and soil protection as well as waste management.</li> </ul>		
<b>Social issues</b>			
<ul style="list-style-type: none"> <li>- Damage to private/public institutions/community assets in the corridor of impact</li> </ul>	<ul style="list-style-type: none"> <li>- Coordinate with Supervisor and Hidromorava to confirm/variation to exact locations and dimensions of assets to be removed/cleared for construction works with pictures</li> <li>- Agree with Supervisor and Hidromorava the quantity and condition of restoration of affected assets before starting excavation.</li> <li>- Ensure that the consent to enter the site is available with Hidromorava/PMT before entering/clearing any \ private property.</li> <li>- Inform affected party at least one week in advance before clearing/dismantling the existing asset.</li> <li>- Ensure the damaged assets are restored before leaving the specific site.</li> </ul>	Contractor	Construction Cost
<ul style="list-style-type: none"> <li>- Damage to the utilities and services located underground (electricity, water, internet, telephone, etc.) and causing the residents to stop their services.</li> </ul>	<ul style="list-style-type: none"> <li>- Coordination with local authorities and locating service lines before starting work.</li> <li>- Get detailed drawings of underground services.</li> <li>- Before starting excavation, manual excavate is applied to avoid damaging the underground infrastructure.</li> <li>- The area that will be scanned for underground services is needed to be obtained from the relevant government institutions before starting work.</li> <li>- Ensure contractor repairs any services that were destroyed during implementation.</li> </ul>	Contractor	Construction cost
<ul style="list-style-type: none"> <li>- Gas emissions generated from machines, and vehicles on the site.</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain machinery in good working conditions to minimize emissions -CO, NOx and other fumes.</li> <li>- Provide adequate protective wear for workers, and equipment must be maintained regularly to avoid any emissions.</li> <li>- Offer good practice awareness to workers to turn off vehicles and machinery when not in use.</li> </ul>	Contractor	Mandatory
<ul style="list-style-type: none"> <li>- Loud noise and severe vibration caused by machines, and vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>- Measures to reduce noise to acceptable levels must be implemented and could include silencers, mufflers.</li> <li>- Avoiding or minimizing transportation through or processing material in community areas (like concrete mixing).</li> <li>- Machinery must be maintained regularly to avoid exceeding noise emission from poorly maintained machines.</li> <li>- Limit noisy activities to normal daylight hours.</li> <li>- Limit vehicle speed at critical locations.</li> <li>- In the narrow streets in neighborhoods, use small machines and equipment to avoid vibration on buildings.</li> </ul>	Contractor	Mandatory (Contractual Obligation)

<p>Solid waste, trash, produced by workers (organic, plastic, etc.) accumulates and pollutes the environment</p>	<p>Ensure that workers regularly collect all solid waste in well-sealed bags and transport it to a designated landfill or dispose of it properly through a certified contractor or at an authorized facility, in a manner that does not harm the environment.</p> <p>Waste management procedures will be added in the tender documents to ensure proper management of waste in the worksites.</p>	<p>Contractor</p>	<p>Mandatory (Contractual Obligation)</p>
<p>The low aesthetic value of landscape such as damages to existing trees and plants, accumulation of waste and debris, damages of fence, walls, advertisements, damaged curbs and tiles, etc.</p>	<p>Plant new trees and replant those damaged.</p> <p>Compensation of damaged plants.</p> <p>Remove the accumulated waste and debris in the maintenance site.</p> <p>Reconstruct the damaged fence, walls, advertisements, damaged curbs and tiles, etc.</p> <p>Intervention sites must be cleaned when investments are completed.</p>	<p>Contractor</p>	<p>Mandatory (Contractual Obligation)</p>
<p>Impacts by vibration due to compaction and maintenance machinery equipment</p>	<p>The Contractor should utilize manual activities inside the neighbourhood.</p> <p>Use small equipment.</p>	<p>Contractor</p>	<p>Mandatory</p>
<p>The road traffic may temporarily be interrupted during implementation, impeding people from accessing their needs.</p>	<p>Inform community, shops owners, public and roadside residence on the work schedule.</p> <p>Coordinate with local community and the public on the work schedule.</p> <p>Avoid complete closure to the streets by doing work in sections.</p> <p>Accelerate the work activity and open up the site as soon as possible by doubling workers and equipment.</p>	<p>Contractor</p>	<p>BoQ Items. Mandatory (Contractual Obligation)</p>
<p>Temporary disruption of economic activities, including disruption of traffic and congestion</p>	<p>Ensure that the closure of street sections does not lead to income loss for roadside businesses, kiosks, or vendors by providing alternative access to both residences and commercial establishments.</p> <p>Conduct activities section by section in a manner to avoid any disruption to people's daily routines.</p> <p>Coordinate with the public on the activities implementation time and inform them previously to avoid any delay or disruption.</p> <p>Never disturb citizens from access to homes, markets, and daily subsistence zones by providing alternative temporary access roads to homes, markets, and daily subsistence zones this could involve creating temporary roads, footpaths, or entrances to ensure continued access during the implementation phase.</p> <p>In residential areas where dust and odour are emitted, inform locals to close their windows.</p>	<p>Contractor</p>	<p>Mandatory</p>
<p>Traffic jams due to the movement of vehicles from/to worksite and transporting of materials</p>	<p>Before the works, the contractor should carry out consultations with Hidromorava and the community.</p> <p>Vehicle trips must be included in a construction plan before approval. Routings, especially heavy vehicles, need to take into account sensitive sites such as schools, hospitals, and markets.</p> <p>It is strictly forbidden to transport materials for construction during rush hour.</p> <p>Coordinate with the traffic authority in the city on the maintenance schedule.</p> <p>Find alternatives (detours) to either side of the existing road before excavating and reconstructing existing surfaces.</p>	<p>Contractor</p>	<p>Mandatory</p>

	<ul style="list-style-type: none"> <li>- Control and manage traffic, by arranging detours and alternate bypass for traffic and roadside residences &amp; businesses for each maintenance site by using traffic cones, barriers, fences, or lights as appropriate with coordination with traffic officers and according to the work plan.</li> <li>- Do not start any maintenance activities before the installation of traffic safety and control safeguards.</li> <li>- Install signs to detour were necessary to guide the driver to follow.</li> <li>- Where required, allocate persons to direct traffic in areas where work is taking place.</li> </ul>		
- Access of public into the worksite	<ul style="list-style-type: none"> <li>- Install fences, barriers, dangerous warning/prohibition sites around the working area which showing potential danger to public people.</li> <li>- Place appropriate warning and directional signs at areas where work is taking place.</li> <li>- Keep road surfaces clear from materials such as soil and gravel.</li> <li>- Limit in coordination with traffic authorities the movement of heavy vehicles on roads/lanes used by the public during traffic peak hours.</li> <li>- Conduct management and safety plans for maintenance activities.</li> <li>- Erect removable barriers.</li> <li>- Protect proper shielding scaffolds.</li> </ul>	Contractor	BoQ Items. Mandatory (Contractual Obligation)
- Lack of workers' awareness and knowledge on respecting local community cultures, and social safeguard issues on Gender, SEA/H, and GBV.	<ul style="list-style-type: none"> <li>- Contractor and its workers to sign the Code of Conduct.</li> <li>- Ensure workers respect and adherence to the Code of Conduct for the local community's protection and do no harm.</li> <li>- GM system in place to handling any issues on Gender, SEA/H, and GBV.</li> </ul>	Contractor/Supervisor	Mandatory
- Child Labor	<ul style="list-style-type: none"> <li>- Verifying age of workers by checking IDs and official documents. All workers should be older than 18 years old.</li> <li>- Ensure a worker log is available, and all workers are registered.</li> <li>- Verify that labour conditions are compliant with ESS2 and no forced labour is used</li> </ul>	Contractor/Supervisor	Mandatory
<b>Occupational Health &amp; Safety (OHS) Impacts</b>			
- General OHS issues	<p>The following mitigation measures are applicable to all OHS impacts</p> <ul style="list-style-type: none"> <li>- Ensure skilled workers are hired for each job.</li> <li>- Conduct regular awareness sessions and daily Toolbox Talks on OHS requirements before commencing any work.</li> <li>- Periodic inspection to ensure that mitigation measures are implemented and stop any unsafe act or unsafe situation.</li> <li>- Emergency response plan to be in place with details and contact of the nearest hospital or medical center, responsibilities are understood for all works, first aid boxes are available and a list of trained first aiders is posted and known by all workers with available transportation.</li> <li>- Immediately report all accidental occurrences with serious accident potential such as major equipment failures, and exposure to hazardous materials to the Hifromorava and PMT.</li> </ul>	Contractor/Supervisor	Mandatory

