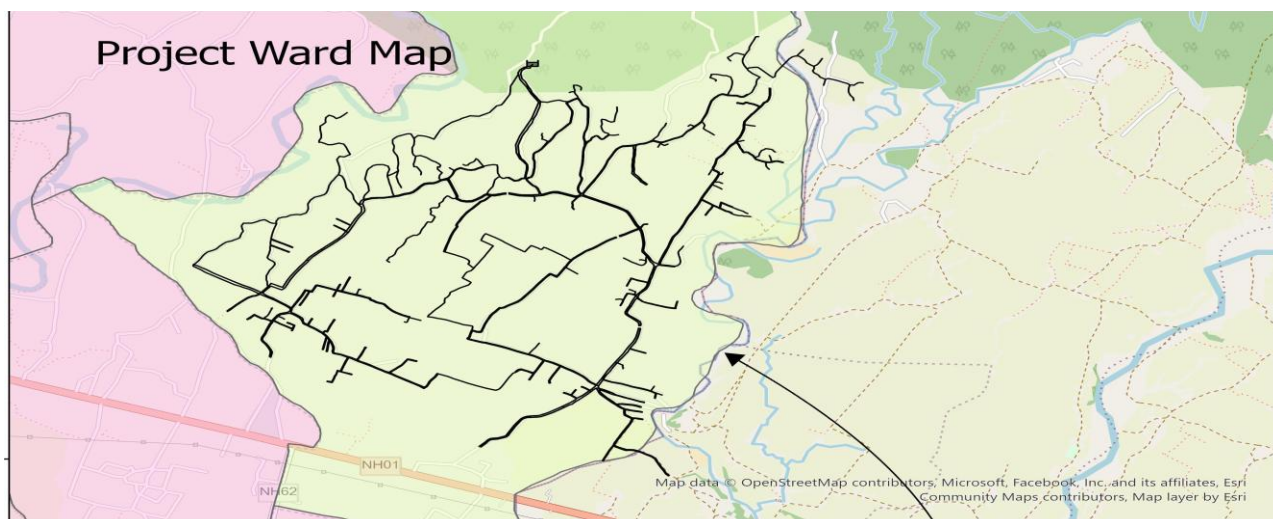




**Government of Nepal**  
**Ministry of Water Supply**  
**Department of Water Supply and Sewerage Management**  
**Water Sector Governance and Infrastructure Support**  
**Project**  
Project Implementation Unit



**Detailed Project Report of Laxmi Water Supply Project**  
**Bardagoriya Rural Municipality-02, Kailali**  
NP-DWSSM-511352-CW-RFB

**Final Report**

Volume I: Main Report and Appendix

Volume II: Drawings

Volume III: Quantity and Cost Estimation

Volume IV: Bidding Document with Specification

Volume V: Environmental & Social Screening Report

**Volume VI: Environmental & Social Management Plan**

**October 2025**

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## **ABBREVIATIONS & ACRONYMS**

BoQ	: Bill of Quantity
CBS	: Central Bureau of Statistics
CoC	: Code of Conduct
DHM	: Department of Hydrology and Meteorology
DPR	: Detailed Project Report
DWSSM	: Department of Water Supply and Sewerage Management
EHS	: Environmental Health and Safety
EPR	: Environmental Protection Rule
ESIA	: Environmental and Social Impact Assessment
ESMP	: Environmental & Social Management Plan
ESMF	: Environmental and Social Management Framework
FPIC	: Free Prior Informed Consent
GBV	: Gender Based Violence
GoN	: Government of Nepal
IDA	: International Development Association
ILO	: International Labour Organization
MoWS	: Ministry of Water Supply
MWASH	: Municipal Water and Sanitation Hygiene
MSL	: Mean Sea Level
MST	: Municipal Support Project
OD	: Outer Diameter
OHS	: Occupational Health and Safety
OHT	: Over Head Tank
PIU	: Project Implementation Unit
PMU	: Project Management Unit
PPE	: Personal Protective Equipment
RAP	: Resettlement Action Plan
RM	: Rural Municipality
RoW	: Right of Way
SEA/SH	: Sexual Exploitation and Abused/ Sexual Harassment
STD	: Sexual Transmitted Disease
WASH	: Water and Sanitation Hygiene
WaSGISP	: Water Sector Governance and Infrastructure Support Project
WSUC	: Water Supply and Users' Committee

## **Executive Summary**

The Laxmi Water Supply and Sanitation (WSS) sub-project is proposed under the Water Sector Governance and Infrastructure Support Project (WaSGISP) with financial support from the World Bank, aims to improve water supply and sanitation services in Bardagoriya Rural Municipality, Sudurpaschim Province. The system is designed to cater the settlements of Ward No.2, ensuring reliable and sustainable water service for current and future needs.

The Laxmi WSS Sub-Project is located in Bardagoriya Rural Municipality (RM), Ward No. 02 in the Kailali district of Sudurpaschim Province. Geographically, the project area is located at latitude 28°41'11.609" N and longitude 81°03' 43.157" E , at an altitude of 149 meters above mean sea level (MSL). The project area experiences a hot and humid climate. Most of the area is flat, with the Kadha River and Patharaiya River flowing through this ward. The project area is approximately 4.5 meters North of Bauniya Chow (Mahendra Highway). The settlement pattern of the project area is heterogeneous.

The site proposed for major structures of the sub-project is located at Ramailo Daanda, Bardagoriya RM-02. The proposed Laxmi WSP site and the ownership belongs to Laxmi WSP of Bardagoriya Rural Municipality. It is surrounded by Goreto Road to the east, Paved Road to the west, Forest to the North and Gravel Road to South. Most of the area is flat. Patharaiya and kada River flow through this ward. . Dhilmil Chowk, Doghara Chowk and Tinkune Chowk are the growing market of this ward.

The intake system uses infiltration galleries with collector wells connected to a sump well on the Kadha River, ensuring continuous supply and easy maintenance. Water is lifted by submersible pumps, selected for their efficiency, low noise, and minimal maintenance; through a 650 m pumping main to a raw water reservoir (200 cum capacity) at Ramailodanda. From there, water is disinfected and stored in two clear water reservoirs of 200 cum each, providing a total of 400 cum storage before distribution. The distribution network, designed using EPAnet, covers 73.5 km of PE with dual lines along wide roads for easier house connections, and includes provisions for a 100 m river crossing, bulk meters, flow control valves, and 1,233 household connections with metering.

The most important part of this sub-project is laying 73.5 km of pipeline along RoW of existing roads, including Bardagoriya Dharmik Road, Kumbhiy Road, Dhilmil chowk Road, Doghara Chowk Road, Tinkune chowk Road. These roads are in public use and require no felling of trees and do not traverse any protected areas or private land. Since the RoW of existing roads are already in public use, there are no issues of land acquisition or outstanding grievances. The pipe trench will have a depth of 90 cm and a width of 60 cm.

**Scope of ESMP:** The Environmental and Social Management Framework (ESMF), developed for the overall project, provides the guiding framework for site-specific environmental and social monitoring

plans in conformance with World Bank policies and project-level standards. This ESMP is prepared in line with the requirements of Nepal's National Environmental Laws and Regulations, as well as the World Bank's environmental and social safeguards, considering the anticipated impacts associated with the proposed sub-project, such as air pollution and noise pollution. The ESMP study for this water supply sub-project will guide its implementation, ensuring that adequate measures are taken to minimize any potential adverse environmental and social impacts associated with construction activities. This ESMP outlines the necessary actions to manage and mitigate negative impacts and risks while enhancing the project's significant positive and beneficial outcomes.

**Environmental and Social Management Plan:** An Environmental and Social Management Plan (ESMP) matrix is included as part of this ESMP, detailing:

- Mitigation measures for environmental impacts during implementation.
- An environmental monitoring program and the responsible entities for mitigation, monitoring, and reporting.
- Public consultation and information disclosure mechanisms.
- A Grievance Redress Mechanism (GRM).

Several potential impacts have already been reduced through design modifications. The ESMP and associated costs for Environmental Management Plan (EMP) implementation will be included in civil works bidding and contract documents, with an indicative EMP implementation cost of NRs. 10,49,000.00 (In Words: Ten Lakhs and Forty Nine Thousand Rupees Only). The items which are not cover in BoQ will be cover from provisional sum

During the construction phase, potential impacts primarily arise from the disposal of moderate quantities of waste soil, as well as disturbances to residents, businesses, and traffic. These are common issues in urban construction, with well-established mitigation methods. Temporary construction-related impacts will be minimized using best construction practices. Traffic management measures will be necessary during pipe laying along busy roads.

The project cost is estimated at NRs **192752377.25** including a 23% allocation for contingencies and VAT. Unit costs and estimates are based on government norms and recent project data.

As per Rule 3 (1) of the Environment Protection Act (EPA), 2019, Environmental Studies must comply with Schedule 1, 2, or 3 of the Environment Protection Regulation 2020 (amended on 2021/05/24). However, this sub-project does not fall under any of these categories, exempting it from a Brief Environmental Study (BES), Initial Environmental Examination (IEE), or Environmental Impact Assessment (EIA). The screening report confirms that the sub-project does not impact National Parks, protected areas, or critical aquatic and terrestrial habitats, with minimal environmental and social consequences and no physical displacement.

The ESMP is integrated into the bid documents and will be reviewed and updated during implementation as needed. It forms part of the contractual obligations for the contractor. The ESMP outlines compliance measures, stakeholder engagement roles, and a Grievance Redress Mechanism (GRM), with a dedicated budget of NRs 10,49,000.00. These measures reinforce the project's commitment to community well-being, social accountability, and environmental sustainability while ensuring long-term operational efficiency.

## 1. INTRODUCTION

### 1.1 Background

The Government of Nepal (GoN) (Ministry of Water Supply (MoWS) as an executing agency and the Department of Water Supply and Sewerage Management (DWSSM)/ Participating Municipalities as implementing agencies) and the International Development Association (IDA) have signed an 80 million USD financing agreement for Water Sector Governance and Infrastructure Support Project (WaSGISP).

### 1.2 Sub-Project Description

The Laxmi WSP Sub-Project is situated in Bardagoriya Rural Municipality, Kailali district, within the Sudurpaschim Province, specifically in Ward No. 02. Geographically, the project area is positioned at a latitude of 28°41'11.609" N and a longitude of 81°03' 43.157" E with an elevation of 179 meters above mean sea level (MSL) Project is located at Ramailo Danda; Kumbhiya at Faliya Bisauney Road which is 4.5 km North from Baumiya Chowk East-West Highway ( Mahendra Highway). The region has a warm and humid climate. It is surrounded by Goreto Road to the east, Paved Road to the west, Forest to the North and Gravel Road to South. Most of the area is flat. Patharaiya and kada River flow through this ward. There is the access to road within the proposed Sub-project Ward area. The Sub-project location with the road accessibility is presented in the figure 1.

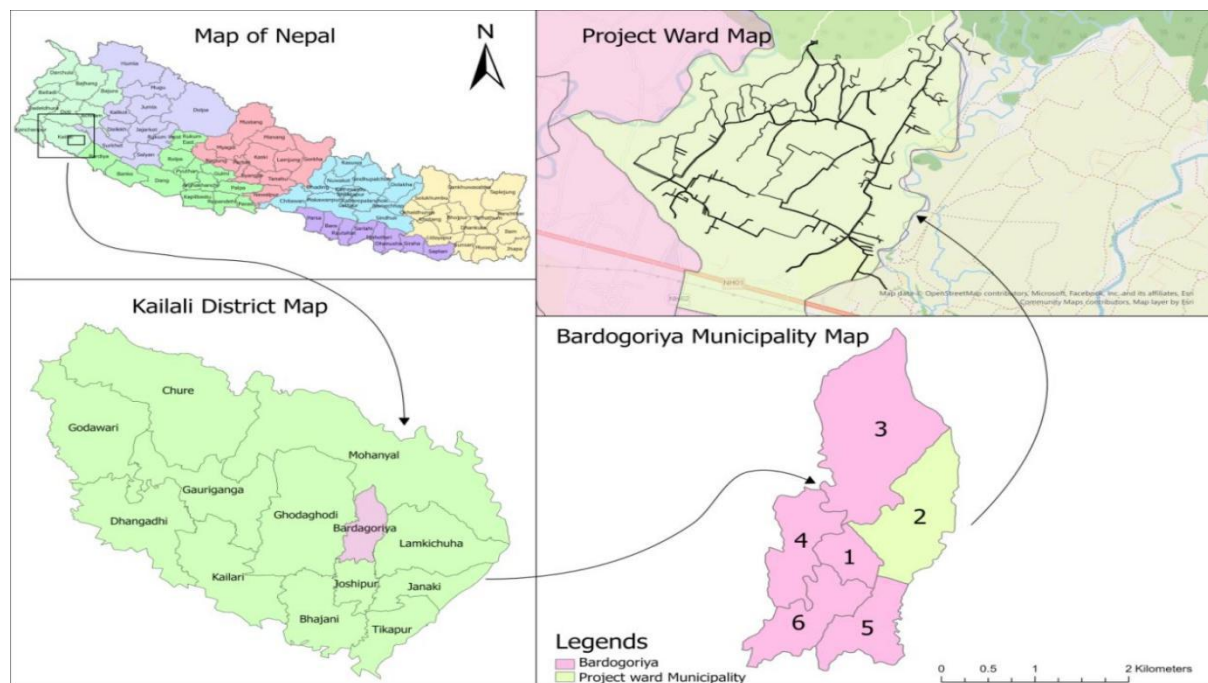
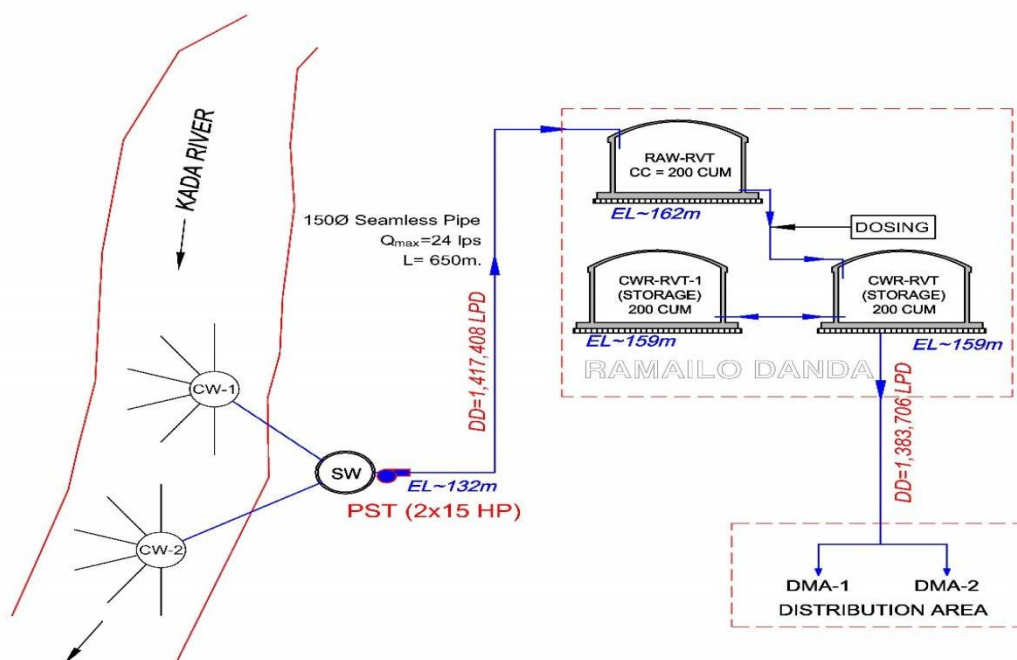


Figure 1: Location map of Laxmi WSP (Ward no. 2)

The demographic composition of the project area is diverse in ethnicity. The population of the service area is 6055 in the survey year 2024 and projected to reach 6409 in the base year 2026. By the end of

the design period in 2046, it is expected to grow to 11143 at an average weighted population growth rate of approximately 2.83.

The Laxmi Water Supply Project (LWSP) is designed as a pumping lift system utilizing subsurface (ground) water sources. The project is proposed for implementation by Bardagoriya Rural Municipality, under the supervision of the Water Sector Governance and Infrastructure Support Project (WaSGISP), and is jointly funded by the World Bank (WB) and Bardagoriya Rural Municipality. The key components of the proposed water supply system include collector wells, a sump well, pumping mains, reservoirs, treatment and disinfection facilities, distribution mains, and other associated infrastructure. The intake system comprises infiltration galleries with collector wells that discharge into a sump well located on the Kada River, ensuring a continuous water supply and facilitating easy maintenance. From the sump well, water is pumped using efficient, low-noise, and low-maintenance submersible pumps through a 650-meter pumping main to a 200-cubic-meter raw water reservoir situated at Ramailodanda. The distribution network, designed using EPANET, comprises 73.5 km of polyethylene (PE) pipelines, including dual-line arrangements along wider roads to facilitate easier household connections. The system also incorporates provisions for a 100-meter river crossing, bulk water meters, flow control valves, and 1,233 metered household connections. The design water demand has been estimated at 1.42 million liters per day (MLPCD). The figure 2 below shows the conceptual framework of laxmi WSP

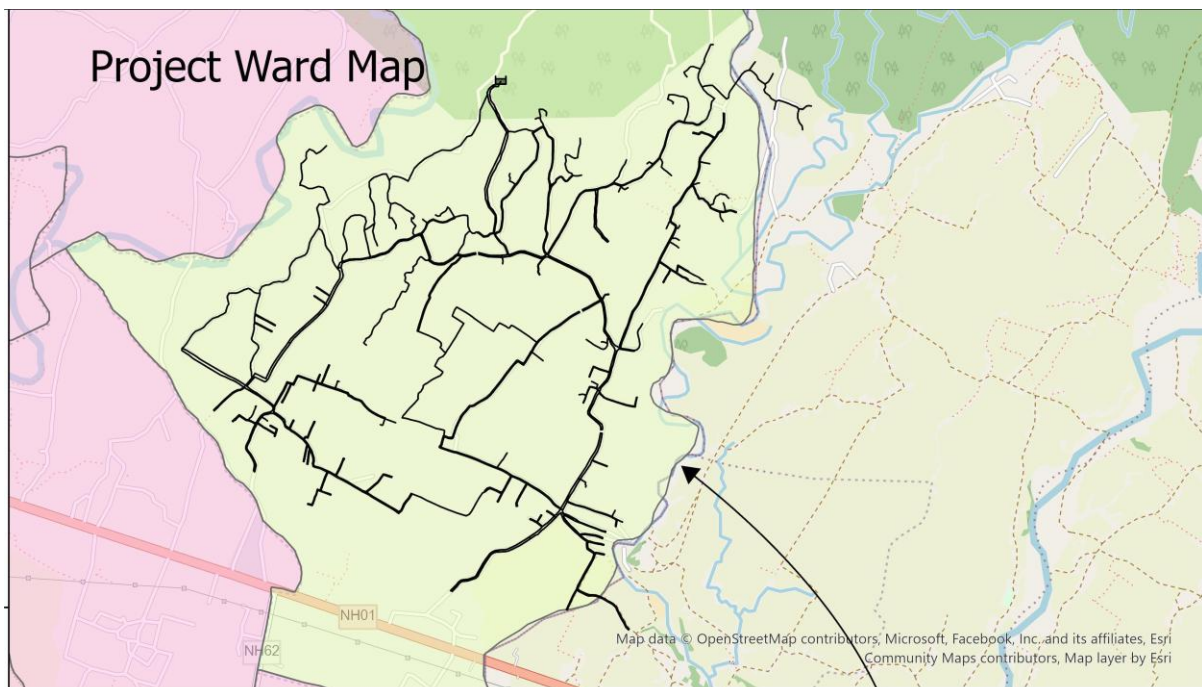


**Figure 2: Proposed Schematic Diagram**

Under WaSGISP intervention following is planned:

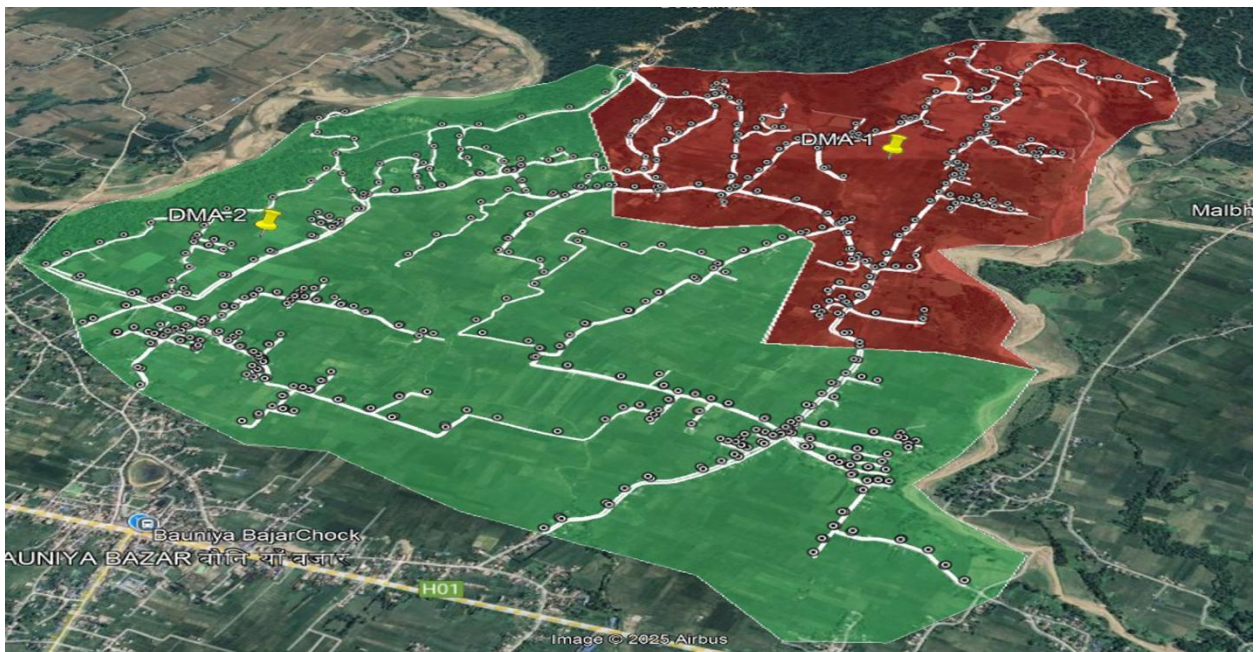
- a. Raw water reservoir:- 1no.,200 Cum Capacity , Clear Water Reservoir- 2 nos. 200 cum Capacity each
- b. RCC frame structure:- Two-storey frame building is proposed for the office at Ramailodanda
- c. Distribution network:- Laying, jointing (by PE coupler), and installation of about 73,542 m of distribution lines.
- d. Household connection:-1233
- e. Crossing:- Cable crossing at Pathariya Khola (100 m proposed)
- f. Intake Arrangement:- Infiltration intake with a 2 no. of collector wells and a sump well at the left bank of Kanda River
- g. Transmission pipe:- 650 m pumping main to a raw water reservoir at Ramailo danda
- h. Transmission electricity line: Stretching of High Tension transmission line to the Sump Well collector and to the Office premises at Ramailo danda
- i. Transformer : 100 kVA transformer at Sump well collector

A GIS based map was prepared to show the layout of the pipeline and coverage of the service area. The map has been presented here.



**Figure 3:- Proposed pipeline of the WSP**

The proposed land for the sub-project is at the Ramaelo dada word no. 2 of Bardagoriya R.M. Laxmi WSS sub-project has enough land to construct all the component of of water supply project and the ownership belongs to Janaki RM (the land ownership certificate is attached in Annex- V). The Laxmi WSP system comprises two District Metering Areas (DMAs) i.e DMA 1 and DMA 2. The distribution pipelines will follow existing public road corridors like Kumbhiya tole Baunya Paschim Tole, Teen Kune Tole, Santoshi Jole, Dhungana Tole, Jhutiya Tole, Jagatpur Tole, Khalla Tole, Bardagoriya Dham, Sahara Ghar, Piruwa Tole, Samiti Tole, Bandewa, Doghara, Algopur, and Pacchlapur. As the pipe laying area on the existing road is clear and already in public use, no additional land acquisition is required. As the pipe laying area on the existing road is clear and already in public use, no additional land acquisition is required ( Road map guideline of Bardagoriya RM will be used during excavation for pipe laying) Consequently, issues or grievances related to compensation payments and land ownership are not anticipated. This sub-project does not require tree felling and does not encroach on protected areas or private land. The proposed pipe line with the District Metering Areas of the Laxmi WSP is shown in the picture below.



**Figure 4: Pipe network of the Laxmi WSP along the existing road with two District Metering Areas**

The above description and illustration demonstrate that the project has been developed with full consideration of environmental measures and is aligned with the Bardagoriya RM's priority objectives for enhancing drinking water services. It will contribute significantly to achieving the development goal with social and environmental safeguard enhancing the standard of living for the local residents and ensuring conditions for sustainable economic development. The salient features of the Laxmi WSS sub-project are given in the subsequent section.

**Table 1: Salient Features of the Sub-Project**

<b>GENERAL INFORMATION</b>		
1	Name of the Project	Laxmi Water Supply and Sanitation Sub-Project
2	Location Area	
	Province	Sudurpaschim
	District	Kailali
	Municipality	Bardagoriya Rural Municipality
	Ward	2
	Location	Ramailo Danda; Kumbhiya at Faliya Bisauney Road
3	Coverage Village	Kumbhiya Tole, Baunya Paschim Tole, Teen Kune Tole, Santoshi Jole, Dhungana Tole, Jhutiya Tole, Jagatpur Tole, Khalla Tole, Bardagoriya Dham, Sahara Ghar Tole, Piruwa Tole, Samiti Tole, Bandewa Tole, Doghara Tole, Algopur Tole, and Pacchlapur Tole.
4	Present Household (2024)	1233
5	Survey Year	2024
6	Base Year ( Project Completion Year)	2026
7	Design Year	2046
8	Survey Year Population (2024)	6055
8	Base Year Population (2026)	6409
9	Population Growth Rate (%)(Weighted Average)	2.83
10	Design Population (2046)	11143
12	Design Water Demand (Mlpcd)	1.42
<b>TECHNICAL ASPECT</b>		
1	Type of Project	Sub-surface Water (Sump well )
2	Name/Type of Source	Sub-surface Water
	Source Location	Kada River near Service Area
3	Location	Ramailo Daanda, Bardagoriya RM-02

		Latitude: 28°41'11.609" N Longitude: 81°03' 43.157" E
<b>Status Of Project</b>		
1	Implementation Status	New Intervention
<b>Project Components</b>		
<b>Components Proposed</b>		
<b>Source Characteristics</b>		
	Source Name	Collector & Sump Well at Kada River
	Source Type	Sub-surface
	Source Location	Within Service Area
	Design Discharge (lps)	12 lps / CW
<b>Reservoir Characteristic</b>		
1	Reservoir Tank(Nos.-Capacity m <sup>3</sup> )	Raw water reservoir-1no.,200 Cum Capacity Clear Water Reservoir- 2 nos. 200 cum Capacity each.
2	Dosing & Chemical Store	A new dosing shed with a store has been recommended with the office premises.
3	Sump Well	1no
4	Collector well	2 no.
5	Office building	Two-storey frame building is proposed for the office at Ramailodanda
6	Water Treatment Plant	1
7	Laboratory Building	1
8	Guard house	2
9	Transformer	1
10	High tension line	1
11	Distribution Pipe (m):	73,542 m
12	Main Gate	2
13	Surface Drainage	1
14	Fire Hydrant	5
15	Air Valve	56

*Environmental & Social Management Plan (ESMP) Report for Laxmi Water Supply Project  
Ward no. 2, Bardagoriya Rural Municipality*

16	Brick Chamber	28
17	RCC Chamber	28
18	Pump House	1
19	Two Chautara	3
20	Household connection	1233
21	Boundary Wall	2 (Security Chain Fencing)
22	Pump House	Pump House proposed at the bank of Kanda River
23	Crossing	Cable crossing at Pathariya Khola of 100m proposed
<b>Available Facilities</b>		
1	Access Road	Bauniya Chowk :- 4.5 km
2	Water	Hand pumps
3	Electricity	11kVA High tension Line
<b>Available Pipes and Proposed Pipes</b>		
2.	<b>Proposed Pipes for distribution system</b>	
	DI Pipe-	
	DI Pipe-	
	PE pipe	73,542.00 m
<b>FINANCIAL</b>		
<b>1</b>	Total Cost of WS Component (Including all VAT and Contingency) NRs.	<b>192752377.25</b>

Under WaSGISP, the following components/intervention are planned and land is available for all components. The details of land area is presented in below table.

**Table 2: Proposed Components, Site Condition and Land Requirement Status**

S.N.	Component	No. of Items	Required land (m <sup>2</sup> )	Site condition	Land availability status	Likely E&S Impacts	Remarks
1	200 m <sup>3</sup> Raw Water Reservoir	1	141.03	Barren Public Land, no vegetation will be cut	Available, ward no. 2 has given consent for its use (Annex-IV, V and VI)	Only minor E&S impacts expected during construction	At Office Premises ( Ramaelo Dada)  - Total Available land 8 kattha ( 2709.4 m <sup>2</sup> )
2	200 m <sup>3</sup> Clean Water Reservoir	2	242.06				
3	Office Building	1	80.67				
4	Dosing Unit Building	1	31.30			Moderate E&S impacts like erosion, dust and noise pollution, OHS and slope stability are expected which shall be outlined in the management plan with mitigation measures.	
5	Septik Tank	1	5				
6	Soak Pit	1	2.3			Only minor E&S impacts expected.	
7	Chautaris	2	29.96			No significant E&S impacts expected..	
	<b>Total</b>		<b>532.32</b>			<b>Total land used-532.32 m<sup>2</sup></b>	<b>Enough Land</b>
8	Collector Well	2	93.74	Site is clear, no vegetation and other structures	Available , Ward no. 2 has given consent letter for it to use. (Annex-IV, V and VI)	Only minor E&S impacts expected	At the Bank of Kada River  Total Available land -2 kattha ( 677.26 m <sup>2</sup> )
9	Sump Well	1	34.74				
10	Pump House	1	11.47				
	<b>Total</b>		<b>139.95</b>			<b>Total land used- 139.95 m<sup>2</sup></b>	<b>Enough Land</b>

All the pipe networks of the WSP is integrated in DMA 1 and DMA 2. The table 4 shows proposed pipe length of the WSP with their respective diameter.

**Table 3: Pipe used for Distribution Network (meter)**

Pipe Type	Length of Pipe (m)		Pipe Type	Length of Pipe (m)
	PE PN 6	PE PN 10		
PE pipe 50 OD		29,760	Pipe of 100 Ømm	
PE pipe 63 OD		9,891	Pipe of 125 Ømm	
PE pipe 75 OD	9,948		Pipe of 150 Ømm	
PE pipe 90 OD	4,377		Pipe of 200 Ømm	
PE pipe 110 OD	2,372		Pipe of 250 Ømm	88
PE pipe 125 OD	9,187		Pipe of 300 Ømm	
PE pipe 140 OD	1,322			
PE pipe 160 OD	2,891		<b>DI Flanged Pipes</b>	
PE pipe 180 OD	1,180		Pipe of 100 Ømm	
PE pipe 200 OD	179		Pipe of 125 Ømm	
PE pipe 225 OD	1,870		Pipe of 150 Ømm	
PE pipe 250 OD	0		Pipe of 200 Ømm	
PE pipe 280 OD	477		Pipe of 250 Ømm	
<b>Sub-Total (m)</b>	<b>33,803</b>	<b>39,651</b>		<b>88</b>
<b>Totally New Pipe Used (m)</b>	<b>73,542</b>			

### 1.3 Rationale of the ESMP

Rule 3 (1) of Environment Protection Act (EPA), 2019 describes completing Environmental Studies as per Schedule 1 or 2 or 3 under Environment Protection Regulation 2020 (First Amendment in 2021/05/24 on Nepal Gazette). For the Sub project, none of the legal provisions are compliable to Schedule 1 or 2 or 3 and hence detailed Environment Study (Brief Environmental Study (BES), Initial Environmental Examination (IEE) and Environmental Impact Study (EIA) is not mandatory. The screening report revealed that the proposed WSP does not lies in any National Parks /Protected areas or any critical aquatic and terrestrial habitat area. So, there is minimal environmental/or social impacts and no physical displacement is caused by the sub-project. Consequently, in accordance with the

Environmental and Social Risk Management Procedures outlined in Chapter 6 of ESMF, this sub-project is categorized as having a 'moderate risk of impact' (Category III), necessitating the preparation of Environmental and Social Management Plan (ESMP) to comply with World Bank Environmental and Social Standards (ESS) requirements. The ESMP includes several matrices identifying key risks and setting out E&S mitigation measures. It also includes key elements relevant to delivery of the E&S management measures, such as institutional/ implementation arrangements, plans for capacity building and training and budget. The issues and risks identified in the matrix are based on current detailed design information of the site. The ESMP will form part of the bid document and to be reviewed and updated during implementation as per requirements. The ESMP will be included in the contractual clauses and will be made binding on the contracting firm.

#### **1.4 Scope and Objective of Environment and Social Management Plan (ESMP)**

The ESMF, which was developed for the overall project provides the guiding framework for the site-specific environmental and social monitoring plan study in conformance with World Bank policy and accordingly the project-level standards. This ESMP is prepared in line with the requirements of the National Environmental Law and Regulations of Nepal and World Bank considering the anticipated impacts associated with the proposed sub-project, such as: air pollution, noise pollution among other effects. The ESMP study for Water Supply sub-projects will guide the sub-project implementation and ensure that adequate measures are taken to protect and minimize any potential adverse environmental and social impacts associated with the proposed construction works. This ESMP provides the actions required to be taken for managing and keeping the negative impacts and risk of the proposed water supply scheme to a minimum, while enhancing the significant positive and beneficial impacts.

The major objective of this Environment and Social Management Plan (ESMP) is to mitigate any social and environment impacts in development interventions. The specific objectives are:

- To identify the existing site-specific environmental and social condition of the project area;
- To identify the environmental and social risks and impacts of the proposed development intervention;
- To explore alternatives, and suggest practical mitigation measures with sufficient budget to mitigate the adverse environmental impacts;
- To prepare environmental monitoring plan;
- To specify institutional arrangement, and roles and responsibilities for environmental and social risk management, and monitoring of the sub-project.

## **1.5 Legal and Policy Framework**

Under the legal and policy framework, a brief of legal acts, policies, regulations and guidelines of the GoN and the World Banks Environmental and Social Standards have been discussed that are relevant and applicable to the Laxmi WSS Sub- Project.

The ESMF reviewed country's legal and institutional framework, identified gaps from comparison of national and World Bank ESF requirements and suggested corresponding measures to meet the requirements. Six of the ten World Bank Environmental and Social Standards (ESSs) are relevant to this project, namely ESS1 on Environmental Assessments, ESS2 on Labor and Working Conditions, ESS3 on Resource Efficiency and Pollution Prevention and Management, ESS4 on community Health and Safety, ESS5 on Involuntary Resettlement, ESS8 Cultural Heritage and ESS10 on Stakeholder Engagement and Information Disclosure.

## 2. DESCRIPTION OF STUDY AREA

### 2.1 Location and Accessibility

The Laxmi WSS Sub-Project is situated in Bardagoriya Rural Municipality, Ward No. 2, Kailali District, Sudurpashim Province. The project area is located 4.5 km north from East-West Highway of Bauniya Chowk. Doghara Chowk, Dilmil Chowk is its largest market. Most of the area is flat. Patharaiya and Kadha rivers flow through this ward. The settlement pattern of the project area is heterogeneous.

Geographically, the area lies at a latitude of 28°41'11.609" N and longitude 81°03' 43.157" E and an altitude of 179 meters above mean sea level (MSL). The climate is characterized as hot and humid. It is surrounded by gravel road to east and south side, Blacktop road to the west and Forest to the north site. The Pathariya River delineates the boundary between the project area and the neighboring municipalities of Lamki Chuha.



Figure 5: Proposed Location of Laxmi Water Supply Project in Google Map

### 2.2 Ground Water Availability

The Laxmi Water Supply and Sanitation (WSS) Project in Bardagoriya RM was being proposed for construction by the Bardagoriya Rural Municipality office with the supervision of Water Sector Governance and infrastructure Support Project (WaSGISP) and Partial funded by World Bank (WB). The primary water source for this sub-project is groundwater.

The sub-project's proposed tube wells will have a pumping discharge capacity of 12 liters per second (lps) per pump with a safe yield 9.6 lps

**Table 4: Design of Pumps at the sump well**

Total Discharge	<b>24.00</b> lps
Pump Discharge and No of Pumps	<b>12 lps</b> 2 nos
However, the Available Size of the Seamless Pipe is	<b>150</b> mm
Length (stretch) of Pipe	<b>650</b> m
Head Loss in Pipe per 100 m	1.237

S N	Description of items	Nos. or m	Head	Remarks
<b>1</b>	<b>Static Head Calculation</b>			
	Depth of S. Well	m.	<b>6</b>	
	GL differences between SW & GL of RAW-RVT	m.	<b>34</b>	
	Height of Inlet of RAW-RVT from GL	m.	<b>3</b>	
	Design Residual Head	m.	<b>6</b>	
	<b>Total of 1.1</b>	m.	<b>49</b>	
<b>2</b>	<b>Dynamic Head Calculation</b>			
	Friction and Other Losses	m.	8 m	
	Head losses in the Bell mouth	1	0.05 m	
	Head losses in Bend (max of 90 degrees)	6	0.23 m	
	Head losses in NRV	1	0.19 m	
	Head losses in the Valve (max in the Glove Valve)	1	0.48 m	
	Other Losses listed above in 1.2)	20%	1.88 m	
	<b>Total of 1.2</b>	m.	<b>11 m</b>	
	Total Design Head (H)	m.	<b>60 m</b>	
	Name of the pump	Lubi Submersible Pump or its equivalent		
	Pump Model	W 46/7 (Lubi Submersible Pump or Equivalent)		
	Phase and HZ	3 Phase 50 Hz		
	Power of Pump	<b>11 KW</b>		

	Efficiency of Pump (n)	64 %		
	Say	<b>15.00 HP.</b>		

## 2.3 Physical Features

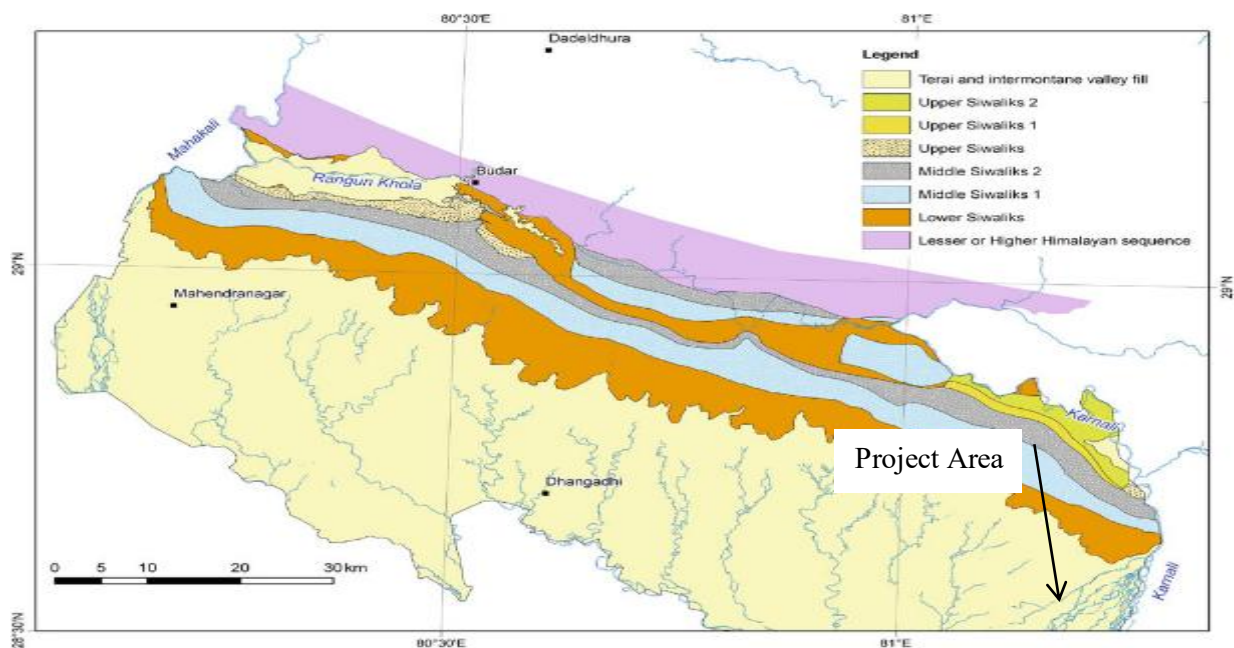
### 2.3.1 Topography and Landuse

The project area lies on plain land of Terai on the northern boundary of the Indogangetic plain at the lap of the Chure foothills. The topography of the project area consists of flat lands molded by perennial and ephemeral streams originating in the foothills (Chure) forming meandering gullies.