	<p>Contractors shall monitor, keep records and report on the following environmental and social issues:</p> <ul style="list-style-type: none"> <li>- <i>Safety</i>: hours worked, lost time injury (LTI), lost workdays, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).</li> <li>- Major works: those undertaken and completed, progress against subproject schedule, and key work fronts (work areas).</li> <li>- <i>ESHS requirements</i>: noncompliance incidents with permits and national law (legal noncompliance), subproject commitments, or other ESHS requirements.</li> <li>- <i>ESHS inspections and audits</i>: by Project Company, Independent Engineer, PMT and Hidromorava, or others—to include date, inspector or auditor name, sites visited, and records reviewed, major findings, and actions taken.</li> <li>- <i>Maintaining a record of injuries and accidents specifying cause and location</i></li> <li>- <i>Provide a list of trained workers, who will be checked for their training skills. Measures will be implemented onsite and followed by regular monitoring visits.</i></li> </ul>		
<p>Excavation risks:  <b>Falling in excavated areas.</b>  <b>Dust from excavation</b></p>	<p>Protection from falls, Falling Loads, and Equipment</p> <ul style="list-style-type: none"> <li>- Install barricades around excavated zones or open zones.</li> <li>- Temporary access will be installed in front of all households.</li> <li>- Use hand / mechanical signals.</li> <li>- Grade soil away from the excavation.</li> <li>- Provide workers with safety breathing masks against dust near excavation works.</li> <li>- Fence or barricade trenches if left overnight.</li> <li>- Provide warning systems such as mobile equipment, barricades, hand or mechanical signals, or stop logs, to alert operators of the edge of an excavation. If possible, keep the grade away from the excavation.</li> <li>- Provide and install protective barricades and other equivalent protection to protect employees against falling rock, soil, or materials.</li> <li>- Prohibit employees from working on faces of sloped or benched excavations at levels above other employees unless employees at lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.</li> <li>- Prohibit employees under loads that are handled by lifting or digging equipment. To avoid being struck by any spillage or falling materials, require employees to stand away from vehicles being loaded or unloaded competent person must make daily inspections of excavations, areas around them and protective systems: <ul style="list-style-type: none"> <li>- Before work starts and as needed,</li> <li>- After rainstorms, high winds or other occurrences which may increase hazards.</li> </ul> </li> <li>- When reasonably anticipated that an employee will be exposed to any hazard.</li> </ul>	Contractor	Mandatory

<p>Lifting Operations (overhead crane to lift water pipes)</p>	<ul style="list-style-type: none"> <li>- Close the lifting area with fence to prevent access to the lifting area during lifting work.</li> <li>- Install warning signs for lifting activities.</li> <li>- Prevent accessibility to non-workers at lifting zones or any construction zone.</li> <li>- Carry out lifting work by well trained, qualified, and certified lifting team and with proper communication means and flag Man.</li> <li>- Provide workers with all necessary PPEs and safety materials.</li> <li>- Use well-maintained equipment for lifting that is appropriate for the weight; well checked and tested by a third party.</li> <li>- Ensure workers are standing within a safe distance from the lifting zone.</li> <li>- Secure loads when lifting and use strong and reliable fixation materials to make sure that the load is well tightened, and no solid parts fall from the load during lifting.</li> <li>- Protect the units against staining, discoloration and other damage until they are installed in their final location.</li> <li>- Ensure workers and any person is standing at a safe distance from the lifting area.</li> </ul>	<p>Contractor</p>	<p>Mandatory</p>
<p>Emergency response and accidents</p>	<ul style="list-style-type: none"> <li>- Contractor has to prepare emergency response plan and establish and maintain an emergency preparedness and response system, to cover: (i) the contingencies that could affect personnel of the subproject to be financed; (ii) the need to protect the health and safety of subproject workers; (iii) the need to protect the health and safety of the affected people and communities.</li> <li>- The emergency preparedness and response system shall include: <ul style="list-style-type: none"> <li>• identification of the emergency scenarios, specific emergency response procedures, and training of emergency response teams,</li> <li>• emergency contacts and communication systems/protocols (including communication with affected communities),</li> <li>• procedures for interaction with government authorities (emergency, health, environmental authorities),</li> <li>• permanently stationed emergency equipment and facilities (e.g., first aid stations, firefighting equipment, spill response equipment, personal protection equipment for the emergency response teams),</li> <li>• protocols for the use of the emergency equipment and facilities with clear identification of evacuation routes and muster points emergency drills and their periodicity based on assigned emergency levels or tiers,</li> <li>• decontamination procedures and means to proceed with urgent remedial measures to contain,</li> <li>• limit and reduce pollution within the physical boundaries of the subproject sites, property and assets to the extent possible.</li> </ul> </li> <li>- The emergency preparedness will include both the construction and the operation phases, and a dedicated, trained, and competent contractor team will be trained to handle the emergency response responsibilities.</li> <li>- <b>First Aid and Accidents</b></li> <li>- Ensure that qualified first-aid by qualified personnel is always available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work.</li> </ul>	<p>Contractor</p>	<p>Mandatory</p>

	<ul style="list-style-type: none"> <li>- Provide workers with rescue and first-aid duties with dedicated training so as not to inadvertently aggravate exposures and health hazards to themselves or their co- workers. Training would include the risks of becoming infected with blood–borne pathogens through contact with body fluids and tissue.</li> <li>- Provide eye-wash stations and/or emergency showers close to all workstations where immediate flushing with water is the recommended first-aid response.</li> <li>- Provide dedicated and appropriately equipped first-aid room(s) where the scale of work or the type of activity being carried out so requires.</li> <li>- Equip first aid stations and rooms with gloves, gowns, and masks for protection against direct contact with blood and other body fluids.</li> <li>- Make widely available written emergency procedures for dealing with cases of trauma or serious illness, including procedures for transferring patient care to an appropriate medical facility.</li> <li>- Immediately report all accidental occurrences with serious accident potential such as major equipment failures, contact with high-voltage lines, and exposure to hazardous materials, slides, or cave-ins (sudden collapse) to Hidromorava and PMT.</li> <li>- Immediately investigate any serious or fatal injury or disease caused by the progress of work by the Contractor and submit a comprehensive report to Hidromorava and PMT.</li> <li>- Details of the nearest hospital should be present on site.</li> </ul>		
Manual Handling	<ul style="list-style-type: none"> <li>- Provide required information and training on manual handling to the site workers.</li> <li>- Ensure applying safe handling techniques.</li> <li>- Remove space constraints, ensure good housekeeping and providing improved layouts</li> <li>- Keep manual handling to one level, improve floor conditions and improve the environmental conditions.</li> <li>- Ensure use of appropriate PPE and safety materials.</li> <li>- Addressing potential use of handling aids with matching safety measures.</li> <li>- Ensure workers are aware of correct lifting techniques or physical work to avoid injuries including back injuries</li> <li>- Ensure regular breaks are maintained and the presence of potable drinking water.</li> </ul>	Contractor	Mandatory
Dust and noise emissions during excavation and while using machineries and equipment (OHS)	<ul style="list-style-type: none"> <li>- Provide dust masks to workers.</li> <li>- Provide ear mufflers to workers working with or near noisy equipment and machines.</li> <li>- Ensure proper maintenance of equipment and machineries.</li> <li>- Use dust sweeping methods and limited water for dust suppression.</li> </ul>	Contractor	Mandatory
Road accidents while transporting equipment and materials	<ul style="list-style-type: none"> <li>- Ensure drivers received awareness sessions on good driving practices such as maintaining speed limits and wearing seat belts.</li> <li>- Coordinate with local authorities to provide and manage alternative road for smooth traffic if required.</li> </ul>	Contractor	Mandatory
Environmental pressures on workers (heat / cold strokes,	<ul style="list-style-type: none"> <li>- Allow resting breaks in shaded / hot areas.</li> <li>- Provide proper PPEs against heat and cold.</li> </ul>	Contractor	Mandatory