Among the total 77.3 sq. km. area of the Bardgoriya Rural Municipality, no scientific land use planning has been undertaken at the moment. However, existing land use can be divided as agricultural, residential/commercial, and forest, and of 15.0961 sq. Km (19.52 %), institutional/public, etc.

### 2.3.2 Geology

Geologically, the project area lies in the Terai Zone of the Nepal Himalaya. The flatland of Terai constitutes the north fringe of the extensive Ganga foreland basin. The Pleistocene and Holocene alluvial accumulations of this strip were laid down by rivers, originating within the Himalaya or beyond it in the Tibetan Plateau. The average thickness of these sediments exceeds 1,500 m. The project area is composed of thick deposit of recent alluvium consisting of gravels, sand and clay. The subsurface geology is dominated by the sediments from large and coalescing fans, the deposits of the Ganga Basin extending to the north, and the sediments constituting the Siwalik trough.



**Figure 6: Modified Geological Map of Western Siwaliks and Terai. Source: Dhital, 2015**

### **2.3.3 Climate**

**Temperature:** The project area lies in Terai region with tropical climatic condition. The temperature rises as high as 46°C during summer and falls as low as 5°C during winter. Both the maximum and minimum temperature is increasing at the rate of 0.023°C /year and 0.016°C /year respectively (*DHM, 2017*).

**Rainfall:** Considering the 30 years rainfall data (from 1984 to 2013) recorded at Dhangadhi, Kailali, the district receives an annual rainfall of 1860.47 mm and the average annual rainfall shows an increasing trend. The observed climate trend analysis of Nepal from year 1971 to 2014 (*DHM, 2017*) shows that the annual precipitation trend of Kailali District is increasing at the rate of 3.44 mm/year but the post-monsoon precipitation shows decreasing trend at the rate of 0.22 mm/year. The temporal distribution of rainfall is highly controlled by the monsoon with more than 80% of rainfall occurring during June to September.

### **2.3.4 Climate Change and Disaster Vulnerability**

According to Climate Change Vulnerability Mapping for Nepal (*MoE, 2010*) based on indices, Kailali district has low combined sensitivity, low overall vulnerability and moderate adaptation capability to the impacts of climate change. Likewise, District Disaster Management Plan of Kailali, (*DDC Kailali, 2070*) has assigned three vulnerability categories (high, medium and low) to different disasters. The project area has medium level earthquake vulnerability, low level flood vulnerability and low level fire vulnerability.

### **2.3.5 Drainage Network**

The project area is drained by some locally originating ephemeral creeks into the Kanda River towards the west and Patharaiya river to the east of the project area. Flat terrain of Kailali has water logging problems especially during monsoon season. During Construction tasks such as earthworks, backfilling, and material stockpiling could obstruct natural drainage flows. This interference might lead to issues such as localized flooding, channel erosion during monsoon. Therefore pipe laying work will be carried out during dry season. Construction will be sequenced to ensure that trenches are back filled promptly to minimize the drainage and pavement disruptions.

### **2.3.6 Air and Water Quality and Noise Level**

Point sources of air and water pollution were not visible in and around the project area. The water quality test of the existing tube wells located at the subproject site was done and found to comply with the NDWQS. Generally, the water in Terai shows occasional increases in iron and turbidity. Therefore, a dosing unit is proposed for the treatment of water pump from the sump well at Kada river. Water from the Kada River has been collected by making small trenches on the riverbed. The

lab tests of water has been done and found compliance within the National Drinking Water Quality Standards, 2062 (refer to Annex-VI).

Vehicles travelling along the Bauniya Faliya Bisauney Road of the project site generate dust, which sometimes increases the suspended particulate matters in the air. Additionally, dust generated by vehicular movement on the paved and unpaved internal roads along the distribution pipeline areas; such as Bardagoriya Dharmik Road, Dhilmil Chowk Road, Doghara Chowk Road, Tinkune Chowk Road causes pollution. The project area is at Ramailo dada far from settlement. Noise in the area primarily comes from vehicle traffic, wind, and frequent visitors. The air quality monitoring test and noise level monitoring has been conducted to establish the baseline and the monitoring report details given in table below.

**Table 5: Air Quality Monitoring Report**

<b>Date</b>	<b>Location</b>	<b>Description</b>		
10th January 2025	Bardagoriya RM-2; Ramailo Dada	PM 2.5 Microgram/Cubic meter	PM 10 Microgram/Cubic meter	Air Temperature Degree Celsius
		35	80	10 <sup>0</sup> C
National Standards of Air Quality, 2069		30 Microgram/Cubic meter	70Microgram/Cubic meter	

**Table 6: Sound Level Monitoring Report**

S.N.	Location	Noise level decible (dB) (day time)			National Standards of Sound Level, 2069 Day Time Limits Leq (Decibel) dB (Day)
		Maximum	Minimum	Average	
1	Office Premises	65	40.3	48.8	65
2	Bardagoriya Dhamik Road	74.3	54.4	61.1	65

**National Ambient Air Quality Standards, 2012 (NAAQS)**

### 2.3.7 Soil Type and Quality

Top soil in the project area is fine textured humus mixed loamy soil productive to vegetation. Regarding the quality of soil, for the remoteness of the project area, the soil is free from pollution of urban origin (like garbage, sewage and industrial discharge).

## 2.4 Biological Features

### 2.4.1 Vegetation

The Laxmi WSS Sub-Project is located in Bardagoriya RM, Ward No. 02 of Kailali district. Kailali district possesses abundant forest resources and a diverse range of biodiversity when compared to other districts of Nepal. Various types of plant species were observed around the sub-project during screening. The project site is adjacent to forest, and the surrounding plant species include Bel (*Aegle marmelos Correa*), Jamun (*Syzygium cumini*), Peepal (*Ficus religiosa*), Mango (*Mangifera indica*), Sisam (*Dalbergia sissoo*), Neem (*Azadirachta indica*), Amala (*Phyllanthus emblica Linn.*), Ashoka (*Saraca asoca*), Guava (*Psidium guajava*), Malu (*Bauhinia vahlii*), and Liptis (*Eucalyptus*), , Tulsi (*Ocimum tenuiflorum*), Sagun (*Tectona grandis*), Sal tree and Mulberry plant etc. managed by the neighboring settlements at their home yards of Ward No. 2 of RM, surrounding the sub-project area.

#### **2.4.2 Fauna/Birds**

The study gathered information on the presence of fauna in the vicinity of the sub-project area. This data was obtained through interviews with local residents. Forests of Kailali district host the mammalian species such as Jackal (*Canis aureus*), Wild Cat (*Felis silvestris*), Monkey (*Macaca mulatta*), etc. However, the sub-project is situated within the settlement area of Ward no. 2 of RM and does not serve as a designated habitat for any terrestrial fauna.

Similarly, the Kailali district and its surroundings host the variety common avian species: Parrot (*Psittaciformes spp.*), Bulbul (*Pycnonotus barbatus*), Dhukur (*Streptopelia orientalis.*), Crow (*Corvus spp.*), Tailorbird (*Orthotomus sutorius*), Kokale/ Grey treepie (*Dendrocitta formosae*), Pigeon (*Columbidae spp.*), Sparrow (*Passeridae spp.*) etc. However, the sub-project area is not a designated bird habitat.

#### **2.4.3 Aquatic life**

The Kanda River is rich in a variety of aquatic plants and animals that help to maintain ecological balance. It is home to fish species such as catfish, tilapia, carp, mudfish, along with various aquatic insects and crustaceans, all of which contribute to the river's food web and serve as key indicators of water quality.

### **2.5 Socioeconomic and Cultural Features**

#### **2.5.1 Demographic Characteristics**

According to the National Population Census 2021 and Bardagoriya Rural Municipality Profile, the total population of ward no-02 is 7,755 including 3,713 males and 4,042 females. This shows that female population outnumbers male population in project area. The sex ratio is 85.65%. But according to the baseline survey 2024, total households are 1233 with population 6053. The baseline survey in this ward revealed the notable presence of Janajati/ethnic group (Tharu Chaudhary, Magar, Gurung etc.) comprising about 41.9%, and the Dalit group comprising about 20.3% of total

households in the project area, whereas 18% are Brahmin, 11.6 % are Chhetri and 8.1% are Thakuri. Tharu Chaudhary are the original inhabitants of this project area. Language spoken mainly depends on the caste/ethnicity. For the majority of people Achhami & Doteli is the most common language followed by Nepali, Tharu, Jumli, Bajureli, Dailekhi, etc.

### **2.5.2 Socio-economic Characteristics**

Agriculture and livestock rearing are the main occupations in the project area. Major crops grown in the project area are cereal crops like paddy, maize and wheat, pulse seeds like gram, red gram, black gram, red lentil and pea, oilseeds like mustards, flaxseed and sesame, vegetables like potato, onion, cauliflower, lady's finger, garlic and cash crops like sugarcane and banana. Livestock reared in the area include cow/oxen, buffalo, goat and pig. Poultry is also common in the area. Meat and dairy are the major livestock products. For the availability of pasture, the livestock/cattle are grazed freely.

Besides agriculture, people are involved in other occupations like Business, Service, Labor and Foreign Employment. As understood from discussion with local people, they have adopted more than one occupations. The business ventures besides commercial agriculture includes wholesale and retail shops of daily utilities, electronics and electrical, packaged food, garments, construction materials, etc. Dhilmil Chowk and Doghara Chowk are the growing market centers in this ward of Bardagoriya Rural Municipality.

According to the National Population and Housing Census 2021, the literacy rate of population 6yrs of age and above of the Rural Municipality is 76%. Literacy is higher in male (83.3%) population than female (69.6%) which reflects the gender discrimination existent in education opportunities.

People have organized into different groups according to their subjective interest and involvement for the welfare to those interest groups. People are involved in community forest user groups, mothers group, youth clubs, civil awareness centers, committees and associations.

### **2.5.3 Available Public Service Facilities**

Laxmi WSP is newly proposed water supply system. There is no any Water Supply & Sanitation Project in Bardagoriya Rural Municipality ward no.02 Laxmi WSP. There are 3 basic schools in this ward. For health care service, one health post, Doghara Basic Health Post, with 3 staff members, which provides primary medical facilities for an average of 50 persons a day. Electricity supply through national transmission has reached to the entire ward. The source of drinking water for majority of families is ground water drawn through shallow tube well. All the settlements of the project area have been connected with road network.

### **2.5.4 Places of Religious and Cultural Importance**

Each specific caste/social groups in the project area have their own cultures based on their religion and traditions. There are many festivals which are specifically celebrated by specific types of social/caste groups. For instance, Maaghi/Maanghey Sakraanti is the major festival celebrated by Tharu community in the area. It is also celebrated by other groups. Additionally, Dashain, Tihar, Janaipurnima, Naag Panchami, Buddha Jayanti, Thulo Ekadashi, Holi, Shivaraatri etc. are other major festivals being celebrated by general people in the project area. Similarly, all of these groups have their own set of intangible heritages example, scared spaces, belief systems, knowledge and practices. But, during consultation with the community, it was reported that project footprints is unlikely to have a bearing on these intangible heritages.

In terms of tangible heritages, there are four places of religious and cultural importance in this ward. They are Bardagoria Temple, Ram Janaki Mandir, Shiva Mandir and many Maruwa (Tharu Temple)

### **2.5.5 Gender Based Violence (GBV) and Sexual Exploitation Abuse (SEA)/ Sexual Harassment (SH)**

Nepal has high incidence rates of GBV cases with mostly girls and women as reported victims. Latest DHS (2022) data shows that 23% of women in Nepal age 15–49 have experienced physical violence since age 15, and 8% have ever experienced sexual violence. Only 28% of women who have ever experienced any type of physical or sexual violence have sought help to stop the violence. Out of the 15 most GBV prevalent countries in the world, Nepal ranks 4th in domestic violence and violence by a partner and child marriage tops 2nd highest in South Asia (DHS, 2022). GBV in Nepal is prevalent due to unequal gender relations and discrimination towards women in both public and private spheres. It has direct implications on the reproductive health status of women and physical, emotional, and mental health of their children.

In case of project district, there is hospital based One Stop Crisis Management Centre (OCMC) at Seti Zonal Hospital of Kailali district, In this OCMC a total of 433 cases have been registered in 2080/081 fiscal year. Out of them there are nine cases of child labour, one case of cyber-crime, 109 cases of denial resources, and 1 case of human trafficking, 53 cases of mental abuse, 95 cases of physical assault / violence, 123 cases of rape, 39 cases of sexual abuse and three cases of social discrimination.

In case of sub-project level there is Department of Women and Children (DWC) under social development unit of Bardagoriya Rural Municipality to resolve the GBV/SEA/SH issues. The Bardagoriya RM has nominated GBV and SEA/SH focal person (Ms. Paanmati Rana). As per the consultation carried out with the local women and with Bauniya Area Police Office, there are 20 cases (3 cases of SH, 2 cases of child labour & 15 domestic violence) in 2080/081 fiscal year related to GBV according to Bauniya Area Police Office and if any such cases happen, then those cases are settled under facilitation of the local elite and social figures. In case, if such cases are not resolved

even under facilitation of the local elite and social figures then they are reported to Rural Municipality office and Area Police Office.

The occurrence of such GBV issues in communities can be further triggered by the sub-project infrastructure work wherein it is expected that around 40 to 45 labours (20 local & 20-25 migrant) will be mobilized per day during the peak construction at the sub project sites. Therefore, potential risks of SEA/SH will be assessed and for which a code of conduct will be adopted to mitigate the SEA/SH impacts of the sub-project and the sample of personal code of conduct for WSS sub-project is attached in Annex VII.

### **3. STUDY METHODS**

The methods adopted to achieve the objective primarily involved map analysis to establish a frame of reference, along with field investigations of the Laxmi WSP. This included the collection of field based information and mapping. The methods included:

#### **3.1 Literature Review and Secondary Data Collection**

The assignment commenced with a review literature and the collection of secondary data. Relevant information was sourced from project documents, including feasibility studies and detailed engineering design reports, district and municipal profile of the project area, topographical maps, geological maps, Google Earth imagery, published and unpublished project- related reports, and climatological records from the Department of Hydrology and Meteorology (DHM).

#### **3.2 Field Survey, Mapping and Verification of Secondary Data**

The study was conducted through an on-site walkthrough of the Laxmi WSP area, primarily focusing on the proposed location. It also included focused group discussions (FGDs), formal consultation meetings, and key informant interview (KII) with the local stakeholders, such as the local government, chamber of commerce, and local residents. Separate consultations with women, Dalits, and Tharu and other disadvantaged groups living in the service area was organized to discuss potential E&S issues related to proposed water supply sub-project and minute of meeting is attached in Annex II. The issues raised during public consultation along with its corresponding mitigation measures is given below in sub-heading 5.1 of public consultation section.

The environmental and social screening checklist was developed through desk study, and review of sub-project related documents, including feasibility studies, detailed engineering design report, environmental impact assessments of similar projects, and stakeholder consultation records. The checklist incorporates different parameters and issues outlined in the ESMF of the WaSGISP project and was further informed through consultations with stakeholders and municipal personnel.

Environmental and social assessment process involved gathering of relevant information on the existing physical, biological and socio-economic, and cultural environmental conditions. This was achieved through field walkthroughs, surveys, measurements, discussions, consultations, and stakeholder interactions. Additionally, potential issues to be addressed in the Environmental and Social Management Plan (ESMP) were identified.

#### **3.3 Desk Work**

Major part of the study was executed through desk-based work, which included engineering design, drawing and mapping, analysis, quantification, and planning of ESMP. Additionally, cost estimation for ESMP was carried out using information obtained from field studies and literature reviews.

## **4. ENVIRONMENT AND SOCIAL MANAGEMENT PLAN**

### **4.1 Impacts and Mitigation**

The proposed Laxmi WSSP expected to have physical, biological, and socio-economic impacts. These impacts may arise during various phases of the project, including pre-construction, construction, and operation and maintenance. While some impacts may be negative, others can be positive. The objective of environmental management is to enhance positive impacts and minimize negative ones through appropriate mitigation measures. Key impacts are described below:

- 1. Disruption of natural drainage and pavements:** The pipe-laying activities along the public road through like Bardagoriya Dharmik Road, Kumbhiy Road and Dhilmilchowk to Bauiya Chowk may disrupt the existing roadside drainage system. Construction tasks such as earthworks, backfilling, and material stockpiling could obstruct natural drainage flows. This interference might lead to issues such as localized flooding, channel erosion, and other related impacts along these routes. Construction will be sequenced to ensure that trenches are back filled promptly to minimize the drainage and pavement disruption.
- 2. Disruption to traffic flow and accessibility:** The excavation and installation of pipelines (trenches 90 cm deep and 60 cm wide) along the public road from Kumbhiya Tole, Baunya Paschim Tole, Teen Kune Tole, Santoshi Jole, Dhungana Tole, Jhutiya Tole, Jagatpur Tole, Khalla Tole, Bardagoriya Dham, Sahara Ghar Tole, Piruwa Tole, Samiti Tole, Bandewa Tole, Doghara Tole, Algopur Tole, and Pacchlapur Tole road will cause temporary road disruptions. These disruptions may affect traffic flow, leading to delays and congestion. To minimize the impact, the pipeline installation will be carried out in short sections of 500 meters at a time, with testing and backfilling completed promptly, within a week.
- 3. Impact to Communities:** Communities will face a range of interrelated challenges due to construction activities, including impacts on air and water quality, increased ambient noise levels, traffic congestion, road safety concerns, and disruptions to the mobility of people, goods, and services. The pipe laying and conducting pre-cover testing will temporarily limit access to homes and may negatively affect businesses in Doghara Chowk, Dhilmil Chowk, Tinkune Chowk and Bardgoriya Dharmik Road. However, these impacts can be effectively mitigated with proper management. The pipe trenches will be relatively small, measuring 90 cm in depth and 60 cm in width, and construction will be sequenced to ensure that trenches are backfilled promptly, typically within a week, following the completion and testing of pipe-laying work.
- 4. Occupational health and Safety:** Given the nature of construction activities, exposure to extreme weather conditions and the non-observance of health and safety measures could trigger

occupational health and safety issues for workers. Additionally, an inadequate supply of safe, potable water; insufficient sanitation facilities; poor sanitation practices on-site; and substandard housing conditions may pose significant threats to their well-being. Workers employed informally, such as migrant workers or individuals newly entering the labor market, are most vulnerable. This is particularly critical given that a strong occupational health and safety culture is not prevalent in Nepal. Therefore, the onus will be on the Project to ensure that workers are advised of their rights, and to actively promote and protect those rights on behalf of the workers.

The impacts have been identified and predicted by considering all activities related to the construction, operation, and decommissioning of support facilities. The possible impacts and their corresponding mitigation measures are listed in Table 6 below.

**Table 7: Environmental and Social Management Plan Matrix**

Field	Impacts	Mitigations Measures	Responsible for Implementation	Monitoring Indicator	Estimated Cost NRs.	Frequency of Monitoring
<b>1. Prior to Construction Activities</b>						
Consents, permits, clearance, certificate (NOC), etc.	Failure to obtain necessary consents, permits, NOCs, etc. for use of land and other property can result to design revisions and /or stoppage of works.	<ul style="list-style-type: none"> <li>- Obtain all of the necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.</li> <li>- Acknowledge in writing and provide report of compliance on all consents, permits, clearance, NOCs, etc.</li> </ul>	PIU/MST	Incorporated in final design and communicated to the Contractors.		Prior to award of contract
Existing utilities	Disruption of services- existing water supply and electricity temporarily.	<ul style="list-style-type: none"> <li>- Identify and include locations and operators of utilities, including roads in the detailed design documents to prevent unnecessary disruption of services and traffic during construction, especially since the pipes will be lined along the roads, which could significantly impact traffic flow.</li> <li>- Coordinating with local water authorities and communicating with public.</li> <li>- Avoid relocating transformers and electrical pole as much as possible.</li> </ul>	PST/MST/PIU	List of affected utilities and operators		During detailed design phase
Drinking Water Supply	Extraction of unsatisfactory raw water quality	<ul style="list-style-type: none"> <li>- During the detailed engineering design stage, Water from the Kada River has been collected by making small trenches on the riverbed. And test was done and Report is attached in ANNEX VII.</li> </ul>	PST, PMU	Incorporated in final design and communicated to contractors	60,000.00	Prior to award of contract

		<ul style="list-style-type: none"> <li>- The cumulative total daily water demand for the Laxmi Water Supply Sub-Project has been estimated to be 1.42 MLD by the end of the design period in 2046 and discharge of 12 lps per DTW has been recommended for a safe yield.</li> <li>- Design to include basic treatment using lime dosing, and provisions for lab unit and kits.</li> </ul>				
Stockpile areas, Storage areas, Disposal areas, and workers camp (if needed)	Disruption to traffic flow and sensitive receptors	<ul style="list-style-type: none"> <li>- Stockpile area, storage areas and workers camp area is proposed within office premises. Contractor's camp will be located in existing Office premises at Ramaelo dada, Bardagoriya RM-02.</li> <li>- The details will be included in C-ESMP (Contractor's Environment and Social Management Plan) of Sub-Project by the Contractor within 60 days after site mobilization.</li> </ul>	PIU	List of selected sites for stockpile areas, storage areas, disposal areas and workers camp (Workers camp is separated from contractor's camp within the Existing OHT premises) (Estimated No. of workers is 20 man/day) Written consent of landowner/s (not lessee/s) for reuse of excess spoils to agricultural land	100,000.00	During detailed design phase
Waste Generation	Generation of solid waste, wastewater and other construction waste may cause pollution from work sites and workers camp (if	<ul style="list-style-type: none"> <li>- Mechanism of safe disposal will be developed in the subproject site before the actual commencement of work, including provision of waste bins.</li> </ul>	Bardagoriya RM/Ward Office	Contractor records. visual inspection		During detailed design phase

	any is established)	<ul style="list-style-type: none"> <li>- Prohibition of unwanted littering and discharge of waste.</li> <li>- Proper management of solid waste will be done using lined pits for waste disposal.</li> </ul>				
Preparation for excavation work along the roads:	Traffic Disruption, Public Safety Risks, Environmental Concerns	<ul style="list-style-type: none"> <li>- Develop (and implement) a comprehensive traffic management plan in consultation with local authorities</li> <li>- Implement erosion control measures, such as silt fences and sediment traps, to prevent soil erosion.</li> <li>- Properly manage and dispose of excavated materials</li> <li>- Inform local communities about the construction schedule and potential disruptions in advance.</li> </ul>	PIU/RM/Contractor	Approved TMP before commencement of works – regular updates		Before commencement of works
<b>2. During Construction Activities</b>						
<b>A. Physical Characteristics</b>						
Community facilities	Disruption of natural drainage Damage to existing facilities like water supply and pavements (roads along Bardagoriya Dharmik Road, Kumbhiy Road and Dhilmilchowk to Bauiya Chowk ).	<ul style="list-style-type: none"> <li>- Avoid natural drainage pathways for pipe-laying works.</li> <li>- Stockpile the excavated material at safe but nearby place to construction site under the satisfaction of Construction Supervision Engineer.</li> <li>- Restore natural drainage system if the drainage system during the construction is blocked.</li> <li>- Conduct a detailed assessment if any drainage system exists.</li> <li>- Design and implement temporary drainage solutions to manage water flow during construction.</li> </ul>	PIU/RM/Contractor	List of any public or private infrastructure disturbed by the subproject works Minutes of meetings with the locals or affected persons.		As per need, or field-inspection if any such case is foreseen

		<ul style="list-style-type: none"> <li>- Prior permission has been obtained from respective local authority for use of water for construction. Use of water for construction works shall not disturb local water users.</li> <li>- If construction work is expected to disrupt, users of community shall be informed 7 days in advance and again 1 day prior to start of construction.</li> <li>- Coordinate with local water supply authorities to schedule any necessary rerouting or upgrades during low-demand periods, minimizing disruption.</li> <li>- Set up temporary water distribution points or alternative supply lines to ensure continuous access to water for affected areas.</li> <li>- Place excavated soil on the down-slope side away from natural drains, ensuring it does not obstruct drainage paths.</li> <li>- Cover stockpiles with tarpaulin during rainfall to prevent erosion and sediment wash-off.</li> <li>- Maintain a buffer distance (1–3 m) from drains and water flow paths when storing materials.</li> <li>- Ensure no concrete slurry, waste water, or lubricants are discharged into natural drainage paths.</li> <li>- Carry out all major excavation and pipe-laying works during the dry season (low rainfall months) to</li> </ul>				
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		<p>reduce the risk of trench flooding and delayed reinstatement.</p> <ul style="list-style-type: none"> <li>- Minimize open-trench duration by laying pipe and backfilling on the same day where possible.</li> </ul>				
Ambient air	<p>Conducting works at dry season and moving large quantity of materials may create dusts and increase in concentration of vehicle-related pollutants (such as carbon, monoxide, Sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons) which will affect people who live and work near the sites Bardagoriya Dharmik Road, Kumbhiy Road and Dhilmilchowk to Baiya Chowk ).</p>	<ul style="list-style-type: none"> <li>- Confining earthworks according to an Excavation Segmentation Plan as part of the C-ESMP, which the contractor is required to prepare before construction begins. The C-ESMP should also include all necessary permits and documents that need to be obtained by the contractor before works commence.</li> <li>- Water sprinkling at dry exposed surfaces and stockpiles of aggregates at least twice daily, or as necessary.</li> <li>- If re-surfacing of excavated portion of roads cannot be done immediately, spread of crushed gravel over backfilled surfaces</li> <li>- Require trucks delivering aggregates and cement to have tarpaulin cover and maintain a minimum of 2” free board</li> <li>- Limit speed of construction vehicles in access roads to maximum of 20 kph.</li> <li>- Ensure use of equipment and fuel complying with applicable emission standards.</li> <li>- Do not allow construction</li> </ul>	Contractor/MS T/PIU	<p>Location of stockpiles.</p> <p>Number of complaints from sensitive receptors.</p> <p>Heavy equipment and machinery with air pollution control devices.</p> <p>Certification that vehicles are compliant with air quality standards.</p>	50,000.00	<p>Daily monitoring by MST in coordination with PIU</p> <p>Monthly visual inspection by PIU.</p> <p>Air quality measurement, once a year.</p>

		<p>equipment/vehicles that generate significant air pollution (above the applicable limit) and those that are poorly maintained on-site. Require all vehicles to be attested and certified for emissions compliance before use.</p> <ul style="list-style-type: none"> <li>- Conducting once a year Air Quality Test for dust nuisance (PM 10 and PM 2.5) at key locations such as settlement, Dhilmil Chowk and Doghara Chowk of Bardagoriya RM-03 during the dry working season (January-June). The tests will be carried out by the MST in coordination with the PIU or by a third party and the determined pollutants will be compared with the National Ambient Air Quality Standards (NAAQS) of 2012.</li> </ul>				
Acoustic environment	<p>Construction activities will be along the Row of existing roads (Bardagoriya Dharmik Road, Kumbhiy Road and Dhilmilchowk to Baiuya Chowk, Tinkune chowk ).</p> <p>Temporary increase in noise level and vibrations may be caused by excavation equipment, and the transportation of equipment materials, and</p>	<ul style="list-style-type: none"> <li>- Plan activities in consultation with local administration so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.</li> <li>- Restrict noisy activities to daytime.</li> <li>- Minimize drop heights when loading and unloading coarse aggregates.</li> <li>- Horns should not be used unless it is necessary or unavoidable</li> <li>- Utilize modern vehicles and</li> </ul>	Contractor/MS T/PIU	-Results of monitoring noise levels (Maintain maximum sound levels not exceeding 70 decibels when measured at a distance of 10m or more from the construction sites)	50,000.00	<p>Daily monitoring by MST in coordination with PIU</p> <p>Monthly inspection by PIU.</p> <p>Noise level measurement, once a year.</p>

	people.	<p>machinery with the requisite adaptations to limit noise and exhaust emissions, and ensure that these are maintained to manufactures' specifications at all times.</p> <ul style="list-style-type: none"> <li>- All vehicles and equipment used in construction shall be fitted with exhaust silencers. Use silent type generators (if required)</li> <li>- If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor must post warning signs in the noise hazard areas. Identify any building at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity. Complete work in these areas quickly.</li> <li>- Providing ear mufflers to workers operating high dB construction equipment.</li> <li>- Implementing regular inspection &amp; maintenance of construction/transportation vehicles to ensure compliance with National Noise Standard Guidelines (NVMES, 2069 B.S., 2012).</li> <li>- Conduct noise level test once a year during the peak construction stage at specified locations near schools, health post and Dhilmil</li> </ul>		-Number of complaints from sensitive receptors		
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		chowk and Doghara Chowk . The test will be carried out by the MST in coordination with the PIU or by a third party.				
Waste disposal	<p>Pollution of water and land resources, and cases of vector borne diseases due to haphazard waste disposal.</p> <p>Generation of solid waste and waste water from construction sites and labor camp</p>	<ul style="list-style-type: none"> <li>- Waste minimization and waste segregation will be prioritized</li> <li>- Practices of composting will be promoted</li> <li>- Hazardous waste will be segregated from non hazardous waste and stored in closed, labeled containers, away from direct sunlight, wind, and rain. Incompatible wastes will be kept separate by physical barriers or sufficient spacing, with secondary containment systems in place to prevent leaks. Only licensed contractors, following local and international regulations, will handle, treat, and dispose of the waste.</li> <li>- The Detail management of solid wastet will be part of CESMP</li> <li>- Waste minimization and waste segregation will be prioritized; 3R approach will be promoted.</li> <li>- Organic waste generated from the camps will be composted or properly managed in compost pit within the camp area by following the waste management guidelines.</li> <li>- Awareness raising event will be carried out.</li> <li>- Decommissioning waste will be re-used, sold to local scrap dealers.</li> <li>- Construction debris will be disposed at designated spoils site</li> </ul>	Contractor	On-site situation in campsites (if any), work sites and their vicinities	10,000.00	Monthly monitoring by PIU/MST.

		<p>only (as recommended in the C-ESMP) and the efforts will be made to minimize such waste through reuse, reduction, and recycling concepts. While hauling and storing spoil temporarily, spoil will be covered with plastic/tarpaulin cover.</p> <ul style="list-style-type: none"> <li>- Backfilling will be done with an immediate effect.</li> </ul>				
<p>Road safety &amp; Community safety</p>		<ul style="list-style-type: none"> <li>➤ Barricades and green nets in sites for restriction of local people's movement during construction in densely populated areas and sensitive such as Tinkubne, Dhilmil chowk, Doghara Chowk area.</li> <li>➤ 'Drive slow' messages will be placed along the active sites and School area.</li> <li>➤ Signboards with safety messages and warnings will be placed in local languages all along the alignment at the construction sites and at the trench excavation area.</li> <li>➤ Construction works to consider elderly, women, child &amp; differently able people (EWCD) requirements</li> <li>➤ Trenches will be back-filled with</li> </ul>				

		<p>immediate effect.</p> <ul style="list-style-type: none"> <li>➤ Awareness activities will be conducted to inform &amp; aware locals.</li> <li>➤ Carry out site management practice such as the fencing around work area and road signage.</li> <li>➤ Increase public awareness of safety, health, and environmental issues by providing information directly and indirectly through campaign.</li> <li>➤ The Contractor will comply with the requirements of the Environmental, social framework (ESS 4) General Guidelines of the World Bank, and the statutory norms of safety during construction</li> </ul>				
Material storage yards	Impacts due to stockpiling of construction materials	<ul style="list-style-type: none"> <li>• Stockpiling sites will be properly fenced. Side drains will be managed. Mixing of chemicals to the water body and soil will be prohibited.</li> <li>• The leased land used for stockpiling will be restored into original shape to the extent possible</li> <li>• As far as possible, the stockpiling of construction material will be carried out in barren or treeless area if possible.</li> <li>• Chemical materials like cement should be stored in shade.</li> </ul>	Contractor	Site allocation, lease agreement, well fenced sites	Included in civil works	Regular throughout the project construction period

		<ul style="list-style-type: none"> <li>• The finer construction materials should be well covered to avoid the dust pollution.</li> <li>• After the completion of the project, the land will be evacuated and restored to the previous condition to the exact possible and will be returned.</li> </ul>				
	Use of fuel, lubricants, oil, and other chemical and their storage	<ul style="list-style-type: none"> <li>• Vehicles and appliances which use chemical substances like petrol, diesel, grease, lubricating oil etc., will be regularly monitored to detect any leakage;</li> <li>• All spent grease, mobile and unused or date expired chemicals will be collected separately in separate drum/barrel and stored in shaded area.</li> <li>• All empty containers of grease, mobile, and chemicals will be compressed and stored in a safe place under the shade.</li> <li>• The wastes of chemical substances like grease and used lubricating oil will not be disposed into environment. It will be either recycled or sold to license holding contractors who recycle these materials for further use;</li> <li>• Regular monitoring on the use, disposal, and collection of these chemical materials will be done with due consideration. and</li> <li>• Strict rules will be implemented to control the haphazard disposal of these materials.</li> </ul>	Contractor	Safe handling and management	-	Regular throughout the project construction period
<b>B. Biological Characteristics</b>						
Vegetation	- Loss of vegetation cover during construction works. However, at present, no tree clearance is envisaged during	<ul style="list-style-type: none"> <li>- Greenery promotion around the construction sites and road alignments where possible</li> <li>- Tree felling will be avoided, and if any such cases occur, prior approval from the local bodies will be</li> </ul>	Contractor	Area of greenery that has been cleared  Complaints or	1,50,000.00	Monthly monitoring by PIU/MST.

	construction	<p>received and compensatory plantation @ 1:10 will be carried out</p> <ul style="list-style-type: none"> <li>- Species of local economic significance and values will be planted</li> <li>- Providing alternative fuel to worker for cooking</li> <li>- Establish, implement, and enforce a Worker Code of Conduct that expressly prohibits illegal logging, clearing, and collection of plant species in general, including fines and dismissal for repeat offences.</li> </ul>		grievances by the locals		
Impacts on fauna	<ul style="list-style-type: none"> <li>- Disturbance to possible occasional movement of wildlife and birds and its surroundings from construction activities</li> <li>- Possible hunting and poaching by workers</li> </ul>	<ul style="list-style-type: none"> <li>- Restrict noise-generating construction activities to established working hours 8 hrs. (8 AM to 4 PM) as per the <b>Labour Act 2017</b>. For any work outside these hours, obtain a special permit in advance.</li> <li>- Establish and enforce a speed limit of 20 km/hr for construction vehicles</li> <li>- Horn prohibited sign will be placed near the School Area School. There is no evidence of human-animal conflict within the project area, which is adjacent to the WSS sub-project, so additional measures for this concern are not necessary.</li> <li>- Establish, implement, and enforce a Worker Code of Conduct that expressly prohibits illegal logging, clearing, hunting, poaching, and</li> </ul>	Contractor	<ul style="list-style-type: none"> <li>- Vehicles running nearby WSP will be monitored.</li> <li>- Number of complaints from sensitive receptor on disturbance of hunting, poaching etc.</li> </ul>		Monthly monitoring by PIU/MST

		<p>collection of animal and plant species in general, including fines and dismissal for repeat offences.</p> <ul style="list-style-type: none"> <li>- Implement a worker environmental awareness program as part of worker induction to inform personnel about the prohibition of hunting and poaching and the penalties associated therewith</li> </ul>				
<b>C. Socioeconomic Characteristics</b>						
Community activities	The construction related activities that impede access will disturb the local residents	<ul style="list-style-type: none"> <li>- To minimize disturbances, construction work will be conducted at earliest possible.</li> <li>- Disturbances to local activities due to obstacle in movement during pipe laying may occur in service areas of Bardagoriya Dharmik Road, Kumbhiy road, Dhilmil Chowk and Doghara Chowk</li> <li>- The pipe trench will have a depth of 90 cm and a width of 60 cm. During the excavation period, caution boards will be installed, and the area will be barricaded with caution tape to ensure pedestrian safety and prevent any impact on pedestrian movement. To minimize the impact, the pipeline installation will be carried out in short sections of 500 meters at a time, with testing and backfilling completed promptly, within a week.</li> </ul>	Contractor	Time schedule of construction work; Information related to construction activity to local residents Number of temporary diversions sign, signboards etc.	60,000.00	<p>Daily (or whenever there are construction activities) by the Contractor/MST</p> <p>Monthly visual inspection by PIU</p>

		<ul style="list-style-type: none"> <li>- The local residents will be consulted and informed about the work schedule preferably a week before the construction starts and one day before the construction starts.</li> <li>- Temporary diversions and signboards will be provided for the pedestrian.</li> <li>- Ramps, where necessary, will be provided to ensure access to houses, and other service areas. Ramps provided will be of sturdy material and of sufficient width.</li> </ul>				
Labor Camp Management	Poor sanitation practices by workforce of 40 to 45 labours (15 local & 20-25 migrant) may cause pollution of surrounding environment. Social problems may arise due to bad behavior of the workforce such as gambling, alcoholism and disrespect to local people and culture	<ul style="list-style-type: none"> <li>- Provide adequate health care facilities within construction sites and provide first aid facility round the clock</li> <li>- Camp shall not be in the vicinity of landslide and flood plains.</li> <li>- Provide and maintain proper drinking water, sewerage and waste disposal facilities at the camps.</li> <li>- Proper ventilation will be provided in the camp</li> <li>- Separate room for men and women workers will be managed.</li> <li>- Separate toilet will be established for male and female.</li> </ul>	Contractor	Daily entry-sheet of the workforce in the campsites Number of local people versus outside workers in the subproject area will be regularly monitored	1,00,000.00	Monthly inspection at campsites (if any) by PIU.