storms) / Inadequate working conditions	Do not allow working during bad weather, rain, storms, etc.		
Chemicals Hazardous Substances and Wastes	<ul style="list-style-type: none"> <li>- Ensure all chemicals (cement, asphalt, etc.) are handled and stored and disposed according to their MSDSs.</li> <li>- Ensure workers are wearing adequate PPEs (proper gloves, masks, goggles, etc.) while handling chemicals.</li> </ul>	Contractor	Mandatory
Poor onsite sanitation or water supply, leading to illness and disease.	<ul style="list-style-type: none"> <li>- Provide adequate supplies of potable drinking water.</li> <li>- Ensure that water supplied for the purpose of personal hygiene (washing) meets water quality standards.</li> <li>- In the absence of public restrooms, coordinate with nearby cafes or restaurants to ensure their restrooms remain open and accessible to workers throughout the work period.</li> </ul>	Contractor	Mandatory
Improper use of equipment while cutting asphalt which causes injuries	<ul style="list-style-type: none"> <li>- Maintain the cutting equipment to ensure they are in good condition.</li> <li>- Provide storage place in the worksite to ensure good storage for the machinery and equipment in the end of the day.</li> <li>- Check the used cutting equipment if they are in compliance with the relevant standard.</li> <li>- Issuance of a special permit to work before using cutting equipment to ensure health and safety procedures in place.</li> <li>- Ensure the moving parts in the equipment are provided by a fixed guard to avoid contact with dangerous moving parts.</li> <li>- Train the workers at a safe distance from moving parts to avoid injuries.</li> <li>- Monitor the operation of equipment during all working times on the equipment to ensure safe procedures are in place and stop any dangerous acts with equipment directly.</li> <li>- Prohibit the use of untrained workers and use restricted to trained operators only.</li> <li>- Ensure that workers wear the necessary personal protection equipment at all times.</li> </ul>	Contractor	Mandatory
Vehicles running into workers	<ul style="list-style-type: none"> <li>- Emphasis safety aspects among drivers.</li> <li>- Inform drivers on location speed limits, and monitor implementation.</li> <li>- Control and manage traffic, by using traffic cones, barriers, fences, or lights as appropriate.</li> <li>- Daily inspection and maintenance for the vehicles by the contractor to ensure they are in good condition prior to start the work.</li> <li>- Provide traffic signs in the worksite, especially for speed limits, routes directions, parking places, entrance and exits, pedestrians' walkways, and worksite warnings signs.</li> <li>- Warning signs for vehicles should be added at a safe distance from work site to warn drivers to slow down prior to reaching the work area.</li> <li>- Stop the movement of vehicles in worksite in bad weather conditions to avoid collision.</li> <li>- Provide the worksite with barriers in the road edges to protect workers and vehicles from falling.</li> <li>- Arrangement and control of the worksite entrance and exits, and not allow for unauthorized person or vehicles enter the worksite.</li> </ul>	Contractor	Mandatory

- Electrical shocks from electricity poles: Work in dry season	- Ensure proper distance is kept from electrical poles - Ensure that electrical pole areas nearby are not surrounded with wet soil. - Provide awareness to workers.	Contractor	Mandatory
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## **7. ENVIRONMENTAL AND SOCIAL MONITORING PLAN**

The implementation of the mitigation measures will be monitored accordingly through daily checks by the Supervisor, weekly and event-based by Hidromorava and PMT staff during field monitoring visits.

The aspects that will be monitored, which is provided in Table 9, will be updated to accommodate any emergency or updated aspects that may be recommended by the monitoring reports.

Table 9. Environmental and Social Monitoring Plan

Impact	Measurements		Frequency	Implementation responsibility
	Methods	Indicators		
<b>Community Health and Safety</b>				
Public safety during the work.	Visual observation and photographic documentation of safety measures. Visual observation for installing of warning signs, barricading of working areas with safety tapes and fencing/ barricades to prevent unauthorized access of public and pedestrians to the working areas.	Number of recorded injuries and accidents	Daily basis during rehabilitation work and weekly during site inspection visits, On any complaint	Contractor, Supervisor
The risk of employing children for work activities.	Site inspection, checking and documentation of contractor employee records	Number of recorded employees below the age of 18	Weekly during site inspection and regularly	Contractor, Supervisor
External stakeholder engagement		Highlights, including formal and informal meetings, and information disclosure and dissemination—to include a breakdown of women and men consulted and themes coming from various stakeholder groups, including vulnerable groups (e.g., disabled elderly, children, etc.).	Monthly	Contractor, Supervisor Hidromorava and PMT
Complaints and feedback handling	Complaints’ forms will be kept on site, and this will feed into the GM register. Details of complaints received will be incorporated into the monitoring process	Number of reported Grievances No. of grievances resolved No. of grievances outstanding No. of grievances escalated.	Weekly	Contractor, Supervisor Hidromorava and PMT
GBV and SEA issues	GBV and SEA complaints’ will be registered into the GM register. Details of complaints received will be incorporated into the monitoring process	Number of reported and registered cases of the SEA/SH through subproject GM. Number of reported cases of contractors’ noncompliance to SEA/SH obligation on work sites.	Weekly	Contractor, Supervisor Hidromorava and PMT
Contractor and their workers signed the Code of Conduct (CoC)	Contractor, and their workers signed on the CoC and they are aware to respect	Number of CoC signed.	Before commencement of work	Contractor, Hidromorava and PMT

	the local community's protection and do no harm.			
Damage to assets for clearing site	Site verification based on proposed design and construction method to confirm list of properties to be cleared and restored by the contractor.	Number of properties to be cleared and restored. Number of properties restored.	Before starting to clear the site Weekly for progress on clearing and restoration	Contractor, Supervisor Hidromorava and PMT
<b>General Environmental Impacts</b>				
Dust generation during work.	Visual observation and photographic documentation of equipment induced dust clouds during construction/ rehabilitation activities	Visible dust emissions. Number of GM related to air pollution	Daily Weekly for received complaints	Contractor, Supervisor Hidromorava and PMT
Increased level of noise and vibration.	Site supervision/ inspection and documentation to ensure compliance with the noise mitigation measures	Percentage of workers comply with suitable PPE procedures Number of GM and complaints related to noise.	Weekly during site inspection.	Contractor, Supervisor Hidromorava and PMT
Air pollution due to emissions from equipment, machinery and transportation trucks.	Visual observation and photographic documentation of equipment induced emissions from vehicles and transport trucks and excavation work during implementation of activities.	Quantity of consumed fuel. Visible dust clouds. Number of complaints regarding dust and air emissions	Weekly during construction/ rehabilitation works and site inspection	Contractor, Supervisor Hidromorava and PMT
Production, proper disposal and disposal of work's debris and waste materials.	Inspection and photographic documentation	Records of presence of wastes stored in open areas or near drainage areas and at undesignated areas and increase in waste pollution Presence of waste collection receipt	Daily during construction/ rehabilitation works and site inspection	Contractor, Supervisor Hidromorava
Soil and groundwater contamination	Inspection and photographic documentation	Visible change in soil colour Presence of visible leaks of chemicals	Daily	Contractor, Supervisor Hidromorava
<b>Occupational Health and Safety</b>				
Lifting Operations	Visual inspection to ensure that all lifting activities in the work site are executed safely and as per the standard lifting safety rules. Visual inspection that safety distance from lifting sites is adhered to OHS reports	Records and number of lifting accidents Number of workers not wearing proper PPEs Records of non-compliances such as standing under lifting zone	Daily Weekly during construction works and site inspection	Contractor, Supervisor Hidromorava

Manual Handling	Visual inspection to ensure that all manual handling activities are performed according to the OSH manual handling safety rules and instructions. Record any noncompliance. Ensure that the implementation of the safety techniques to control the manual handling risk is monitored continuously.	Number of injured workers from manual handling Number of workers not wearing proper PPEs	Daily	Contractor, Supervisor
Excavation	Visual inspection to ensure that all excavation activities are executed safely, and all safety rules are implemented. Recorded noncompliance with photographic proof.	Presence of visible dust cloud Presence of workers not wearing masks and adhering to PPEs Number of injuries from excavated zones Number of workers not wearing proper PPEs	Daily	Contractor, Supervisor
Chemicals and Hazardous Substances and Wastes	Visual inspection Recorded noncompliance with photographic proof.	Records of hazardous wastes in undesignated zones Chemicals, wastes and hazardous substances are not labelled Number of workers not wearing suitable PPEs while handling chemicals and wastes	Daily	Contractor, Supervisor
Work related accidents and injuries.	Inspection and photographic documentation	The record of injuries and accidents indicating the number of injured workers in the subproject report specifying cause and location. Corrective actions recorded	Daily	Contractor, Supervisor Hidromorava and PMT
Poor onsite housekeeping, toilet and water supply	Visual inspection Site inspection	Presence of clean water and soap Presence of pests Presence of waste at undesignated areas Reports on illness and diseases.	Daily Weekly during site inspection and regularly	Contractor, Supervisor Hidromorava and PMT
Safety	Visual inspection Site inspection	Hours worked, recordable incidents, root causes, incident types (e.g., lost time, medical treatment, first aid, near misses), and required remedial actions. This includes revising safety procedures, introducing new	Daily Weekly during site inspection and regularly	Contractor, Supervisor Hidromorava and PMT

		equipment, and providing additional training.		
Environmental incidents and near misses	Environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.	Number and types of recorded environmental near misses	Daily	Contractor, Supervisor Hidromorava and PMT
Major works		Work undertaken and completed, progress against subproject schedule, and key work fronts (work areas).	Daily	Contractor, Supervisor Hidromorava and PMT
E&S and OHS requirements		Register non-compliance incidents with permits and national law (legal non-compliance), subproject commitments, or other E&S requirements.	Daily	Contractor, Supervisor Hidromorava and PMT
E&S/OHS inspections and audits:		By contractor, engineer, or others, including authorities to include date, inspector or auditor name, sites visited, and records reviewed, major findings, and actions taken.	Weekly	Contractor, Supervisor Hidromorava and PMT
Workers issues		Number of workers, indication of origin (local, nonlocal nationals), gender, age with evidence that no child labor is involved, and skill level (unskilled, skilled, supervisory, professional, management). Number of grievances raised by workers and number of solved grievances	Daily	Contractor, Supervisor Hidromorava and PMT
Training on E&S issues	Including dates, number of trainees, and topics.	Training records and number of training sessions on OHS risks and Environmental & Social issues and attendances	Weekly	Contractor, Supervisor Hidromorava and PMT
Footprint management		Details of any work outside boundaries (Such transportation of equipment and materials) or major off-site impacts caused by ongoing work—to include date, location, impact, and actions taken.	Monthly	Contractor, Supervisor Hidromorava and PMT
Operation and Maintenance				

Workers dissatisfaction/issues	GM reports	Number and type of GM and solved GM related to work issues	Continuous/daily	Contractor, Supervisor Hidromorava and PMT
Operation and Maintenance (Staff Health and Safety and community health and safety, social and environment)	Ensure same monitoring measures are implemented during operation and maintenance	Number of complaints due to misfunctions of water network Number of water cuts Number of maintenance times	Continuous daily	Contractor, Supervisor Hidromorava and PMT
Operation and Maintenance (Training to staff)	Training on how to maintain the water network, clean them, proper PPEs, and safety measures, etc.	Number of trainings received by facility workers.	Prior to handing the subproject to the facility administration.	Contractor, Supervisor Hidromorava and PMT
Operation and Maintenance (water quality and quantity)	Monitor and manage water quality and quantity  Conduct awareness campaigns and educational programs	Number of monitoring conducted on water quality and quantity. Presence of water monitoring devices  Increased awareness and knowledge among the local community about sustainable water management Number of awareness sessions conducted	Monthly	Hidromorava, Municipality, MESPI in coordination with the PMT



## 8. STAKEHOLDERS ENGAGEMENT PLAN AND PUBLIC CONSULTATION

The stakeholder engagement process involved engaging all relevant parties, including local authorities and communities targeted by the interventions. Activities included sharing community needs, setting priorities, and developing subproject designs and plans. FLOWS / PMT social consultants to inform the local community about planned activities and gather feedback conducted public consultations.

Table 10. Public consultation dates

Subproject Intervention	Consultation Date/Place	Consulted Beneficiaries		
		Male	Female	Total
Works to upgrade the water distribution networks in Gjilan and Kamenica	2/07/2023 Kamenicë	23	3	26
Works to upgrade the water distribution networks in Gjilan and Kamenica	17/10/2023 Gjilan	14	8	22
<b>Total</b>		<b>37</b>	<b>11</b>	<b>48</b>

### 8.1. Public Consultation Findings and Feedback

PMT engages all affected parties of sub-project within the subproject cycle. The consultation process involved face-to-face and group interviews with members of local communities, including both men and women. Feedback was collected through discussions, where the nature, objectives, potential impacts, and proposed mitigation measures of the subproject were explained. Beneficiaries prioritized their need for regular access to drinking water and expressed support for the targeted investment, foreseeing positive social impacts. No concerns were raised regarding land, noise, or Gender-Based Violence and Sexual Harassment (GBV&SH). However, during the work phase, concerns were raised about potential disruptions to businesses, protection of underground services and water pipes during construction and excavation, and proper disposal of construction waste. It is essential to ensure that all construction waste is transferred to designated areas. PMT also coordinates with local authorities and conducts public feedback sessions during site visits to ensure community acceptance.



Photo 1&2: Public discussion and information

As part of the legal requirements for the Environmental Impact Assessment (EIA) process, a public debate on the EIA report was held in accordance with Law No. 08/L-181 on Environmental Impact Assessment. The debate took place on September 30, 2024, at the municipal building in Kamenica, with 16 participants in attendance. During the discussion, the potential environmental and social impacts of the project were reviewed, and all measures to be implemented during the construction and operational phases were thoroughly explained. No issues were raised during the meeting.



Photo 3&4: Public debate in Kamenica

## 8.2 Stakeholders Engagement Plan

PMT will maintain ongoing engagement with stakeholders throughout subproject implementation. This will involve meetings with beneficiaries, community committees, and local authorities to address issues and discuss various aspects of implementation. The Hidromorava, in collaboration with PMT will coordinate meetings with community committees to ensure effective coordination and address environmental and social concerns. Additionally, they will organize awareness and training sessions on environmental and social requirements and monitoring roles. PMT will remain in continuous cooperation with community committees to address any emerging issues. Meetings with local authorities will also be conducted to facilitate cooperation in implementation efforts. As implementation nears completion, stakeholders will be convened for meetings to prepare for subproject submission and operation. This will include training sessions for beneficiaries and community committees on subproject operation and maintenance to ensure sustainability.

Consultation Event	Purpose	How	Who	When
Beginning of works/ Mobilization of contractors	Inform stakeholders about the start of construction activities	Direct communication, meetings	Hidromorava PMT Contractor	[Date]
Fortnightly progress meetings	Provide updates on project progress and receive feedback from stakeholders	Meetings, progress reports	Hidromorava PMT Contractor, Stakeholders	Every two weeks
Information disclosure on utility disruptions	Notify the community about utility disruptions due to construction activities	Public notices, announcements	Hidromorava PMT Local Media	As needed

Traffic rerouting/ Blocking of roads	Inform stakeholders about traffic rerouting or road closures during construction	Public notices, announcements	Hidromorava PMT Local Media	As needed
Access through local media	Utilize local media channels to disseminate project information to the community	Public notices, announcements	Hidromorava PMT Local Media	As needed

## 9. CAPACITY BUILDING

PMT will organize capacity building sessions at various stages of the subproject life cycle based on the ESMF. A comprehensive training for RWC Hidromorava staff will include updates aligned with the World Bank's ESF. Another training session will cover each staff member's responsibilities, implementation procedures, required forms, risk assessment methods, and general Occupational Health and Safety (OHS) procedures. Before handing over sites to the Contractor, Hidromorava and PMT representatives will conduct awareness sessions for workers and community committees, emphasizing environmental, social, and OHS aspects necessary during implementation. Throughout the implementation phase, the contractor's OHS assistant will hold regular awareness sessions highlighting daily risks and addressing issues like Gender-Based Violence and Sexual Exploitation and Abuse (GBV&SEA), Grievance Redress Mechanism (GRM), and Code of Conduct (CoC).