		<ul style="list-style-type: none"> <li>- Raised bed is the minimum standard of bedding in labor camp.</li> <li>- Ensure no wood is burnt by any worker on or off site. Camps shall be provided free of cost, with electricity and regulator &amp; adequate fuel supplies of LPG or Kerosene.</li> </ul>				
Occupational Health & Safety	During the construction work, the laborers involved in the construction activities may be exposed to different level of health risks and are prone to accidents	<ul style="list-style-type: none"> <li>- Mandatory use of safety measures (PPEs) such as mask, helmet, hand gloves and rubber boots, etc.</li> <li>- The laborers will be insured for their health and safety.</li> <li>- Provide safe drinking water for labours</li> <li>- Prohibit child labour and forced labour in all construction activities.</li> <li>- Provide OHS orientation training to all new employees to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow employees</li> <li>- Provide comprehensive training to all workers on occupational health and safety practices. Training should consist of basic hazard awareness, sites 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</li> </ul>	Contractor	Availability of personal protective equipment, First-aid facilities, Medical insurance coverage for workers, Housekeeping and condition of sleeping and sanitation facilities at campsite (if any), Roster of workers	1,40,000.00	<p>Daily (or when there is a construction activity) by the Contractor/MS T.</p> <p>Monthly visual and document inspection by PIU</p>

		<p>reviewed as part of orientation training.</p> <ul style="list-style-type: none"> <li>- Contractor will arrange the First Aid Kit Box and standby medicine for workforce during working period and emergency situations. Adequate and easily accessible first-aid outfit should be available on the site. Some of the work force should be trained to use the outfit. The contractor should also make provisions for an ambulance to take injured for ill person to the nearest hospital, if needed</li> <li>- Adopt systematic labor registration procedures keeping up-to-date information of all workers including contact details of the person to be contacted in case of emergency.</li> </ul>				
Social Harmony	<p>-Changes in social structure, cultural and traditional practices of the rural people due to exposition to the outside workforce</p> <p>- Conflict between Local and Outside Workers and erosion of law and order situation of the project area</p>	<p>-Workforce will be informed about the culture and living style of the project area. They will be instructed to respect the locally accepted culture and living style.</p> <p>- Special instruction will be given to all workers to act in responsible manner during and after the working hours, respecting the rights, properties and practices of local people.</p> <p>- The use of local workers will be maximized in order to mitigate the impact. The use of locals will not only help in minimizing the adverse impact associated with the change in lifestyle but also a milestone to enhance the</p>				

		<p>local economy through employment and cash flow.</p> <ul style="list-style-type: none"> <li>- Preference will be given to the local people in project related jobs and subsidiary opportunities</li> <li>- Construction workers from outside the project area will be well-informed about the general norms and values of society before deployment. The construction workforce will be instructed to respect local people, especially the female members and the local culture and tradition.</li> <li>-A code of conduct (CoC) will be prepared and strictly enforced for the construction workforce and the project staff on how to behave with the local people of the project area, which besides others will include a) Respect to the local people their culture, traditions and women; b) Not indulge in any conflict with the local people; c) Not to gamble with the local community people; d) Not to drink alcohol outside the construction camps and roam local markets after consuming alcohol.</li> <li>-</li> </ul>				
GRM, Social Disturbance / Risk of SEA/SH, Human trafficking,	During the construction work, the laborers including the community, may be exposed to risk of SEA/SH, Human Trafficking, GBV, HIV AIDS and Communicable diseases.	<p>(i) Regarding SEA/SH, GBV</p> <ul style="list-style-type: none"> <li>- Locals will be given due priority for any employment opportunity</li> <li>- GRM will be established for the workers, focal person handling GRM including SEA/SH will</li> </ul>	PIU/Contractor	Regular monitoring and supervision of construction site/ camp - Information	144,000.00	Daily (or when there is a construction activity) by the Contractor. MST/ PIU Rural

<p>GBV, HIV AIDS and Communicable diseases</p>		<p>be assigned, and every laborer will be informed of the GRM.</p> <ul style="list-style-type: none"> <li>- Follow Code of Conduct which applies to staff, laborers and others employees at works site, personnel of subcontractors, any other personal assisting in the execution of the subproject works.</li> <li>-</li> <li>- CoC will be COC signed, a copy provided to each worker, oriented on the CoC to ensure it is understood by those signing, and strictly adhered to and monitored for all workers. Signed copies of code of conduct will be maintained.</li> <li>- Separate toilets will be provided for male and female workers</li> <li>- SEA/SH, GBV awareness raising activities, trainings and stakeholder engagements such as - community based-awareness program, school based awareness program. The GRM focal person related to GBV (Paanmati Rana) of Department of Women and children under social development unit of Bardagoriya RM will be part of trainings, awareness programs regarding SEA/SH.</li> <li>- Awareness program for women</li> </ul>		<p>related to SEA/SH, Human trafficking, GBV, HIV AIDS and Communicable diseases</p>		<p>Municipality</p>
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		<p>and against the gender-based violence will be conducted for the workers as well as the local community including school children regarding these concerns</p> <ul style="list-style-type: none"> <li>- 4 orientations/trainings with at least 25 participants in each training; to be conducted during Pre-construction and during Construction period.</li> </ul> <p>(ii)HIV AIDS &amp; Communicable diseases</p> <ul style="list-style-type: none"> <li>▪ Awareness creation and sensitization to workers and other persons post- project to reduce or eliminate chances of infections of HIV-AIDS and other sexually transmitted diseases</li> <li>▪ Distribute HIV &amp; AIDS awareness materials in collaboration local health related agencies</li> <li>▪ Ensure protective measures for communicable diseases is followed, prepare and follow SOPs by all workers and staff (hand washing, using sanitizer, masks etc.) including the community health and safety awareness and management</li> <li>▪ Health screening of the workers will be carried out before joining them into workforce</li> <li>▪ Emergency Response Plan will be</li> </ul>				
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		implemented during any critical circumstances (e.g. CoVID spread)				
Child labour, forced labour and wage discrimination	During the construction work, the laborers involved in the construction activities may be a Children	<ul style="list-style-type: none"> <li>- Grievance Redress Mechanism will be established for labor issues, focal person handling worker related GRM will be assigned and every laborer will be informed of the GRM.</li> <li>- Grievances box will be installed in contractor and labor camp.</li> <li>- Child labour &amp; forced labour will be strictly prohibited</li> <li>- Copies of citizenship card or other valid personal ID card will be kept in record of the workers</li> <li>- Awareness among the workers and the local community (at least two) will be conducted</li> <li>- Equal wage for male and female workers will be ensured</li> </ul>	Rural Municipality/ Contractor	<ul style="list-style-type: none"> <li>- Copies of citizenship card or other valid personal ID card will be seen if any doubt</li> </ul>		Daily by the Contractor. MST Monthly visual inspection by PIU
Community Health & Safety	Overall, communities will be exposed to cross-cutting threats from construction's impacts on air and water quality, ambient noise level; Chances of accidents, Communicable and transmittable diseases may potentially be brought into the community by construction workers	<ul style="list-style-type: none"> <li>- Contractor's will maintain adequate space and adequate lighting, temporary fence, barriers and signage at worksites;</li> <li>- Children and community members will be prohibited from active construction sites</li> <li>- Proper fencing of stockpile areas</li> <li>- Awareness programs on communicable diseases and hygiene practices will be carried out</li> <li>- Disseminate the GRM to communities and affected stakeholders during consultations, community meeting, disseminate</li> </ul>	Rural Municipality/ Contractor	<ul style="list-style-type: none"> <li>-Number of permanent signs, barricades and flagmen on worksites</li> <li>-Number of complaints from sensitive receptors; Number of walkways, signs, and metal sheets placed at subproject</li> </ul>	100,000.00	Daily by the Contractor/ MST. Monthly visual inspection by PIU

		<p>through local media and newspaper.</p> <ul style="list-style-type: none"> <li>- Sensitive localities in terms of risk of this environmental, social and health related impact is Bardagoriya Rural Municipality ward-04.</li> <li>- Inform and regularly update and organize awareness campaigns targeting the affected communities, including vulnerable groups, about potential project hazards and changes to project activities that may have environmental, health, or safety impacts, as well as the proposed prevention, mitigation, and emergency response measures.</li> <li>- Active sites will be well demarcated and bounded. Excavated sites will be well bounded with hard barricades.</li> <li>- Unauthorized entry to active construction sites and stockpile sites will be strictly regulated.</li> <li>- Movement of vehicles for construction activities will be strictly regulated under safety guidelines.</li> <li>- Code of conducts will be implied for the workforce so that they have no conflict with the local communities.</li> <li>- Provision of ramps will be made where trenching works are being carried out to provide access to</li> </ul>		location		
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		houses and businesses.				
<b>3. During Operation and Maintenance Phase</b>						
Exposure to chemicals	Excessive exposure to chlorine, hypochlorous acid, and hypochlorite ion generally results in irritation of the esophagus, a burning sensation in the mouth and throat.	<ul style="list-style-type: none"> <li>- All disinfection chemicals require proper storage and handling practices</li> <li>- Provide safe storage for chemicals</li> <li>- Ensure that the person is hired, with knowledge of chlorine use for disinfection process during operation</li> <li>- Ensure use of PPE while using chemicals</li> <li>- Use of chlorine guideline as per WHO</li> <li>- Training on the handling and on dosage of the chemicals will be given to the staff. Ensure there is storage area for chemicals in compliance with the <b>Material Safety Data Sheet (MSDS)</b> for each substance. This includes: <ul style="list-style-type: none"> <li>• Storing chemicals in appropriate containers that are compatible with the substances.</li> <li>• Ensuring proper labeling and segregation of incompatible chemicals (e.g., acids and bases, oxidizers and flammables).</li> <li>• Maintaining temperature, ventilation, and humidity controls as specified in the SDS.</li> <li>• Implementing secondary containment measures to prevent</li> </ul> </li> </ul>	Contractor during DLP; WSUC or Operator after DLP	Visual inspection		Daily (or as needed) by the operator.

		<p style="text-align: center;">spills or leaks.</p> <ul style="list-style-type: none"> <li>- Ensuring easy access to spill kits, eye-wash stations, and fire extinguishers in case of emergencies."</li> <li>- Additional measures, as required, will be defined in the <b>O&amp;M manual</b> of the water treatment facility and operation of the pipeline.</li> </ul>				
Water bodies	<p>Water pollution due to effluent produced from the periodic Back washing of the reservoir , if discharged directly to the river course may cause harm to the water bodies and aquatic life especially during the dry season when flow will be less.</p>	<ul style="list-style-type: none"> <li>- A settling Reservoir is proposed for decanting of the slurry from the effluent during backwash.</li> <li>-</li> </ul>	Contractor during DLP; WSUC or Operator after DLP	<p>Visual inspection</p> <p>Effluent sampling</p>		<p>For first year, DSMC After that WSUC daily inspection or as needed.</p> <p>Effluent sampling by the operator, only when necessary or practical.</p>
Impact on water bodies  (Kanda River)	Blockage of Natural flow and pollution of water construction of sump well.	<ul style="list-style-type: none"> <li>✓ Earthworks generating higher amount of spoil will be conducted during dry season to avoid the difficult working conditions that prevail during monsoon season such as problems from runoff.</li> <li>✓ Washing of project vehicles at riverbanks will be restricted.</li> <li>✓ Proper storage of chemicals and lubricants, use of spillage kit to void</li> </ul>	MST/PIU/RM			Daily monitoring by MST in coordination with PIU

		<p>spillage. Take all precautions to prevent entering of wastewater into streams. Install temporary silt traps or sediment basins. All the chemicals and oil containers will be stored on the concrete surface to avoid contamination and spillage into land, surface, and ground water.</p> <ul style="list-style-type: none"> <li>✓ While working across or close to any water body, the flow of water must not be obstructed. Ensure no construction materials like earth, stone, are disposed in a manner that may block the flow of water of any water course.</li> <li>✓ Any disposal on Dumare river will be prohibited; fishing by the workforce will be strictly prohibited; Washing of project vehicles along the river bank will also be prohibited;</li> <li>✓ All workers will be provided with proper orientations and clear instructions to avoid fishing, improper waste disposal, and any activity that could disturb the aquatic ecosystem.</li> </ul>				
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<p>Drinking water supply system</p>	<p>Delivery of unsafe water due to source contamination, leakage in pipes</p>	<ul style="list-style-type: none"> <li>- The operations and maintenance plan and training for staff will cover;</li> <li>- (i) Competent/cautions handling and storage of calcium Hypochlorite and qualified persons to implement/oversee disinfection and treatment;(ii) Providing safe storage for chemicals; in compliance with the Material <b>Safety Data Sheet (MSDS)</b> for each substance.</li> <li>- (iii) ensure capacity of WSUC to implement quick response to hazardous substance/waste spills;</li> <li>- (iv) Implement Safeguard Policy Statement (SPS)-complaint EMP and a WSP. This policy ensures that the water supply sub-project is environmentally and socially sustainable; and</li> <li>- (v) Monitor water quality.</li> </ul>	<p>Contractor during DLP; WSUC or Operator after DLP</p>	<p>Visual inspection Water Quality reports  WTP records in the logbook</p>	<p>Daily or as needed visual inspection by the operator.  Quarterly or as needed water quality testing by the operator.</p>
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<p>-Impact on Water Pollution</p> <p>-Pollution and nuisance due to sludge removal and its disposal</p>	<p>If the effluents from the reservoir tank and waste water from the labor camp is not well treated, then there will be risk of pollution of local water bodies due to the discharge of effluent and liquid waste. However, likeliness of occurrence of this case is very low.</p>	<ul style="list-style-type: none"> <li>✧ The reservoir will be cleaned on regular basis.</li> <li>✧ Quality of the effluent will be regularly monitored to ensure that the effluent meets the GoN tolerance limits of discharge of waste water</li> <li>✧ The operation and maintenance of the Reservoir will be carried out on timely and regular basis as per it <b>O&amp;M plan.</b></li> <li>✧ Laxmi WSUC shall be responsible for the O&amp;M of the system, and an effective and efficient mechanism for the O&amp;M of the system should be developed</li> <li>✧ <b>Standard Operation Procedure Operation (SoP)</b> will be adopted for the operation of Reservoir.</li> <li>✧ Sludge will be handled only by designated trained team authorize by the municipality and taken to the safe place stored in closed container.</li> </ul>	<p>Contractor during DLP; WSUC or Operator after DLP</p>	<p>Visual inspection Water Quality reports WTP records in the logbook</p>		<p>Daily or as needed visual inspection by the operator. Quarterly or as needed water quality testing by the operator.</p>
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Grievance Redress Mechanism	Unresolved grievances/complaints on drinking water supply	✧ All grievances related to the Laxmi Water Supply Project during the operation phase will be addressed through the Grievance Redress Mechanism of Bardagoriya Rural Municipality	Bardagoriya Rural Municipality	Grievance record logbook		Throughout the operation
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## 4.2 Capacity Development and Training

To enhance the capacity of officials for effective implementation of proposed mitigation measures and monitoring the resultant effect, as well as create awareness among workers and supervision staff, trainings and awareness programmes have been planned and is given in Table. The PMU, PST, PIU, MST can be consulted for such trainings. Experts/Consultants can also be the resource persons to impart trainings. These experts shall be appointed based on specific need for the training.

**Table 8: Details of proposed training program**

S. N	Title	Objective	Time of training	Duration/ Days	Participants
1	Orientation on E&S by PMU/PST to MST/PIU.	-ESMF requirements -Roles & responsibilities of contractor & MWASH unit -Identification of social issues -Addressing social impacts -Preparing mitigation plans	Pre-construction stage(when contractors are substantially mobilized)	1 Day	PIU/MST/Contractor /MWASH unit
2	Environmental and Social Management Plan (ESMP) Implementation Training by PMU/PST to MST/MWASH Unit	-To implement ESMP efficiently and accurately, leading to unfavorable impacts to environment workers and community.	Before mobilization of contractor	1 Day	PMU/PST/PIU/MST/ MWASH, contractor unit
3	Focused training on specific issues by PIU/MST to Labours/Contractor	-Issues relating to wage parity, child labour etc.	During construction or when needed	½ Day	PIU/MST/Contractor /MWASH unit
4	Training on STDs/ HIV Aids issues by MST/PIU to labour/Contractor	-To increase the level of awareness about prevention and control of STDs/HIV Aids among communities.	During construction	1 Day	PIU/MST/Contractor /MWASH unit
5	Training on occupational Health by PIU/MST to labours/Contractor	-To ensure the safety health and welfare of labours and others who may be affected	During construction	1 Day	PIU/MST/Contractor /MWASH unit
6	Road safety by PIU/MWASH unit/MST to	-To raise road safety consciousness among the road users	During construction/ During	1 Day	PIU/MST/Contractor /MWASH unit

	labours/contract or		trench excavation along the road.		
7	Operation and Maintenance of the Facilities (O&M Manual)	-To train the O&M staff on the implementation of operation phase E&S measures	During the DLP	1 Day	PIU/MWASH unit

### 4.3 Summary of cost of ESMP activities

The summary of costs for Environmental and Social Management Plan (ESMP) activities during the construction and operation phases itemizes expenses under various subjects, as shown in Table 4. These costs exclude mitigation actions that are typically the contractor's responsibility. Most physical environmental impact mitigation costs are included in the project cost or associated with contract bids, with some measures being non-cost bearing.

Mitigation costs for operation phase activities, such as infrastructure rehabilitation and periodic maintenance of the Laxmi WSP are not included. The proponent will cover all environmental management costs beyond the contractor's legal liabilities and the legal roles & responsibilities of governmental institutions.

**Table 9: Summary of costs of ESMP Activities**

S.N.	Items & Headings	Unit	Qty.	Rate	Total, NPR	Reference
	<b>Provisional Sum amount</b>					
1	Water quality test	Samples	12	5000	60,000.00	Dhangadhi Lab
2	Air quality and Noise level monitoring	Samples	2	50,000	1,00,000.00	Consulting with the air, water and noise level monitoring lab. (Once in a year)
4	Greenery promotion	Job	LS	1,50,000	1,50,000.00	Consulting with Nursery.
5	Labour Camp Management	Job	LS	1,00,000	1,00,000.00	
6	Water Sprinkling	Job	LS	50,000	50,000.00	As per the site accessibility.
7	No horn sign installation	Job	LS	20,000	20,000.00	As per local market price
7	Waste collection bins	Job	LS	10,000	10,000.00	As per local market price
8	First Aid and PPE	Job	LS	75,000	75,000.00	As per local market price
9	Environment and Social Awareness, Worker's & Community's Health and Safety and WASH Promotion ( <i>Events will be conducted by</i>					

	<i>MST/PIU/MWASH unit for workers as well as community)</i>					
(i)	Environmental and Social Awareness (during Pre-construction phase and construction phase; at least 30 participants/event)	Events	2	25,000	50,000.00	
(ii)	Occupational Health and Safety (including GBV, SEA/SH, HIV AIDS & Communicable diseases at least 35 participants in each orientation/training, during pre-construction and construction phase)	Events	2	25,000	50,000.00	
(iii)	Community level awareness on WASH and Sanitation and on SEA/SH	Events	2	20,000	40,000.00	
10	Stockpile/Construction Waste Disposal Management	Job	LS	1,40,000	1,40,000.00	
11	Environment & Social safeguards (grievance meetings, site monitoring, etc.)	Meetings /Events	18	8,000	1,44,000.00	
12	Information dissemination materials and medium					
	(a) Leaflets	Job	LS	10,000	10,000.00	Consulting with local press & media.
	(b) PSA (local media)	Job	2	25,000	50,000.00	Consulting with local press and media.
	<b>Total</b>				1049000.00	

*(In Words: Ten Lakhs and Forty Nine Thousand Rupees Only)*

**Note:** Environmental Mitigation will be covered from Provisional Sum A2 in Item no.2 of Contactor's BoQ & Community level awareness program will be conducted by PIU & MST

#### **4.4 Environmental and Social Monitoring**

Environmental monitoring is an essential aspect of environmental management. It consists of collection of data to measure environmental changes associated with implementation of the proposal. The purpose of monitoring is to investigate and understand the quality of the environment prior to implementation of the proposal and keep records of the impact of implementation of the proposal on the environmental quality so as to provide reliable information and scientific basis for environmental management. Therefore, environmental monitoring is a mechanism which evaluates whether the mitigation actions were actually carried out or not and evaluates the effectiveness of the implemented measures to curb the perceived impacts or identify unforeseen impacts for further corrective actions to avoid or minimize the impacts before it is too late.

Existing Environment Protection Act, 2076 and Environment Protection Rule, 2077 obliges the proponent to comply with the matters mentioned in the environmental management plan and provides the responsibility to the concerned department or ministry; these are basically related with the projects requiring environmental studies pertaining to these laws. Rule 45 of Environment Protection Rule, 2077 indicates towards self-monitoring of environmental impacts of implementation of the proposal and submit the report to the concerned agency.

Basically, two types of environmental monitoring will be carried out for this project: Impact Monitoring and Compliance Monitoring.

Impact monitoring will be carried out to assess the actual level of impact due to project construction.

The impact monitoring includes:

- Monitoring of the impacts of the project on physical, biological and socioeconomic and cultural environment of the area;
- Monitoring of the accuracy of the predicted impacts;
- Identification of the emerging impacts due to project activities or natural process and development of remedial action; and
- Monitoring of the effectiveness of mitigation measures.

Compliance monitoring will be conducted to monitor the compliance of the proposed mitigation measures and regular monitoring activities by the PIU/MST. The compliance monitoring will mainly focus on:

- Compliance of the mitigation measures and specification in accordance with the environmental and social management plan;
- Allocation of adequate budget for implementation of mitigation measures and monitoring;
- Compliance of existing act, regulation and guidelines and mandate relevant with the proposal; and
- Overall environmental and social performance of the project.

### **E&S Reporting:**

The MST is responsible for the day to day monitoring and reporting of the Contractor's E&S compliance. The MST will prepare monthly E&S progress reports and submit them to the PIU. The PIU will compile these monthly reports and, in coordination with MST, prepare a quarterly monitoring report. This quarterly report will then be submitted to the PMU, which will share it with the World Bank. In addition to these regular reports, the PMU, in coordination with the PIU, PST, and MST, will prepare an annual E&S monitoring report. This annual report will also be shared with the WB.

The monitoring plans have been presented in the form of matrix/table below. The plan includes the parameters to be monitored, the measurable indicators, the method, location and schedule. The schedule of monitoring will be daily, weekly, monthly, quarterly, half yearly or annually depending on the parameter and type of monitoring.