## 10. GRIEVANCE REDRESS MECHANISM

As part of an ongoing move to improve its accountability, FLOWS has in place a GRM system for managing, responding to, and monitoring issues within its Program.

The FLOWS website is fully operational and accessible to the public, including the communities affected by the implemented activities.

To raise awareness, the Contractor, in collaboration with Hidromorava and PMT, will provide the affected communities with detailed information on GRM procedures both on-site and during site visits. Additionally, an information board will be installed at the construction site to display clear instructions on how the public can submit questions or complaints.

The Contractor will also implement an internal grievance mechanism specifically for workers.

RWC Hidromorava has complaint and request forms available on its website, with a dedicated link added for FLOWS to provide detailed GRM forms, making them easily accessible to the public.

FLOWS will actively monitor and address any complaints that may arise during civil works.

The Grievance Complaint Form, (from Figure 9, below) is available on the FLOWS website at <https://flows-ks.info/forma-e-ankeses/>. Additionally, other communication channels are available for beneficiaries, including:

- A complaints box at the subproject location
- Telephone, SMS, Viber, and WhatsApp: +38348600883
- In-person visits by PMT

All complaints, information requests, suggestions, and other concerns will be logged in the GRM register.

To manage GRM issues, PMT has established a Grievance Redress Committee (GRC). Initially, Hidromorava and GRC members will address complaints and provide assistance during the implementation phase, acting as the first level of grievance redress.

If a claimant is dissatisfied with the decision from the first-tier GRM, they may escalate the grievance to the second-tier GRM, which operates within MESPI/PMT. This tier consists of three members: two from MESPI and one from PMT. Managed by PMT, the second-tier GRM is responsible for reviewing unresolved subproject grievances and addressing all other grievances related to the project. PMT will ensure that the grievance log is kept up to date, disclose relevant information periodically on the FLOWS website, and inform the World Bank about the status of the GRM.

**Complaint Handling Mechanism**

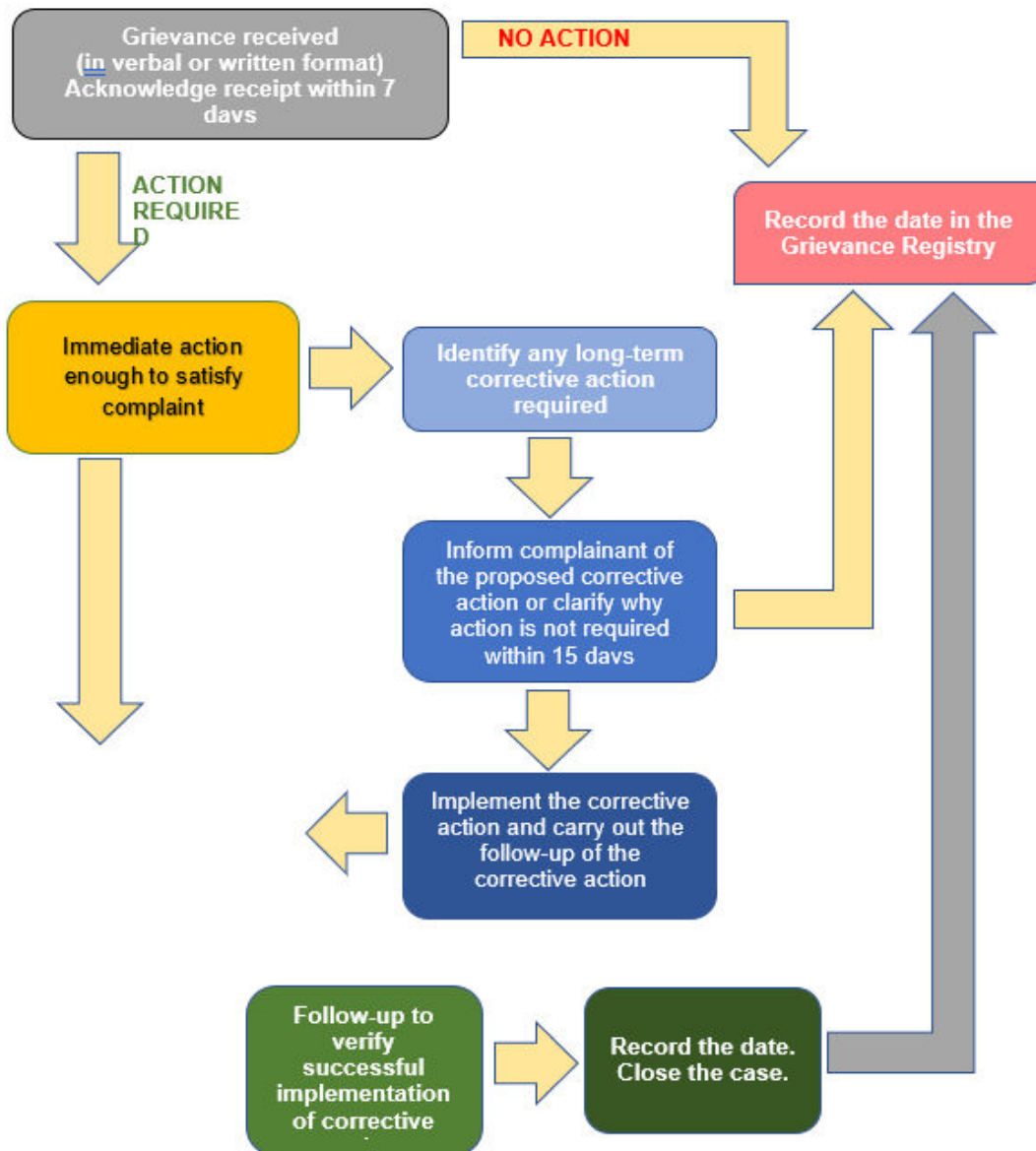


Figure 8. Complaint handling mechanism

<b>Project Complaint Form</b>	
<b>Reference Number</b>	
<b>Full name (not mandatory)</b>  I would like to submit my complaint anonymously.  I ask not to reveal my identity without my consent.	
<b>Contact information</b>  Please indicate how you would like to be contacted (mail, phone, e-mail).	<input type="checkbox"/> <b>By mail:</b> Please provide the mailing address: _____ _____ <input type="checkbox"/> <b>By phone:</b> _____ <input type="checkbox"/> <b>By E-mail:</b> _____
<b>Preferred language of communication</b>	<input type="checkbox"/> <b>Albanian</b> <input type="checkbox"/> <b>Serbian</b> <input type="checkbox"/> <b>Other:</b> _____
<b>Description of incident for complaint</b> What happened? Where did it happen? Who did it happen to? What is the outcome of the problem?	
<b>Date of Incident / Complaint</b>	<input type="checkbox"/> <b>One time incident/complaint</b> (date _____) <input type="checkbox"/> <b>It happened more than once</b> (how many times? _____) <input type="checkbox"/> <b>Ongoing</b> (currently experiencing a problem)
<b>What would you like to see happen?</b>	
Contact information for questions and complaints: <b>FLAWS Project</b> <b>Address:</b> Hajdar Dushi, 1-B Nr.7 <b>Tel:</b> + 383 48 600 883 <b>E-mail:</b> <a href="mailto:complaints@flows-ks.info">complaints@flows-ks.info</a>	Signature: _____  Date: _____

Figure 9. Compliant form

## 11. IMPLEMENTATION AND REPORTING OF ESMP

The following roles and responsibilities of various stakeholders involved in the implementation and reporting of the Environmental and Social Management Plan (ESMP) for the project are outlined below:

### Contractor:

The Contractor is responsible for implementing the Environmental and Social Management Plan (ESMP). They are required to report on a monthly basis regarding the implementation of the ESMP. Additionally, the Contractor must monitor, keep records, and report to RWC Hidromorava on various environmental and social issues, including safety, incidents, workers' grievances, and stakeholder engagement.

### Supervisor:

The Supervisor is responsible for the preparation and implementation of a program for monitoring environmental and social impacts during and after construction (implementation and operation of the project). They are required to report on a monthly basis regarding the monitoring of the ESMP to RWC Hidromorava.

### RWC Hidromorava:

RWC Hidromorava plays a supervisory role in the overall implementation process. They receive reports from both the Contractor and Supervisor regarding environmental and social issues. RWC Hidromorava is responsible for overseeing the execution of the ESMP and ensuring compliance with environmental and social standards.

### PMT:

The PMT, established for the FLOWS Program, within the Ministry of Environment, Spatial Planning and Infrastructure (MESPI), is primarily responsible for managing environmental and social compliance, procurement, financial management, and monitoring and evaluation reporting under the FLOWS. The PMT ensures that subproject development objectives are met and facilitates communication with relevant ministries and local government entities to ensure timely implementation of activities.

The PMT is responsible for reporting the implementation of the ESMP to the World Bank.

### Municipalities:

The Inspectorate of Kamenica Municipality oversees the implementation of the ESMP/EMMP at the project site in Kamenica, while the Inspectorate of Gjilan Municipality is responsible for Line 0 in Perlepnica. Both inspectorates ensure compliance with environmental and social standards, as well as all permit requirements.

## Annex 1 -ENVIRONMENTAL AND SOCIAL REQUIREMENTS FOR THE CONTRACTOR

Contractor shall meet the following Environmental, Social, Health and, Safety (including labor) requirements – thereafter called ESHS requirements.

The ESHS requirements include 9 sections:

1. Contractor Environmental and Social Management Plan (C-ESMP)
2. ESHS Training
3. Construction Site Management
4. Occupational Health and Safety (OHS)
5. Emergency Preparedness and Response
6. Stakeholder Engagement
7. Code of Conduct
8. Contractor Environmental and Social Reporting

### 1. Contractor Environmental and Social Management Plan (C-ESMP)

- ✓ Prepare and submit to FLOWS/PMT for approval a Contractor Environmental and Social Management Plan (C-ESMP).
- ✓ Include in the C-ESMP a detailed explanation of how the contractor’s performance will meet the ESHS requirements
- ✓ Ensure that sufficient funds are budgeted to meet the ESHS requirements, and that sufficient capacity is in place to oversee, monitor and report on C-ESMP performance.
- ✓ Put in place controls and procedures to manage their ESHS performance. Get prior written approval from Hidromorava before starting construction /rehabilitation activities.

### 2. ESHS Training

- ✓ Determine ESHS training needs in collaboration with Hidromorava and PMT.
- ✓ Maintain records of all ESHS training, orientation, and induction.
- ✓ Ensure, through appropriate contract specifications and monitoring that service providers, as well as contracted and subcontracted labor, are trained adequately before assignments begin.
- ✓ Demonstrate that its employees are competent to carry out their activities and duties safely. For this purpose, the Contractor shall issue a Competence Certificate for every person working on site (relative to trade and aspect of work assignment) that specifies which tasks can be undertaken by which key personnel.
- ✓ Training should include occupational health and safety measures, GBV HS and social health and safety measures, Environmental health and safety measures, waste management and hazardous materials management.

#### *Orientation Training*

- ✓ Provide ESHS orientation training to all employees, including management, supervisors, and workers, as well as to subcontractors, so that they are apprised of the basic site rules of work at/on the site and of personal protection and preventing injury to fellow employees.
- ✓ Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

#### *Visitor Orientation*

- ✓ Establish an orientation program for visitors, including vendors that could access areas where hazardous conditions or substances may be present.
- ✓ Visitors shall not enter hazard areas unescorted.

- ✓ Ensure that visitors shall always be accompanied by an authorized member of the contractor, or a representative of FLOWS/PMT, who has successfully fulfilled the ESHS orientation training, and who is familiar with the subproject site construction hazards, layout, and restricted working areas.

#### *New Task Employee and Contractor Training*

- ✓ Ensure that all workers and subcontractors, prior to commencement of new assignments, have received adequate training and information enabling them to understand work hazards and to protect their health from hazardous ambient factors that may be present. The training should adequately cover the step-by-step process that is needed for subproject activities to be undertaken safely, with minimum harm to the environment, including:
  - Knowledge of materials, equipment, and tools
  - Known hazards in the operations and how they are controlled
  - Potential risks to health
  - Precautions to prevent exposure
  - Hygiene requirements
  - Wearing and use of protective equipment and clothing
  - Appropriate response to operation extremes, incidents and accidents

### 3. Construction Site Management

#### *Vegetation*

- ✓ Prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the construction site
- ✓ Protect all trees and vegetation from damage by construction operations and equipment, except where clearing is required for permanent works, approved construction roads, or excavation operations
- ✓ Revegetate damaged areas on completion of the works, and for areas that cannot be revegetated, scarifying the work area to a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion
- ✓ Repair, replant, reseed or otherwise correct, as directed by Flows or PMT, and at the Contractor's own expense, all unnecessary destruction, scarring, damage, or defacing of the landscape resulting from the Contractors operations
- ✓ Transport labor and equipment in a manner to avoid as much as possible damage to grazing land, crops, and property

#### *Protection of the Existing Installations*

- ✓ Safeguard all existing buildings, structures, works, pipes, cables, sewers, or other services or installations from harm, disturbance or deterioration during construction activities
- ✓ Coordinate with local authorities to identify existing infrastructure that might not be visible
- ✓ Repair any damage caused by the Contractor's activities, in coordination with concerned authorities.
- ✓ Take all reasonable precautions to prevent or reduce any disturbance or inconvenience to the owners, tenants or occupiers of properties to the construction activities, and more generally to the public
- ✓ Maintain safe access to public and private properties that might be affected by construction activities. If necessary, provide acceptable alternative means of passage or access to the satisfaction of the persons affected.
- ✓ Working during night hours is not permitted.

#### *Waste from Construction Activities*



- ✓ Collect and properly store and manage all solid wastes and hazardous wastes resulting from the construction activities, including construction debris and spoils, to prevent the contamination of soil and groundwater. In case chemicals are present they should be stored and disposed according to their MSDS
- ✓ Remove unneeded excavation material from construction sites as soon as possible
- ✓ Agree with relevant municipalities about construction waste disposal
- ✓ Minimize littering of roads by ensuring that vehicles are licensed and loaded in such a manner as to prevent falling off or spilling of construction materials, and by sheeting the sides and tops of all vehicles carrying mud, sand, other materials or debris
- ✓ Transfer construction waste to assigned places in the selected waste disposal sites with documented confirmation.
- ✓ Properly dispose of solid waste and debris and hazardous waste at designated permitted sites waste disposal sites allocated by the local authorities and obtain a receipt of waste from the authorized landfill authority.

#### *Hazardous and Toxic Materials*

- ✓ Toxic and deleterious wastes resulting from the Project Company's activities require special attention in order to forestall their introduction into the natural environment which could result in harm to people, aquatic life or natural growth of the area. The Contractor shall take precautions relative to the conditions specified herein.
- ✓ Train workers regarding the handling of hazardous materials.
- ✓ Store hazardous materials as per the statutory provisions of the Manufactures.
- ✓ Provide adequate secondary containment for fuel storage tanks and for the temporary storage of other fluids such as lubricating oils and hydraulic fluids,
- ✓ Use impervious surfaces for refueling areas and other fluid transfer areas
- ✓ Train workers on the correct transfer and handling of fuels and chemicals and the response to spills
- ✓ Provide portable spill containment and cleanup equipment on site and training in the equipment deployment
- ✓ Deposit or discharge toxic liquids, chemicals, fuels, lubricants and bitumen into containers for salvage or subsequent removal to off-site locations.
- ✓ Treat hazardous waste separately from other waste
- ✓ Avoid the storage or handling of toxic liquid adjacent to or draining into drainage facility.
- ✓ Keep absorbent materials or compounds on Site in sufficient quantities corresponding to the extent of possible spills.