**Table 10: Compliance Monitoring Plan**

Issues	Indicators	Method	Schedule	Location	Responsible	Agencies to be consulted
<b>Construction Phase</b>						
Approval of operation plan of Bardagoriya Rural Municipality with proposed intervention	Approval letter	Review of approval letter	Prior initiation of work or Prior procurement	Bardagoriya Rural Municipality	PIU/MST	
Implementation of recommendations (mitigation and enhancement measures and monitoring requirements)	Inclusion of each of the environmental considerations from the tender documents in the contractor's or executor's work plan e.g. C-ESMP, Traffic management Plan, Earthwork Segmentation Plan, as applicable)	Review of proposed work plans, submitted by contractor or executing authority	During contract negotiations	Bardagoriya Rural Municipality	PIU/RM	
Mitigation management (Compliance with ESMP)	Budget allocation for mitigation measures and monitoring	Review of project budget document	Daily	Bardagoriya Rural Municipality	RM/PIU/MST	
Implementation of construction phase monitoring	Monitoring report and budget allocation for corrective actions	Review of monitoring report and budget allocation for corrective actions	Annual	Bardagoriya Rural Municipality	RM/PIU/MST	
<b>Operation Phase</b>						

Operation phase mitigation management	Budget allocation for mitigation measures for operation phase	Review of project budget document	Annual	Bardagoriya Rural Municipality	RM/PIU/	
Implementation of operation phase monitoring	Monitoring report and budget allocation for corrective actions	Review of monitoring report and budget allocation for corrective actions	Annual	Bardagoriya Rural Municipality	RM/MWAS H	

**Table 11: Impact Monitoring Plan**

Parameter	Indicators	Method	Location	Frequency & Schedule	Agencies to be consulted
<b>Construction Phase</b>					
Physical Environment					
Air quality	Dust and smoke	Field observation	Construction area and access road	Once in a year	
Noise pollution	Noise level	Field observation and discussion	Construction site and access road	Once in a Year	
Land pollution	Open defecation and garbage disposal places	Direct observation	Disposal site	Daily	
<b>Biological Environment</b>					
Vegetation	No. of trees felled and area of site cleared	Site observation and record checking	Embankment site	Daily	
<b>Socio-economic and Cultural Environment</b>					
Existing infrastructures	Damages of road and culvert, access to houses	Observation and discussion with local people	Access road	Regular	
Law and Order	Incidents of different types of crimes in the project area; complaints in the local police	Discussions with the local people and the local police	Project area and surrounding	Monthly during construction	Local Police Office
Labor Issues	Number and type of grievances related to workers, number of grievances resolved,	Site visits, visual inspections, reports and photographs, review of workers'	Project area and surrounding	Regular	

	labor records	grievances register			
Information disclosure, stakeholder engagements, GRM	-Number, type and topic of engagement activities Number, type and status of grievances  -Number and type of engagement activities with vulnerable groups	Observation, discussion with the locals, GRM register and other reports/documents	Project area and surrounding	Regular	
Occupational health and safety	Cases of accidents and injury	Observation and record checking	Active construction sites	Weekly	Health institutions
Traffic and road safety	Status of road for use; road accidents	Observation and record checking	Project area and surrounding	Daily	
Gender, children and vulnerable group	Number of such people employed	Review of attendance and discussion	Construction site	Weekly	
<b>Operation Phase</b>					
<b>Physical Environment</b>					
Land pollution	Open defecation and garbage disposal places	Direct observation	Water Supply & Sanitation Project site and surrounding	Monthly	
<b>Biological Environment</b>					
Vegetation	Survival of plantations	Site observation and counting	Plantation sites	Monthly for 5 years	
<b>Socio-economic and Cultural</b>					
Existing infrastructures	Damages of road and culvert	Discussion with local people	Access road	Monthly	
Law and Order	Incidents of different types of crimes in the project area; complaints in the local police	Discussions with the local people and the local police	Surrounding settlements	Monthly	Local Police Office
Gender and social inclusion	Involvement of women and vulnerable groups in tourism business	Interview with local people	Water Supply & Sanitation Project site and surrounding	Biannually	Municipality/Wards
Livelihood of local users	Involvement of users in commercial agriculture/tourism	Interview with local people	Water Supply & Sanitation Project site	Annually	Municipality/Wards

	business/other related ventures		and surrounding
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#### **4.5 Implementation Schedule**

The project is schedule for implementation after completion of tender process, which will be after the approval of all project documents (Design and drawing, cost estimate and ESMP) and completed within 18 month form the date of contract signing.

#### **4.6 Project Environmental Management Framework and the Key Stakeholder**

Overall project environmental management framework is the responsibility of the project proponent, Bardagoriya Rural Municipality. The Bardagoriya RM under its leadership will form a project implementation committee (PIC) including all other local level stakeholders. The PIC will procure construction contractor and oversee the overall construction activities. It will also monitor the performance of environmental and social safeguard measures.

The key stakeholders including the **Bardagoriya Rural Municipality**, to be involved in the project management are:

- a) **World Bank:** Implementation of World Bank’s Environmental and Social Framework (ESF), work plans, directives and guidelines as required, review monitoring report.
- b) **Project Implementation Unit (PIU):** The PIU will supervise the Municipality Support Team (MST) to aid in infrastructure development, construction oversight, and reporting. It will spearhead federal and provincial efforts to enhance sector governance, institutional capacity, and resilience of water supply and sanitation infrastructure through integrated watershed management, in collaboration with the municipalities.
- c) **Municipal WASH (M-WASH) Unit:** It include developing WASH governance, policy, and institutional arrangements, programming and regulation of municipality-wide water and sanitation services, as well as planning, managing, and monitoring the implementation of local water supply and sanitation services as provided for by the Constitutional provision and Local Governance Operations Act, 2017.
- d) **Project Support Team (PST):** The PST supports the Municipal Support Team by offering guidance on local project execution, capacity building, and community engagement, while also aiding the Project Management Unit (PMU) by providing essential data, reports, and on-the-ground insights to inform decision-making and ensure alignment with project objectives.
- e) **Municipal Support Team (MST):** MST offer specialized technical aid to the PIU, focusing on governance, institutional support, planning, design and construction supervision of infrastructure project. It aims to strengthen the M-WASH Unit's capacity in planning and

managing water and sanitation services effectively. MST is also responsible for contractor's daily compliance monitoring.

- f) Contractor:** The Contractor is responsible to plan, execute, supervise, inspect and direct a construction project from start to finish regardless of the scope of the project. The contractor ensures that the project complies with the ESMP and all the specifications as outlined in the contract documents.
- g) Sub-Contractor:** Subcontractor/Supplier is an institution, awarded a portion of an existing contract by a principal or general contractor. Subcontractor/Supplier performs work under a contract with a general contractor. Essentially, a Subcontractor/Supplier will perform and abide by all the obligations of the principal or general contractor's contract, including compliance to ESMP and all specifications in the contract documents.
- h) E&S Specialist/E&S Consultant:** The E&S Specialist are there in PMU, PST and MST who carry out the required E&S assessments and prepare reports. They provide guidance to PMU and PIU for effective implementation of ESMP recommendations. The MST E&S Specialists support the PIU to carryout day to day compliance monitoring of the Contractor's responsibilities. The Contractor will hire its own E&S Specialists to implement its E&S responsibilities as per the contract. In the guidance of PST/PMU E&S specialist, E&S specialist of MST prepare the site-specific environmental and social management plan (ESMP) report. E&S specialist support and provide guidance to PIU to ensure that the relevant E&S instruments/ESMP/ESSR/ESCoP etc. and also effective implementation of these reports for the sub-projects.
- i) Affected Wards, Municipality and District Coordination Committee (DCC):** Provide recommendations to the proponent with comments and suggestions and assist proponent in the project implementation.

#### **4.7 Social Accountability and Grievance Redress Mechanism (Project level GRM and Central GRM)**

The stakeholders may raise any grievances related to the impacts on them or any other grievances. Such types of grievances need to be addressed through Grievance Redress Mechanism (GRM) for timely response on stakeholder's query and concerns. At first instance, the project-affected grievant should raise their grievance with the Grievance Committee of the project, and the Grievance committee will determine whether it can be resolved within the project, at the ward level, or whether another mechanism should be used. The records will be kept properly.

A Grievance Redress Mechanism has been set up to allow stakeholders including PAPs to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). Information about GRM will be published on the municipality's website, will be pasted at public space in the sub-project area, in the notice boards of municipality and ward offices. Locals will be encouraged to make use of the GRM established for the sub-project to raise any complaints/ grievances induced due to this sub-project. Stakeholders will be made fully aware of their rights and the procedures.

The project municipality level GRM has been established and the Bardagoria RM Level Grievance Redress Committee (GRM) has been formed under coordination of the Chairperson of the Bardagoriya RM (Mr. Karna Bahadur Kunwar). At the RM level, the composition of GRC includes RM Vice Chairperson, Administrative officer, PIU Manager, MWASH Unit. (The details are provided in Annex 2). Likewise, Ward level GRC has also been formed at project's ward level.

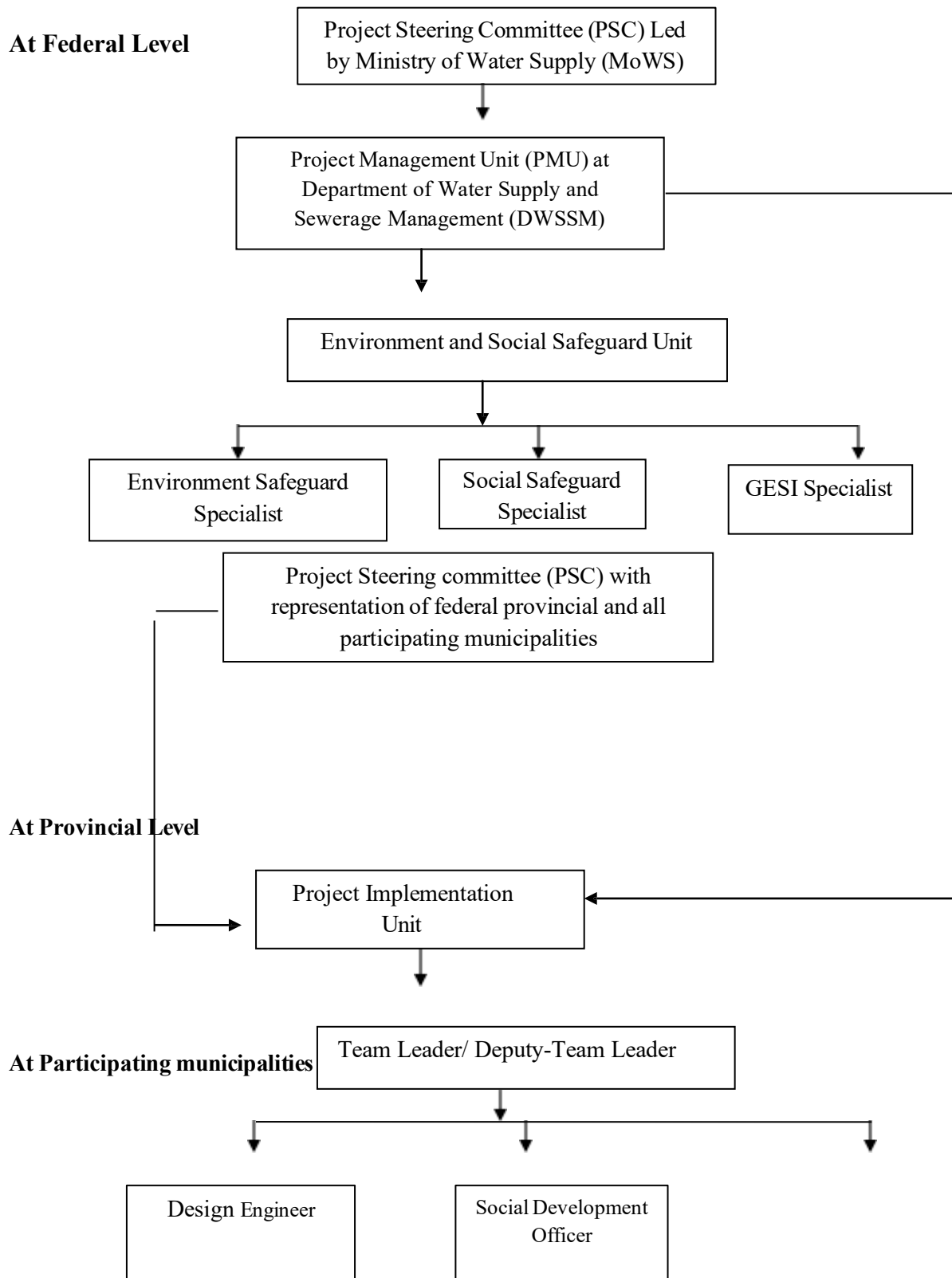
The second level GRC is at the PMU level, comprising members from the PMU. This committee formed under the chairmanship of the Project Director (PD), the staffing of the Grievance Redress Committee (GRC) includes Social Development Expert of PMU and one other employee appointed by the PD. These three -member committee can also seek the help of external experts or organizations if necessary to investigate and address complaints. Special project grievance mechanisms such as on site provision of complain hearings allows project affected persons to get fair treatment on time. The subproject will also handle issues regarding the compensation damages done during construction. The details of the proposed GRC structure and GRM process were discussed during public consultations with stakeholders in all levels.

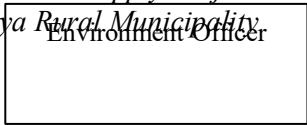
### **Grievances about GBV**

There is an existing GRM put in place for the project which will also be used for addressing GBV and SEA/SH-related issues at the PMU. In case of sub-project, there is Department of Women and Children (DWC) under social development unit of Bardagoriya Rural Municipality to resolve the GBV/SEA/SH issues. The Bardagoriya RM has nominated GBV and SEA/SH focal person ( Ms.Paanmati Rana). However, the PIU/MST will also map out any GBV service providers in the project area so that the focal person can also access any support and timely advice in cases related to GBV and SEA/SH. The project will place its uppermost priority on handling and managing the GBV-related grievance by maintaining full confidentiality of the survivor. The first responders of the grievances in relation to GBV will be the GBV focal person and the focal person will be trained on managing and handling such grievances. GBV referral pathway will be established and communicated to both PMU at the DoWSSM and local level. Further, the GRM will also put in place a system to immediately notify both the PMU and the World Bank of any GBV complaints, with the consent of the survivor.



**Organogram of E & S activities**





**Figure 7: Organogram of E & S activities related to the project**

## **5. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE**

### **5.1 Public Consultation**

Public consultation meetings, and Key informant interview (KII) were used to engage as many locals as possible during the public consultation process. The details of design aspects of the sub project, social & environmental risk, and GBV aspects were discussed during the public consultations. Separate consultations with women, Dalits, and Tharu and other disadvantaged groups living in the service area were organized to discuss potential E&S issues related to proposed water supply sub-project. (Please see annex II for details) The major concerns discussed during the public consultations were as followings;

- Information regarding enhancement and construction of sub-project as well as about pipe laying work is given to the local people.
- Priority for sub-project construction was requested, and the locals also demanded for employment opportunities in the project’s construction works as per their skill.
- The locals requested to provide subsidy tap and toilet construction for poor and marginalized households.
- A detailed discussion was held regarding the need for proper management and prior information in case of interruption of water supply and electricity during pipeline expansion.
- Awareness of workers and locals regarding social harmony was also discussed
- Potential concerns of dust problem, and disturbances due to noise during construction phase was raised as a concern as there are settlements and schools

For instance, the group of directly beneficial people is those living nearby WSS project area. The aim was to identify possible environmental and social impacts that might arise from the proposed project activities. Moreover, the applicable suggestions and recommendations have been incorporated in the proposed project design/ESMP preparation. According to the site survey during the ESMP, within the directly impacted area of Bardagoriya Rural Municipality ward no.2. People expressed their concerns about various kinds of environmental impacts caused by the project. People around the selected site of Bardagoriya expressed some comments on construction at that site, citing noise and other impacts to the surrounding communities. Public concerns and corresponding mitigation measures are summarized in table;

**Table 12: Public concern and Mitigation Measures**

<b>Public concerns</b>	<b>Mitigate measures</b>
Dust during construction	Regular water sprinkling and speed limits
Noise during construction	Prepare reasonable construction program; Avoid night construction as much as possible;

Wastewater and solid waste from construction camps	Use existing living facilities as much as possible; Build septic tanks on Public Toilet construction sites; Transport solid waste to location or landfills designated by local environmental and sanitary authorities;
Noise generated during trench excavation work and other construction activities	Select low-noise equipment; Deploy acoustic barriers
Accident may occur during trench excavation	Immediately backfilling and placed the caution board at both side of excavated trench. Pre-inform to the

## 5.2 Stakeholder Consultations Plan for Implementation Phase

Consultations during implementation phase will include direct interactions with the Project Impacted Persons. PIU, MST and contractor will conduct regular consultations with PAPs as well as local user’s committees, local unit of electricity office, and other stakeholders. All consultation on social and environmental issues carried out during implementation of sub-projects will be held in an inclusive manner, including vulnerable social groups and women. Public consultation will be taken as a continuous process during the construction phase as well. The stakeholder engagement plan will be as per the Table 13 below.

**Table 13: Stakeholder Engagement Plan**

<b>During Construction</b>				
<b>Topic</b>	<b>Stakeholders</b>	<b>Engagement Method</b>	<b>Frequency</b>	<b>Responsibility</b>
<ul style="list-style-type: none"> <li>▪ Disclosure of ESMP (and updated ESMP), including C-ESMP</li> <li>▪ ESMF, SEP, and LMP</li> <li>▪ Delineate Labour Influx Management Procedures</li> <li>▪ Activities planned for SEA/SH and GBV</li> <li>▪ Awareness of HIV and other communicable diseases</li> <li>▪ GRM for SEA/SH</li> <li>▪ Project GRM</li> <li>▪ Planned construction activities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bardagoriya Rural Municipality and concerned officials of the Municipality and MWASH Units</li> <li>▪ Project affected Ward chairs</li> <li>▪ Tole Committees</li> <li>▪ Local Community of the project area</li> <li>▪ Community Leaders</li> <li>▪ Local CBOs and NGOs working on WASH and GBV</li> </ul>	<ul style="list-style-type: none"> <li>▪ FGDs and targeted outreach activities with women, IP organizations, and other vulnerable groups, such as Dalits (Application of audio/visual communication techniques and other accessible formats)</li> <li>▪ Community radio and local media</li> <li>▪ Notice Boards</li> <li>▪ Periodic information disclosure activities</li> </ul>	<p>Periodically throughout project implementation</p> <p>For planned construction activities, the community will be informed a week before the construction work and a day before construction work in the construction-planned areas.</p>	<p>PIU/MST Contractors</p>

▪ Beneficiary satisfaction survey	▪ Target beneficiaries of the project	▪ Beneficiary satisfaction survey	The first survey after two years of implementation, and last survey during the final year of operation	PMU/PST/MST
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### 5.3 Information Dissemination

For the success of the project, all information about the proposed activities and their expected results will be publicly shared with the Project area people and interested stakeholders. In collaboration with the relevant local authorities and other community groups, the project will disclose all the relevant information in the various stages of project cycle. Agencies working for environmental and social aspects will also be informed about the on-going and planned activities, to identify jointly appropriate protective or corrective measures. All the relevant E&S documents will also be published in the PMU website. The following approaches will be adopted to make information accessible to all the concerned stakeholders throughout the project cycle;

- Mass Media: Use local media like newspapers, radio and TV.
- Meeting/Workshops, Targeted FGDs, Notice Boards, social media, consultations
- Distribution of project documents, information leaflets and brochures: Certain project documents will be disclosed in Nepali (if necessary in other relevant local language). Project-related information materials will be distributed prior to each construction work to local officials, local people, stakeholders, and other concerned offices like municipality, ward, and community leaders, Toile Committee, relevant CBOs and NGOs.

The municipality office will serve as the project-level information sharing point during implementation and will disseminate all the documents related to the project activities. Based on the public information disclosure policy, the municipality will unveil the information through its website. The information disclosure activities are as per the table below.