#### *Area Signage*

- ✓ Appropriately mark hazardous areas.
- ✓ Install warning signs.
- ✓ Ensure that signage is in accordance with international standards and is well known to, and easily understood by workers, visitors and the general public as appropriate.
- ✓ Demarcate work sites with safety tape, fencing or barricades, as appropriate, to prevent unauthorized access to the construction sites
- ✓ Safeguard public safety by covering holes and by installing guardrails along temporary pathways.

#### *Decommissioning of Worksites and Plant*

- ✓ Clear construction sites of any equipment or waste, and ensuring that the sites are free from contamination.
- ✓ Dispose of or recycle any equipment or waste in an appropriate and environmentally sound manner.
- ✓ Hand construction sites over to the original owners, taking into account his/her wishes and national legislation.

#### 4. Occupational Health and Safety (OHS)

##### Severe Weather and Facility Shutdown

- ✓ Design and build work place structures to withstand the expected elements for the region and designate an area designated for safe refuge, if appropriate.
- ✓ Develop Standard Operating Procedures (SOPs) for subproject or process shut-down, including an evacuation plan.

##### Lavatories and Showers

- ✓ Provide adequate lavatory facility (toilets and washing areas) for the number of people expected to work at the construction sites.
- ✓ Provide toilet facility with adequate supplies (e.g. soap, disinfectants, etc).
- ✓ Where workers may be exposed to substances poisonous by ingestion and skin contamination may occur, provide facility for showering and changing into and out of street and work clothes.

##### Potable Water Supply

- ✓ Provide adequate supplies of potable drinking water
- ✓ Ensure that water supplied for the personal hygiene (washing) meets water quality standards.

##### Clean Eating Area

- ✓ Where there is potential for exposure to substances poisonous by ingestion, make suitable arrangements to provide clean eating areas where workers are not exposed to the hazardous or noxious substances

##### Personal Protective Equipment (PPE)

- ✓ Identify and provide at no cost appropriate PPE to workers, the workers of subcontractors, as well as to visitors, which gives adequate protection.
- ✓ Ensure that the use of PPE is compulsory.
- ✓ Provide sufficient training in the use, storage and maintenance of PPE to its workers and workers of its subcontractors.
- ✓ Properly maintain PPE, including cleaning when dirty and replacement when damaged or worn out;
- ✓ Determine requirements for standard and/or task-specific PPE based on of Job specific Safety Analysis;
- ✓ Consider the use of PPE as a last resort when it comes to hazard control and prevention, and always refer to the hierarchy of hazard controls when planning a safety process.

##### Noise

Institute appropriate measures to reduce the exposure of workers to construction noise, including but not limited to:

- ✓ Avoid exposure to a noise level greater than 85 dB for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB.
- ✓ Enforce the use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85dB, the peak sound levels reach 140dB, or the average maximum sound level reaches 110dB.
- ✓ Provide hearing protective devices capable of reducing sound levels at the ear to at most 85 dB(A).
- ✓ Rotate staff to limit individual exposure to high levels.
- ✓ Install practical acoustical attenuation on construction equipment, such as mufflers.
- ✓ Use silenced air compressors and power generators.
- ✓ Keep all machinery in good condition.
- ✓ Install exhaust silencing equipment on bulldozers, compactors, crane, dump trucks, excavators, graders, loaders, scrapers and shovels.

- ✓ Post signs in all area where the sound pressure level exceeds 85 dB.
- ✓ Shut down equipment when not directly in use.
- ✓ Provide advance notice to occupants if an activity involving high level impact noise is in close proximity to buildings.

#### First Aid and Accidents

- ✓ Ensure that qualified first-aid by qualified personnel is always available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work.
- ✓ Provide workers with rescue and first-aid duties with dedicated training so as not to inadvertently aggravate exposures and health hazards to themselves or their co-workers. Training would include the risks of becoming infected with blood-borne pathogens through contact with bodily fluids and tissue.
- ✓ Provide eye-wash stations and/or emergency showers close to all workstations where immediate flushing with water is the recommended first-aid response.
- ✓ Provide dedicated and appropriately equipped first-aid room(s) where the scale of work or the type of activity being carried out so requires.
- ✓ Equip first-aid stations and rooms with gloves, gowns, and masks for protection against direct contact with blood and other body fluids.
- ✓ Make widely available written emergency procedures for dealing with cases of trauma or serious illness, including procedures for transferring patient care to an appropriate medical facility.
- ✓ Immediately report all accidental occurrences with serious accident potential such as major equipment failures, contact with high-voltage lines, and exposure to hazardous materials, slides, or cave-ins to Hidromorava and FLOWS/PMT.
- ✓ Immediately investigate any serious or fatal injury or disease caused by the progress of work by the Contractor, and submit a comprehensive report to Hidromorava and FLOWS/PMT.

#### 5. Emergencies

- ✓ Establish and maintain an emergency preparedness and response system, in collaboration with appropriate and relevant third parties including to cover: (i) the contingencies that could affect personnel and facility of the subproject to be financed; (ii) the need to protect the health and safety of subproject workers; (iii) the need to protect the health and safety of the affected communities
- ✓ The emergency preparedness and response system shall include:
  - Identification of the emergency scenarios
  - Specific emergency response procedures
  - Training of emergency response teams
  - Emergency contacts and communication systems/protocols (including communication with affected communities when necessary)
  - Procedures for interaction with government authorities (emergency, health, environmental authorities)
  - Permanently stationed emergency equipment and facility (e.g., first-aid stations, firefighting equipment, spill response equipment, personal protection equipment for the emergency response teams).
  - Protocols for the use of the emergency equipment and facility.
  - Clear identification of evacuation routes and muster points.
  - Emergency drills and their periodicity based on assigned emergency levels or tiers.
  - Decontamination procedures and means to proceed with urgent remedial measures to contain, limit and reduce pollution within the physical boundaries of the subproject property and assets to the extent possible.

## 6. Stakeholder Engagement

- ✓ The Contractor will be required to undertake a process of stakeholder engagement with representative persons and communities directly affected by the activities it undertakes, including, if necessary, the public disclosure of its C-ESMP. The Contractor shall also maintain throughout the subproject, good relations with local communities and will give these communities prior notice of plans and schedules as they might affect local people.
- ✓ The stakeholder engagement process will also be applicable in the event of land acquisition associated with changes in the footprint of activities.

### Labour Force Management

#### Labour Influx

- ✓ Avoid contamination of fresh water sources.
- ✓ Provide opportunities for workers to regularly return to their families.
- ✓ Provide opportunities for workers to take advantage of entertainment opportunities away from rural host communities.
- ✓ Ensure that children and minors are not employed directly or indirectly on the subproject, and keep registration and proof of age for all employees on-site.
- ✓ Pay adequate salaries for workers to reduce incentive for theft.
- ✓ Pay salaries into workers' bank accounts.
- ✓ Get an appropriate mix of locally and non- locally procured goods to allow local subproject benefits while reducing risk of crowding out of and price hikes for local consumers.
- ✓ Hire workers through recruitment offices, and avoid hiring 'at the gate' to discourage spontaneous influx of job seekers
- ✓ Identify authorized water supply source and prohibiting use from other community sources.
- ✓ Put in place measures to reduce water and electricity consumption.
- ✓ Employ locals to the extent possible.
- ✓ Develop and adopt a Gender Action Plan to promote the transfer of construction skills to local women, to facilitate their employment at the subproject site, including training and recruitment targets.

#### Labor Conditions

- ✓ Implement the measures and commitments defined in the Labor Management Procedures.
- ✓ Provide all workers with terms and conditions that comply with Kosovo Labor Law and applicable International Labour Organization conventions on workplace conditions.

#### Insurance

- ✓ Provide insurance for all employees involved in onsite activities.
- ✓ Compensate any employee for death or injury, except to the extent that liability arises.