**Table 14: Proposed Strategy for Information Disclosure**

Target stakeholders	List of information to be disclosed	Methods and timing proposed activities
<b>Project implementation phase</b>		
<ul style="list-style-type: none"> <li>• Government officials (Federal, provincial, and Municipality officials including the wards)</li> <li>• District line agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Planned and ongoing activities</li> <li>• Regular updates on project status, including the implementation of ESMP, C-ESMP, ESMF, LMP, SEP</li> <li>• GRM</li> </ul>	<ul style="list-style-type: none"> <li>• Sharing project update and reports through meetings</li> <li>• Consultation and face-to-face meetings</li> <li>• Information boards, leaflets, and brochures</li> <li>• PMU/PIU websites</li> </ul>

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	<ul style="list-style-type: none"> <li>• SEA/SH and GBV activities</li> </ul>	
<ul style="list-style-type: none"> <li>• CBOs and NGOs working on WASH</li> <li>• Local NGOs and CBOs working on GBV</li> <li>• Community leaders</li> <li>• National &amp; local Media</li> <li>• Local Community</li> </ul>	<ul style="list-style-type: none"> <li>• Project concept and planned activities</li> <li>• ESMF, IEE, SEP, Labour Influx management procedures</li> <li>• SEA/SH Activities and GRM procedures for SEA/SH</li> <li>• GRM procedure</li> <li>• Planned construction activities</li> </ul>	<ul style="list-style-type: none"> <li>• Information boards, leaflets, and brochures</li> <li>• PMU/PIU websites</li> <li>• Meetings and workshops</li> </ul>
<ul style="list-style-type: none"> <li>• Individuals and communities with a focus on vulnerable groups, including IPs, women, and Dalits</li> <li>• Local NGOs and CSOs working on WASH and GBV</li> </ul>	<ul style="list-style-type: none"> <li>• Project concept and activities</li> <li>• E&amp;S procedures and management plans (ESMP, C-ESMP)</li> <li>• GRM procedures, ESMF and Labour Influx management procedures, SEP and</li> <li>• Planned construction activities</li> <li>• SEA/SH activities and GRM procedure for SEA/SH</li> <li>• Revised project information if any</li> </ul>	<ul style="list-style-type: none"> <li>• Regular release of public notices through mass media, community radio, television, and social media</li> <li>• Regular updates of information on the PMU/PIU website</li> <li>• Distribute information leaflets and brochures to public</li> <li>• Air project information/ messages through community radio</li> <li>• Periodic small group meetings with vulnerable and IP groups</li> <li>• Regular contacts with the representatives of IP and vulnerable groups through phone calls, emails, text messages (Application of audio/visual communication techniques, and other accessible formats)</li> </ul>

## **6. CONCLUSION AND RECOMMENDATION**

Laxmi Water Supply Project in Bardagoriya Rural Municipality aims to enhance water supply infrastructure while minimizing environmental and social impacts. The Laxmi Water Supply Project (LWSP) is conceptualized as a pumping lift system based on subsurface water. This WSS system is proposed for construction by the Bardagoriya Rural Municipality office with the supervision of Water Sector Governance and Infrastructure Support Project (WaSGISP) and Partial funded by World Bank (WB) and Bardagoriya Rural Municipality, with key components including collector wells, sump well, pumping mains, reservoirs, treatment and disinfection facilities, supporting infrastructure, proposed of 73542 m pipe laying work and 1233 HH connection work. The proposed WSP doesn't transverse any protected/National park and free from encroachments.

The Environmental and Social Management Plan (ESMP) outlines measures for obtaining necessary consents, and mitigating potential E&S risks during construction and operation. Overall, the project exemplifies responsible development practices, ensuring community well-being and environmental protection. The plan includes impact and compliance monitoring across various environmental and social aspects, reflecting a holistic approach. Additionally, the ESMP outlines the roles of stakeholders and emphasizes social accountability via a Grievance Redress Mechanism (GRM) at project and central levels. The ESMP underscores the project's commitment to sustainable development and minimizing adverse environmental and social impacts.

A total of NRs 10,49,000.00 (In words: Ten Lakhs and Forty Nine Thousand Rupees Only) is allocated for mitigating impacts during the construction and operation phases. These costs have been carefully considered to ensure financial feasibility and comprehensive coverage of environmental and social management responsibilities and legal liabilities.

## Annex- I: Environmental and Social Screening Checklist

### I- Sub-project Background

1	Name of the Sub Project	Laxmi Water Supply Project
2	Location	Municipality/ Rural Municipality: <u>Bardagoriya R.M.</u> Ward No: <u>02</u> District: <u>Kailali</u> Province: <u>Sudurpaschim</u> Altitude: <u>179_m</u>
3	Co-ordinate (GPS)	Latitude: 28° 41' 11.7'' N Longitude: 81°03'41.9'' E
	Project's boundaries in four directions and the area of influence	East: Dhundra Public Drain, West: Unpaved road North: Shiva Mandir/ Pragatishil Krishak Samuha Haat Bazar Truss South: Unpaved Road
4	Type of Sub-project	Water Supply
5	Proponent	Bardagoriya Rural Municipality

### II- Environmental and Social Screening

S.N.	Screening Checklist	Response (Yes/No)	Remarks/Comments (Provide information/ justification either for "Yes" or "No" if applicable)
<b>A</b>	<b>Environmental Screening</b>		

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1	Is the sub-project site located within any National parks/ protected areas or any critical aquatic and terrestrial habitat area?	No	It is located nearby the Shiva Mandir. The settlement area is around 250 m far from the construction site there is no any impact on nearby area and far from Bardiya National Park.
2	Is the sub-project site located in the surrounding national parks or protected areas including buffer zone?	No	Sub-project is located at Bardagoriya RM-02 which is far from Bardiya National Park.
3	Will the sub-project be located in areas surrounding forest or wildlife areas other than national parks and protected areas?	No	Propose site is located at Bardagoriya RM-02 and it does not transverse in any protected area.
4	Will the sub-project be implemented in the areas surrounding water bodies, lakes and ponds and intend to use or depend on them for the Implementation?	No	Far from water bodies which is around 1000 m far from sub-project area.
5	Will the sub-project be implemented in Areas located in high risk zone such as landslide prone area, steep slopes, highly degraded land in hills, riverine area susceptible to annually flooding, or in areas causing large-scale soil erosion?	No	Proposed site is flat land of of forest area so there is no risk of soil erosion.
6	Will the sub-project involve land clearance on very steep slopes?	No	The sub-project area is flat and barren land. So, no need of land clearance.
7	Will the proposed sub-project involve logging?	No	There is no history of water logging, hence the proposed sub-project does not involve logging. Some days with heavy rainfall rainwater takes 2 to 3 hours to drain out of the catchment.
8	Will the proposed sub-project endanger indigenous Plant species of ecological significance?	No	There is no any impact on plant species because the proposed land is barren. The sub-project area don't bear flora/fauna species with ecological importance.

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9	Is there any public infrastructure (School, hospital, health post) in the surrounding area of the project site? If yes, provide brief descriptions.	Yes	There is no any infrastructure.
10	Will the construction activities cause any damage to the existing local roads and other infrastructures/Utilities?	Yes	The construction activities will cause minimal damage to the sides of existing local roads during trench excavation for pipe laying works.
<b>B</b>	<b>Social Screening</b>		
	<b>Land acquisition</b>		
1	Does the sub-project require land acquisition?	No	There is enough land to construct additional infrastructure belonging to Rural Municipality (RM). Similarly, land acquisition is not required for pipe laying. Access will be temporarily restricted during the process but the trench will be covered once the pipes are laid.
2	If Yes, please provide information about the types of land that will be acquired. Private land Government/Public land Forest land (specify ownership i.e private, Government)		The land acquired by Water Supply Project belonging to Rural Municipality and the existing road is public land. So, the private land acquisition is not required.
3	Has sub-project managed enough land for Construction? If Yes, how? explain briefly	Yes	There is enough land to construct reservoir at Office premises and the land belonging to the Bardagoriya RM. The land for the pipe-laying work is along the road, which is public land. So, the private land acquisition is not required.
4	If the sub-project is planning to acquire private land, please provide information about the process of acquisition  Voluntary donation Involuntary acquisition Negotiation	No	Private land acquisition is not required for the sub-project because the proposed land is public land.
5	If private land acquisition is required, will there be a loss of productive land?	No	Private land acquisition is not required.

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6	If private land acquisition is required, will there be any physical/economic displacement and impact on livelihoods?	No	Proposed land is public land, private land acquisition is not required. So that there is no any physical and economical displacement.
7	Will there be a temporary land acquisition for the sub-project?	No	Temporary land acquisition is not needed as there is enough land of RM for sub-project.
8	If “Yes”, please provide information about the types of land that will be temporarily acquired.	No	Ownership of the land is with Rural Municipality
9	Will there be any adverse impact on non- titleholders including loss of shelter and livelihood due to land acquisition?	No	The land is free of encroachers or non-titleholders/ illegal users, hence such impacts were not observed during field visit.
10	Will land acquisition result in loss of income loss of access to common property resources?	No	Since the proposed land is public land, no such impacts are anticipated.
	<b>Cultural Heritage</b>		
11	Will the proposed sub-project be implemented in or surrounding heritage site, religious temple and other religious site?	No	The proposed site is located at barren land. There is no any heritage site around it.
12	Will the sub-project cause encroachment on historical/cultural/religious areas?	No	No any impact on historical/cultural/religious areas.
13	Will there be any adverse impacts on cultural heritage due to sub-project activities? If “Yes”, please explain briefly	No	There will be not any adverse impacts on cultural heritage due to sub-project activities.
	<b>Indigenous and vulnerable People</b>		
14	Will the sub-project involve activities that are likely to make irreversible adverse impact on indigenous communities, women and vulnerable Groups?	No	Does not impact on Indigenous and vulnerable people.

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15	Will the proposed sub-project include any activity that promotes or involves incidence of child labour?	No	Child labour is strictly prohibited.
16	Will the proposed sub-project benefit ethnic groups living in the service area?	Yes	The proposed sub-project will benefit all the local people irrespective of their caste and ethnicity and will be given priority to backward/ ethnic groups in construction activities.

SN	Screening checklist	Yes		No		Comments Provide information/justification either for “Yes” or “No” if applicable
<b>Labor and working conditions</b>						
1.	How many workers are likely to be hired for the proposed works? How many workers are estimated to be women?	Total 35 numbers of workers are estimated for the proposed works 10 numbers of female workers are estimated				
2.	Will the project draw on migrant workers?	Yes		Some of the skilled manpower will be hired from outside the Bardagoriya Rural Municipality		
3.	How many workers are estimated to be hired directly from the project area?					
4.	Of the total workers, how many are estimated to be	Skilled:10 Semiskilled: 10 Unskilled: 15 Engineers: 3 Technician/overseer:3 Security guards: 2 Others: 10				

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5.	In terms of the categorization of the sub- project workers as the World Bank’s ESF,how many of them will be	Direct workers:10 Contracted workers:35 Primary suppliers’ workers: 10 Community workers: 15		
6.	Will there be a labor camp? Or any form of accommodation for workers	Labor camp will be managed/constructed by project: Will be constructed at office premises.		
7.	If the sub-project is planning to manage/construct a labor camp, provide the information on	Probable location (s) of labor camp: within OHT premises Drinking water, Electricity, LPG Gas for cooking. Status of basic facilities (power, water etc.):		
8.	Does the sub-project plan to maintain and regularly update a labor registry throughout the project lifecycle?	Yes		Attendance register will be kept at construction site and daily attendance will be done.
9.	Is there a policy that ensures nondiscrimination in wages and other facilities?	Yes		There is Labour Act 2017 for nondiscrimination in wages and other facilities.
10.	Does the Project ensure that all persons working for the project are above minimum age as per national laws?	Yes		Child Labour will be strictly prohibited.
11.	Does the Project ensure it will abide by the national standards working hour rules and overtime?	Yes		As National Standards worker will work for 8 hours per day.

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12.	Does the sub-project have plans to provide orientation to migrant workers about National labor laws, local tradition, culture, costumes, norms, and values?	Yes		One-day orientation to migrant workers about National labor laws, local tradition, culture, costumes, norms, and values has been scheduled prior to construction.
13.	Will heavy machinery (e.g. excavators, cranes, trucks, jack-hammers) be used for construction activities?	Yes		Excavators, truck and Jack Hammers will be used during construction period.
14.	Will the Project activities involve the handling of hazardous Materials/contaminants?		No	There is no any hazardous material required.
15.	Will the Project activities involve the handling of risky electrical equipment?	Yes		there is little risk of handling of risk electrical equipment while installing transformer by 100kVA and 11kVA transmission line
16.	Is there any safety concern to women, once the migrant workers arrive in sub-project site?	Yes		The arrival of migrant workers at a sub-project site can raise concerns about the safety of women in the area. It is essential to address these concerns through a combination of policies, preventive measures, and community engagement.
17.	Does the sub-project plan to provide orientation to workers about the national laws and project policies on GBV & SEA/SH?	Yes		One day orientation to workers about the national laws and project policies on GBV & SEA/SH is planned.
18.	Does the sub-project plan to provide orientation to workers about the risks of communicable diseases such as STDs?	Yes		One day orientation to workers about the risks of communicable diseases such as STDs is planned.
10.	Does the sub-project plan to provide orientation to workers about COVID-19 related national and WHO protocols?	Yes		One day orientation to workers about communicable diseases is planned in which one class will be of COVID-19.
20.	Is there any history of conflict between the migrant workers and the local in any infrastructure projects in the local area?		No	There is no history of conflict between the migrant workers and the local during OHT construction in sub-project area and other projects in the local area.

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21.	Is there any possibility of conflicts between migrant workers and the local community?		No	There is no possibility of conflict as the community people are peaceful.
<b>Resource Efficiency and Pollution Prevention and Management</b>				
1.	Will construction activities result in production of waste that needs special treatment or disposal measures? If “Yes”, describe types and expected amount of waste, if known at the time of screening?	Yes		Waste produced from construction site are most of cement bags so there is no production of waste that needs special treatment or disposal measures
2.	Will the sub-project generate substantial amount of wastewater (liquid waste) during construction and operation?		No	There is no generation of wastewater during construction.
3.	Will it create dust pollution around the sites?	Yes		Due to transportation dust pollution will create in sites and also by harvesting agricultural product
4.	Will be the sub-project generate substantial amount of air emission during construction and operation?	Yes		During construction period there will be air emission from concrete mixture, generator.
5.	Will the sub-project create noise/vibration beyond the level permitted by the law?	Yes		Not regularly but while using generator, concrete mixture, metal cutter.
6.	If the sub-project plans to transport, storage, and use and/or disposal of materials that may create physical, chemical, and biological hazards?  If “Yes”, please mention		No	Such hazardous creating material will not be used.

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7.	Will it temporarily stop or impact/pollute the water supply and sanitation system in and around the site?		No	Its completely new Project.
8.	Will there be any solid waste generated by sub-project that needs to be transported off-site for reuse, recycle or disposal of?	Yes		Some amount of solid waste will be generated. Metal waste, cement sacs etc., will be reused.
9.	Will any liquid waste, or an item containing liquids (including oils), needs to be transported off-site for reuse, recycle or disposal of?		No	Not any liquid waste, or an item containing liquids (including oils), needs to be transported off-site for reuse, recycle or disposal is needed.
10.	Will any explosive and hazardous chemicals be used within the project?		No	Not any explosive and hazardous chemicals be used.
11.	Will building materials containing asbestos be removed/disposed of?		No	Such asbestos containing materials are not disposed.
12.	Will any building materials be removed/disposed of that are coated with lead-based paint?		No	There will be construction of new building only.
13.	Will mercury-containing devices (switches, gauges, thermostats) be removed/disposed?		No	Such devices are not used.
14.	Will any building materials be removed/disposed of that contain lead, silver or chrome?		No	There will be construction of new building only.
15.	Will the sub-project use batteries (lead-acid or nickel-cadmium) as its components?		No	No use of batteries.

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17.	If “Yes”, please briefly explain how the Project plans safe transportation, storage and use and then disposal of hazardous materials.			
18.	Will sub-project activities involve GHG emissions?	Yes		
19.	If “Yes”, please provide description of the activities that will contribute to the GHG emission.	During construction activities such as using of generator, concrete mixture etc., but will be insignificant.		
<b>Potential Community and Occupational Health and Safety Impacts</b>				
1.	Are there any community health and safety risks due to the use of equipment, machinery, or the activities at the sub-project?	Yes		To use such equipment skilled manpower should be mobilized.
2.	Will the construction works disturb the normal functioning of other commercial / community/residential activities?  If “Yes”, please mention the activities and period of disturbance.		No	There will not disturb due to construction works on commercial/community/residential activities.
3.	Are there any potential impacts to public health and safety due to changes in the landscape for sub-project?		No	Sub-project site is already finalized and some infrastructures are already constructed.
4.	Are there any risks to community safety due to accidental and natural hazards during sub-project construction and operation?		No	Sub-project site is already surrounded by a boundary wall. But during pipe laying there could be minimal risk to community safety.

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5.	Is there any possibility of traffic congestion or rise in road accident in the project area due to project activities?	Yes		There may be possibility of traffic congestion and road accidents due to transport used in project.
6.	Is there any provision to control possible trespassing of non-project staff on the project site during construction and operation?		No	
7.	Does the sub-project plan to provide orientation to surrounding communities about the risks of communicable diseases and COVID-19?	Yes		One day orientation for community level on STDs has been planned prior to construction.
<b>Stakeholder Engagement</b>				
8.	Have the stakeholders of the sub-project been identified?	Yes		Stake holder are already identified during survey
9.	If “Yes”, please name them along with their level of influence and interest in the sub-project	WB, RM, PIU, MWASH unit, Local people of Bardagoriya RM		
10.	Have the stakeholders been categorized in terms of gender, age, and ethnicity?	No		
11.	Major issues raised by the stakeholder during initial consultation?	-Job opportunity for local people -Delivery quality water as soon as possible		
12.	What are the main sources of information for the stakeholders? [Hint: radio, TV, newspapers]	Radio, social media and Bhalmanasa (the social leader in community, they share information in society).		
13.	Is there is social institution/practice for community consultation on common issues in the area?			Not a social institution but there are Bhalmanasa in all community to solve common issues within their community.

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14.	Is there any social/religious/cultural institution or practices for local dispute settlements?			Bhalmansa committee and Tole Development committee is religious /cultural institution or practices for local dispute settlements.
15.	Are there any youth clubs, women groups or NGOs active in the project area and in the district?  If “Yes” please provide top five such clubs/groups/			NGOs youth clubs, women groups and 1. Mahila Samuha
<b>Contextual risk</b>				
1.	Is there any history of community conflict in the sub-project area?		No	There is no history of community conflict in the sub-project area.
2.	Is there any history of protests against infrastructure projects in the area?		No	There is no history of protest against infrastructure project.
3.	Provide a brief description about nature of crimes, if any, observed in the project area in last two years. [Hint: Source of information local police station]			Stolen, Household debate
4.	Which political parties won the last local election? [Municipal and the ward of the project site]			Both RM and Ward – Nepal Communist Party
5.	Which political parties won the last parliamentary election from the Constituency of the project site?			Nepal Communist Party
6.	What are the major economic activities in the municipality? [Hint: Occupation, local exports, etc.]			Agriculture, vegetable, daily wages base labour, foreign employment

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7.	Please name the major industries/institutions located in the municipality.	Rice mill,		
8.	Which are the major market centers in the sub-project area and how far are they?			Baunitya Chowk :- 4.5 km,
9.	Is there a board community support for the sub-project? [Hint: Community perception based on stakeholder consultation]			All the community not only supportive they are excited for drinking water.
10.	Is there support from the local municipality for the project?	Yes		Sub-Project is under Bardagoriya Rural Municipality.

**Checklist for ESS7 and particularly to FPIC**

ESS7: Indigenous Peoples	Yes	No	Impact			Remarks
			No	Positive	Negative	
Does the project footprints lie in areas where indigenous people is present including (area of influence)	Yes		No impact			Laxmi Water Supply Project is located at Bardagoriya Rural Municipality ward no-02. The surrounding community is mixed with Janajati/Indigenous Peoples group like Tharu, Chaudhary, Magar, Gurung etc. and other ethnic groups such as Dalit, Brahmin/Chhetri and other caste/ethnic groups. Tharu Chaudhary are the original inhabitants of the area.
Will the project lead to full or partial physical displacement of IPs (regardless of whether the IPs are recognized as IPs by the country's law)?		No	No impact			The proposed site is public land belonging to Bardagoriya RM. and the distribution pipeline network will be laid along the existing public road, which is public land. As such, the laying of water pipelines will not result in physical displacement or restrict access to private or community land.
Will the project lead to full or partial economic (loss of assets/access to resources due to land acquisition and also access restriction—whether or not these affected are physically displaced or not) Displacement of IPs?		No	No impact			The ownership of land is with the Bardagoriya Rural Municipality and the distribution pipeline network will be laid along the existing public road, which is public land. Private land or community land is not required for sub-project. Proposed interventions will not result in loss of assets or access restriction to communal resources nor any full or partial economic loss.
Will the project impact land/restriction access to land subject to traditional use or under customary use or occupation (regardless of whether IPs possess legal titles to such areas, whether the project is located within or outside of the land and territories inhabited by IPs, or whether the IPs are recognized as IPs by the country's law)?		No	No impact			All construction works will be carried out within the Proposed Office premises of Laxmi water supply project and the existing road width, which is in public use. Therefore, the sub-project will not impact the community land of Indigenous Peoples (IP) nor restrict access to land traditionally used or occupied under customary practices.
Will the project impact natural resources (timber and non-timber forest products, other forest product, medicinal plants /grazing or pasture lands/forest/cropping areas)/loss of access to such assets and resources subject to traditional use or		No	No impact			The major infrastructure of proposed Laxmi Water Supply Project will be constructed in barren land. Major intervention under the project will be pipe laying work but it will be limited within the existing road width that is in public use. So, impact on natural resources or loss of access

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under customary use or occupation (regardless of whether IPs possess legal titles to such areas, whether the project is located within or outside of the land and territories inhabited by IPs, or whether the IPs are recognized as IPs by the country's law)?						to such resources is not expected.
Will the project lead to the utilization or commercial development of natural resources on lands and territories claimed by IPs?		No	No Imp act			This is a community water supply project directly benefiting the community. Thus the sub-project will not lead to the utilization or commercial development of natural resources on lands.
Will the project have significant impact on tangible cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected community? <i>(Tangible heritage may include movable or immovable objects, sites, structures, group of structures, and natural features and landscape that have cultural significance like burial grounds/ritual spaces/stupas/shrines/places of worship)</i>		No	No Imp act			There is no any impact on tangible cultural heritage.
Will the project have significant impact on intangible cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected community? <i>(Intangible cultural heritage may include practices, representations, expressions, knowledge, and skills, as well as associated instruments, objects, artifacts, cultural spaces that IP communities recognize as part of their heritage like traditional handicrafts such as Bamboo weaving, oral traditions, performing arts and so on)</i>		No	No imp act			IP community groups have their own set of intangible heritages example, scared spaces, belief systems, knowledge and practices. But, during consultation with the IP community, it was reported that project footprints is unlikely to have a bearing on any intangible heritages.