#### Grievance Mechanism for Workers

The Contractor will put in place a Grievance Mechanism for its workers and the workers of its subcontractors that is proportionate to its workforce. The GM shall be distinct from the subproject level Grievance Mechanism for affected individuals and communities, and shall adhere to the following principles:

- ✓ *Provision of information.* All workers should be informed about the grievance mechanism at the time they are hired, and details about how it operates should be easily available, for example, included in worker documentation or on notice boards.
- ✓ *Transparency of the process.* Workers must know to whom they can turn in the event of a grievance and the support and sources of advice that are available to them. All line and senior managers must be familiar with their organization's grievance procedure.

- ✓ *Keeping it up to date.* The process should be regularly reviewed and kept up to date, for example, by referencing any new statutory guidelines, changes in contracts or representation.
- ✓ *Confidentiality.* The process should ensure that a complaint is dealt with confidentially. While procedures may specify that complaints should first be made to the workers' line manager, there should also be the option of raising a grievance first with an alternative manager, for example, a human resource (personnel) manager.
- ✓ *Non-retribution.* Procedures should guarantee that any worker raising a complaint will not be subject to any reprisal.
- ✓ *Reasonable timescales.* Procedures should allow for time to investigate grievances fully but should aim for swift resolutions. The longer a grievance is allowed to continue, the harder it can be for both sides to get back to normal afterwards. Time limits should be set for each stage of the process, for example, a maximum time between a grievance being raised and the setting up of a meeting to investigate it.
- ✓ *Right of appeal.* A worker should have the right to appeal to the World Bank or national courts if he or she is not happy with the initial finding.
- ✓ *Right to be accompanied.* In any meetings or hearings, the worker should have the right to be accompanied by a colleague, friend or union representative.
- ✓ *Keeping records.* Written records should be kept at all stages. The initial complaint should be in writing, if possible, along with the response, notes of any meetings and the findings and the reasons for the findings. Any records on SEA shall be registered separately and under the strictest confidentiality.
- ✓ *Relationship with collective agreements.* Grievance procedures should be consistent with any collective agreements.
- ✓ *Relationship with regulation.* Grievance processes should be compliant with the national employment code

#### Protection from Sexual Exploitation and Abuse

- ✓ Provide repeated training and awareness raising to the workforce about refraining from unacceptable conduct toward local community members, specifically women.
- ✓ Inform workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted.
- ✓ Prohibit its employees from exchanging any money, goods, services, or other things of value, for sexual favors or activities, or from engaging any sexual activities that are exploitive or degrading to any person.
- ✓ Develop a system to capture gender-based violence, sexual exploitation and workplace sexual harassment related complaints/issues.
- ✓ Adopt a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.

#### Protection from Child Labor

- ✓ Exclude all persons under the age of 18 and verify that workers are older than 18 when hiring.
- ✓ Review and retain copies of verifiable documentation concerning the age of workers.

#### 7. Code of Conduct

- ✓ Contractors shall ensure that all employees, including those of subcontractors, are informed about and sign Code of Conduct.

#### 8. Contractor Environmental and Social Reporting

Contractors shall monitor, keep records and report on the following environmental and social issues:

- ✓ *Safety:* hours worked, lost time injury (LTI), lost workdays, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).

- ✓ *Environmental incidents and near misses:* environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.
- ✓ *Major works:* those undertaken and completed, progress against subproject schedule, and key work fronts (work areas).
- ✓ *ESHS requirements:* noncompliance incidents with permits and national law (legal noncompliance), subproject commitments, or other ESHS requirements.
- ✓ *ESHS inspections and audits:* by Project Company, Independent Engineer, FLOWS/PMT and its implementing partners, or others—to include date, inspector or auditor name, sites visited and records reviewed, major findings, and actions taken.
- ✓ *Workers:* list of workers at each site, confirmation of ESHS training, indication of origin (expatriate, local, nonlocal nationals), gender, age with evidence that no child labor is involved, and skill level (unskilled, skilled, supervisory, professional, management).
- ✓ *Training on ESHS issues:* including dates, number of trainees, and topics.
- ✓ *Footprint management:* details of any work outside boundaries or major off-site impacts caused by ongoing construction—to include date, location, impacts, and actions taken.
- ✓ *External stakeholder engagement:* highlights, including formal and informal meetings, and information disclosure and dissemination—to include a breakdown of women and men consulted and themes coming from various stakeholder groups, including vulnerable groups (e.g., disabled, elderly, children, etc.).
- ✓ *Details of any security risks:* details of risks the Project Company may be exposed to while performing its work—the threats may come from third parties external to the subproject.
- ✓ *Worker grievances:* details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.
- ✓ *External stakeholder grievances:* grievance and date submitted, action(s) taken and date(s), resolution (if any) and date, and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report. Grievance data should be gender-disaggregated.
- ✓ *Major changes to Contractors environmental and social practices.*
- ✓ *Deficiency and performance management:* actions taken in response to previous notices of deficiency or observations regarding ESHS performance and/or plans for actions to be taken should continue to be reported to FLOWS/PMT until it determines the issue is resolved satisfactorily.

## ANNEX 2 – ENVIRONMENTAL AND SOCIAL SCREENING

Table 11. Environmental and Social Risk Questionnaire for the subproject ‘The Upgrade of the Water Distribution Network in Municipality of Kamenica’

No	ENVIRONMENTAL AND SOCIAL CHECKLIST QUESTIONNAIRE	YES	NO	Notes
1	Does the proposed activity include new construction and extension of activity?		x	
2	Does the proposed activity include rehabilitation activities?	x		Installation of the water supply pipelines, with approximate length of: L = 11,6 km in Kamenica L = 187 m in Perlepnica
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)?		x	
4	Does the proposed activity require other type of EA under the national legislation?	x		
5	Does the proposed activity require specific public consultations under the national legislation?	x		Public debate <sup>4</sup> is a mandatory part of the EIA process <sup>5</sup> as per national legislation- the Public debate is conducted on 30 <sup>th</sup> Sep 2024 in Kamenica
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?		x	
7	Is the project activity performed in or potentially affects an archaeological or cultural heritage site?		x	Although investment locations are situated away from archaeological sites, any potential chance findings or archaeological discoveries during project implementation shall be reported.
8	Will the project activity be a source of dust, pollutants or some hazardous, toxic or harmful substances in the air?	x		
9	Will the project be a source of greenhouse gases or ozone depletion substances?	x		
10	May the project cause microclimate changes?		x	

<sup>4</sup> Raporti i VNM-së për KRU Hidromorava, pasi që i është caktuar data e mbajtjes së Debateve Publike në Gjilan, Kamenicë dhe Viti (2).pdf

<sup>5</sup> Pelqim Mjedoror KRU HIDROMORAVA 3361 2 24 (1).pdf

11	Will the project be a source of noise and vibration?	x		
12	Will the project generate significant quantities of waste (hazardous, non-hazardous, inert waste)?	x		
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?		x	
14	Will the project generate additional waste water?		x	
15	Are there any risks of contamination of surface waters?		x	
16	Are there any risks of contamination of ground waters?		x	
17	Are there any activities which will lead to physical changes of the water body?		x	
18	Will the project contribute to pollution of international waters?		x	
19	Are there any risks of physical changes of the terrain, soil pollution, sediment loads, erosion, etc.?	x		
20	Will the project involve the use of pesticides or fertilisers?		x	
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?		x	
22	Will the project be located in or near some sensitive or protected area?		x	
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?		x	
24	Will this project affect some critical habitats (forest, wetlands, marshlands, aquatic ecosystems)?		x	
25	Will this project affect some endangered plant/s?		x	
26	Will this project affect some endangered animal species?		x	
27	Is there a right of way issue or need for land acquisition?		x	
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?		x	
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?	x		
30	Does the Project location cover a previously undeveloped area where there will be a loss of green field land?		x	
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?	x		
32	Are there areas within or around the location which are densely populated or built up, that could be affected by the Project?	x		
33	Will the implementation of the project cause physical displacement of individuals, families or businesses?		x	
34	Will the project require a temporary or permanent land acquisition?		x	
35	May the project cause an impact on community assets?	x		



36	May the project cause an impact on community health and safety?	x		
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ANNEX 2 – PROJECT SITE LOCATIONS