Annex II: Minutes of meeting / Consultation Meeting

1. Public Consultation meeting held on 13<sup>th</sup> May 2025 at Bardagoriya RM Ward No-02 Office; Doghra

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आप्य मिति २०८२/०५/३० गतेका दिन यत्र बर्दगोरिया गाउँपालिका वडा नं २ को अध्यक्ष श्री गोविन्द विक्रमको अध्यक्षतामा बर्दगोरिया गा. पा. २ स्थित दुध्रा अड्डामा भएको हलफ तथा अन्तःक्रिया कार्यक्रम मा पुस्तावित श्री लक्ष्मी खोपानी उप-आयोजनाको हाउन्डनेरी गर्ने कार्यको विषयमा पारिषदको प्रतिवेदन र वातावरणीय रूपमा सामाजिक व्यवस्थापन योजना (ESMP) तयारीको क्रममा प्राविधिक, वातावरणीय र सामाजिक रूपमा आर्थिक बहुरु हितो मान्दिका मुल्याङ्कन प्रभाव र लक्ष्य आयहरूको जोमा (M3) खोपानी समिति र ल्यान्डिङ खोपानी उपभोक्ताहरू बिच विषय हलफ तथा अन्तःक्रिया गर्ने कार्य सम्पन्न गरियो। हलफका क्रममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMP) परिधि भित्र रहेर तपासिलमा उल्लेखित बुँदाहरू माथि उठेका मुद्दाहरू (इसपबु) र तिनीका सामाजिक आर्थिकको जोमा विषय हलफ गर्ने निर्णय गरियो।

क्र. सं.	नामथर	पद	हस्ताक्षर
०१	गोविन्द विक्रम	व्य अध्यक्ष	
०२	गोविन्द डंगोल	भन्मन्सा	
०३	श्री प्रेम खत्री	स.स अध्यक्ष	
०४	श्री मिर्छाले दुमरे	" उप-अध्यक्ष	
०५	माया थापा चौधरी	" सदस्य	
०६	सुधी खत्री	" सदस्य	
०७	सुधी कुडुगाना	" सदस्य	
०८	दानधर विक्रम	" सदस्य	
०९	श्री राम भद्र	" सदस्य	
१०	नेत्र प्रसाद उपध्याय	" सदस्य	
११	निर्मला देबि सिंह खत्री	स.स कोषाध्यक्ष	
१२	दिपक चौधरी	खा.पा उपभोक्ता	
१३	भागीराम चौधरी	"	
१४	मान ब. विक्रम	"	
१५	दल प्रसाद डंगोल	"	
१६	पुष्प डंगोल थापा	"	
१७	रम ब. खत्री	"	
१८	विता खत्री	"	

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१९	अल्पना थाक	ला.प. उपभोक्ता	कल्पना
२०	अंकिता डंगोप	"	<del>कल्पना</del>
२१	अनुष्ठा चौधरी	"	हापुष
२२	लक्ष्मी थाक	"	सुसीला
२३	लक्ष्मी चौधरी	"	सदावी
२४	अन्तराम चौधरी	"	अनाराम
२५	चन्द्रकला कुनार	"	चन्द्रकला
२६	दिप देवी कुठरीया	"	दिप
२७	अमृता डंगोप थाक	"	
२८	मनिसज्ज रिमाल	"	मनिराम रिमाल
२९	स्वप्न रिमाल	"	स्वप्न
३०	गणेश पौ कुठरीया	"	कल्पना
३१	नेत्राम चौधरी	"	
३२	न्यायम कौरेल	"	न्यायम
३३	राधाकृष्ण चौधरी	"	
३४	देवदास डंगोप	"	देवदास
३५	कनका डंगोप थाक	"	
३६	चैतन्य डंगोप	"	
३७	मन्यु डंगोप	"	मन्यु
३८	जानकी डंगोप	"	जानकी
३९	पूणिमा चौधरी	"	पूणिमा
४०	राजकुमार कुनार	"	राजकुमार
४१	पूणिमा कुनार	"	पूणिमा
४२	राजकुमार थाक	"	
४३	कल्पना जगला	"	कल्पना
४४	रुना थाक	"	रुना
४५	चैतन्य डंगोप	"	
४६	राजेश डंगोप थाक	"	राजेश
४७	राज क चौधरी	"	Ram
४८	लायक राम चौधरी	"	
४९	वीन क डंगोप थाक	"	वीन
५०	चिन्मय डंगोप	"	
५१	पारदेवी डंगोप	"	
५२	दुगा डंगोप	(M-WASH)	
५३	सम्राज बिबाडी	(M-WASH S.M)	

- २५ अतवारी इंगोप वडा सफल
- २६ बलबहादुर खिस्ट छेडा थल सेक
- २७ सुजना कुमारी इंगोरा MSA सम.
- २८ पुद्दल सिंह रामजाही प्रगार
- २९ विवेक का

निर्वाचकहरू

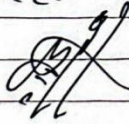
- १) यस वडाको रिया वडा नं १ मा पर्ने लक्ष्मी खानेपानी आयोजना हतौलेको सम्बन्धमा सम्बन्धीत सबै संरक्षकाला लागू जानकारी देकाएर हुनु आयोजना तथा सिधु निर्माण र शुष्कताको हुनुपर्ने सम्बन्धमा जित्ने हुनुपर्ने गरियो साथै निर्माण कार्य गर्दा अपनाइने सिधु र प्रकृतिको जानकारी दिन कार्य जमेट गरियो।
- २) आयोजना निर्माण गर्दा सैजगरीको पहिलो प्रमाणीकता ह्यान्डिग बाहिरो हुनुपर्ने सम्बन्धमा जित्ने लपमा हुनुपर्ने गरियो।
- ३) हाल यस प्रस्तावित आयोजना क्षेत्रमा हिंसा, बाल श्रम लैङ्गिक हिंसा विभेद र बालविवाह जस्ता कुनैकुनै लपमा हुनुपर्ने गरेको देखिने तथा भविष्यमा यसको सम्बन्धमा हुनुपर्ने हुनुपर्ने र त्यसैको लागि कडा रूपमा अपनाइनुपर्ने सुझावको विषयमा जानकारी दिई हुनुपर्ने गरियो।
- ४) यस प्रस्तावित आयोजना क्षेत्रमा गरेको हिंसा तथा लैङ्गिक विभेद सम्बन्धीत सम्बन्धीत निकायको बाहिरो कामदार र स्थानीय समुदायको हुनु हुने भन्ने भन्ने वा आफ्नो लैङ्गिकको बारेमा जानकारी दिई जित्ने हुनुपर्ने गरियो साथै वातावरण सामाजिक व्यवस्थापन योजना (ESMP) मा समेत उल्लेख गरिएका गरी हिंसा विभेद आदि विषयको बारेमा हुनुपर्ने गरियो।

२) वातावरणीय एवम् सामाजिक व्यवस्थापन योजना  
वाटि ग्रह गा.पा को कार्यलयमा सम्पर्क गरि जानकारी  
लिने लडिने लगायत आयोजना निर्माण का  
क्रममा अडपनि विविध वातावरणीय एवम् सामाजिक  
समस्या र तिन्का समाधानका उपायहरू को बारेमा  
बिस्तृत रूपमा छलफल गरियो।

३) आयोजना निर्माण क्रममा हुने वायु प्रदूषण जस्ता  
वातावरणीय समस्याका र त्यसको निपकाण  
सम्बन्धमा बिस्तृत छलफल गरियो।

४) निर्माण अवसाथीका क्यारु र कामदारहरूका  
लागी छिवि आयोजना निर्माण क्षेत्र नजिक  
को दुबानो स्थान उपयुक्त हुने सम्बन्धमा छलफल  
गरियो।

५) वातावरणीय एवम् सामाजिक व्यवस्थापन  
योजना वाटि ग्रह गा.पा को कार्यलयमा सम्पर्क  
गरि जानकारी लिने लडिने लगायतका निर्माण  
क्रममा अडपनि विविध वातावरणीय एवम् सामाजिक  
समस्या र तिन्का समाधानका उपायहरूमाथि  
बिस्तृत रूपमा छलफल गरियो।

 प्रमुख

2. Public Consultation meeting among marginalized groups on 13<sup>th</sup> May at Bardagoriya RM-02; Kumbhiya

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आज मिति २०८१/०५/३० गतेका दिन यस लक्ष्मी स्वयंसेवकी हाट हाफर्ड उपभोक्ता समितिका आन्तर्गतका कार्यक्रम यस बर्दगोरिया गाउँपालिका वडा नं २ का वडा अध्यक्ष श्री गोविन्द बि.कु. उद्यु को अध्यक्षतामा यस लक्ष्मी उप-आयोजनामा लाभार्थी, दलित पढापाठी तथा स्वयंसेवक सहित सम्बन्धित क्षेत्रका हस्ताक्षर तथा अनुमतिपत्रका कार्यक्रम समेत तपशिलका बुँदा हरुमा हस्तकल गरियो।

क्र.सं	नाम थप	पद	हस्ताक्षर
१	गोविन्द बि.कु.	वडा अध्यक्ष	
२	अलवारी इंगोपा	उपाध्यक्ष	
३	इरुवा जोशी	उ.स. अध्यक्ष	
४	मनजला देवि भन्ज	उपा.पा उपभोक्ता	
५	लक्ष्मी देवी बम	"	
६	लाली देवी कामी	"	
७	शुभा बि.कु.	"	
८	निर्मला सिंह	"	
९	सुनिता मल्ल	"	
१०	गिता कुवा देवी	"	
११	सुमुन्द्र कामी	"	
१२	जमिना कामी	"	
१३	जुकी कामी	"	
१४	उमालाल केसी	"	
१५	किङ्गले कामी	उ.स. उपाध्यक्ष	
१६	वसुन्ध बम	उपा.पा उपभोक्ता	
१७	लक्ष्मी बि.कु.	"	
१८	उज्वेली बि.कु.	"	
१९	न्याउली बि.कु.	"	
२०	लक्ष्मी इंगोपा	"	
२१	उसु व. इंगोपा थारु	"	
२२	रुक्मिणी इंगोपा थारु	"	
२३	प्रमद इंगोपा	"	
२४	चिन्मणि	"	

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२३	सुविष्ट लविच्छा-चौचरी	स्वा.प. उपभोगा	कायु.
२४	डल पञ्च हुम	"	का
२५	गोपुरा इगाप	"	गोपुरा
२६	प्रविन वि.क	"	प्रवीन
२७	बाबु देवी कामा	"	बाबु
२८	लला देवी वि.क	"	रतना
२९	दलसप कुमारी वि.क	"	दलसप
३०	आईती कामा	"	आईती
३१	बिमला वि.क	"	बिमला
३२	उदय वि.क	"	उदय
३३	दिवक वि.क	"	दिवक
३४	विशु वि.क	"	विशु
३५	खुशीराम थारु इगाप	"	खुशी
३६	इम्मरा बिनाडी	स्वा.प. बर्दगोरिया	इम्मरा
३७	सिर्जना इगाप	(MST)	सिर्जना
३८	त्रिवेदिका	(MST, DTL)	त्रिवेदी
३९	हिममत देविया	(SDS) MST	हिममत
४०	दुगा इगाप	(M-WASH) S-17	दुगा

तयशिल

- १) लक्ष्मी खानेपानी हा.ल.क.ई. उपभोगा समिति को आयोजना निर्माण गर्दा पम्पगारीको अप्पुशर क्षमता अनुसन्धान कार्य स्थानीय अधिनियमहरूलाई फिनु पर्ने सम्बन्धी विस्तृत रूपमा हुलफल गरियो।
- २) लक्ष्मी खानेपानी हा.ल.क.ई. उप-आयोजनाको अनुसन्धान गर्दा आते विपन्न बा.ल.क.ई.काइ पडाइ र सा.चालथ निर्माण सम्बन्धी लक्ष्मियत पिते क्रुराव्य गठो निर्णय गरियो।
- ३) यस लक्ष्मी खानेपानी आयोजनाको सम्बन्धित समूह हा.ल.क.ई.काइ आयोजनाका कर्माचारीको तालिम

Date \_\_\_\_\_  
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दिने तथा शहसिकरणको लागि अभियोजिका  
बनाउने निर्णय गरियो।

② यस क्षेत्रमा दलित जनजाती ककुम्भारी बस्ती  
होए भएकाले पहिलो प्राथमिकता बसाइका लागि  
दिनु पर्ने निर्णय गरियो।

सिन्हा

Hawong

Tumb.

3. Rural Municipality Level Grievances Redress Committee (GRC) Formation

Page No.  
Date

आज मिति २०८१/०१/१३ गतेका दिन खनिपानी क्षेत्रगत सुरासन तथा पूर्वाधार सहयोग आयोजना (NASSIP) अन्तर्गत गुनसो सम्बन्धी व्यवस्थापन गर्ने यस वडेगोरिया गा.पा अध्यक्ष श्री कृष्ण बहादुर कुँवर ज्युको अध्यक्षतामा आयोजना कार्यन्वयन इकाई (PIU) मा स्थापना हुने गुनसो व्यवस्थापन समिति गठन गर्न इलफल सहित निर्णय गरियो।

उपस्थिति

- |                              |                                   |  |
|------------------------------|-----------------------------------|--|
| १) श्री कृष्ण बहादुर कुँवर   | वडेगोरिया गा.पा अध्यक्ष           |  |
| २) श्री गणेश राज ठोरी        | वडेगोरिया गा.पा उपाध्यक्ष         |  |
| ३) श्री प्रकारा कुँजाना      | वडेगोरिया गा.पा प्र.प्र.अ         |  |
| ४) श्री टंक प्रसाद ओझा       | वडेगोरिया गा.पा इन्जिनियर         |  |
| ५) श्री लक्ष्मी राज जोशी     | PIU Manager                       |  |
| ६) श्री हृषी राज ओझा         | अधिकृत                            |  |
| ७) श्री मोहन सिंह मंडेल      | MWASH Focal Person                |  |
| ८) श्री आस्मित स्वार         | PIU Sub-Engineer                  |  |
| ९) श्री हिममत बहादुर श्रेष्ठ | Social Management Specialist      |  |
| १०) श्री रेखरी प्रसाद महु    | Governance & Institutional spc    |  |
| ११) श्री उमेश प्रताप सिंह    | Environmental Mgmt. Specialist    |  |
| १२) श्री सस्वती वि.क         | वडेगोरिया गा.पा कार्यपालिका सदस्य |  |

प्रस्ताव

१. गुनसो व्यवस्थापन समिति गठन सम्बन्धमा

२. बस स्वस्थित गुनसो व्यवस्थापन सम्बन्धमा

निर्णय

१. प्रस्ताव नं १ माथि इलफल गर्दा खनिपानी क्षेत्रगत सुरासन तथा पूर्वाधार सहयोग आयोजनामा आयोजना कार्यन्वयन गर्दा आई पर्ने सम्बन्धलाई समाधान गर्न पालिका स्तरीय आयोजना कार्यन्वयन इकाई (PIU) मा रहने गरी आयोजना गुनसो व्यवस्थापन समिति तल उल्लेखित पद्याधिकारी रहने गरी गठन गरियो।

१) लक्ष्मी राज जोशी संयोजक PIU

२) टंक प्रसाद ओझा सदस्य MWASH इकाई प्रमुख

३) हृषी राज ओझा सदस्य सामाजिक विकास अधिकृत।

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ब्यक्तनामाकार

श्री गणेश राज गिरी वडगोरिया गा.पा उपाध्यक्ष

निर्णय नं२

प्रस्ताव नं २ माथि फलफल गर्दा यस वडगोरिया गा.पा मा संघान्ति  
रविपनी तथा बससफई सम्बन्धीत आरका गुनासहरुको व्यवस्थापन  
गरी गुनासो व्यवस्थापन समितिने समाधान गर्ने निर्णय गरियो।

गुनासो

निर्णय

गुनासो

4. Meeting regarding the Nomination of Focal Person For Overall GRM, Workers' GRM & SEASH/GBV

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Date: \_\_\_\_\_

आज मिति २०८१/०८/३१ गतेका दिन खानेपानी क्षेत्रगत सुशासन तथा पूर्वाधार सहयोग आयोजना (WASGISP) अन्तर्गत, यस वडैगोरिया गाउँपालिका अध्यक्ष ज्यू श्री कर्ण बहादुर कुँवर ज्यूको संयोजकत्वमा बैठक बसी फलफल सहित निर्णय गरियो।

तपस्विनी

१) श्री कर्ण बहादुर कुँवर	वडैगोरिया गा.पा. अध्यक्ष	
२) श्री गणेश राज गिरी	वडैगोरिया गा.पा. उपाध्यक्ष	
३) श्री प्रकाश डुङ्गना	वडैगोरिया गा.पा. प्र.प्र.अ.	
४) श्री लक्ष्मी राज जोशी	PIU Manager	
५) श्री मोहनलाल जैशी	रेजिमी Team Leader (WASGISP)	
६) श्री पद्म राज जैशी	MWASH Engineer	
७) श्री झपी राज ओझा	अधिकृत	
८) श्री पानमती राना	महिला विभाग शाखा प्रमुख	
९) श्री संतोष पाण्डे	(Technical Manager) WASGISP	
१०) श्री मोहन मंडे	MWASH Unit Focal Person	
११) श्री संजय चालिसे	Design Engineer WASGISP	
१२) श्री हिक्मत बहादुर शैक्या	Social Dev. Sps.	
१३) श्री दिलिप डुङ्गना	Computer Operator PIU	
१४) श्री शेखरी प्रसाद	अड्डा Governance & Im. Sps.	
१५) श्री उमेश प्रताप सिंह	Environmental Mgmt. Sps.	

१६) २मी प्रस्ताव नं-१  
Focal Person सम्बन्धमा निर्णय व.  
प्रस्ताव नं १ माथि फलफल गर्दा यस खानेपानी क्षेत्रगत सुशासन तथा पूर्वाधार सहयोग आयोजना कार्यन्वयन गर्न तपस्वील कमीनिसन फलफल सहित निर्णय गरियो।

i) Overall GRM Focal Person: झपी राज ओझा (सा.प्र.अ.)  
ii) Worker GRM Focal Person: दिलिप डुङ्गना (PIU-Computer Operator)  
iii) SEASH/GBV Focal Person: पानमती राना (म.वि.शा प्रमुख)

5. Meeting and minute of WSUC about Laxmi WSP construction work (16<sup>th</sup> July 2025)

आज मिति 2072 साल भाद्रपद १२ गतेको दिन बर्दगोरिया गा. पा. वडा नं. २ का वडा अध्यक्ष श्री गोविन्द वि. क. ५५ को अध्यक्षता वडा समितिको बैठक निम्न उपस्थितिका वर्यो जसको उपस्थिति र निर्णय निम्न बमोजिम रहेको छ ।

उपस्थित

- १, श्री गोविन्द वि. क. (वडा अध्यक्ष)
- २, श्री फतवाले डाक्टर राहु (वडा सदस्य)
- ३, श्री मोहन चौधरी (वडा सदस्य)
- ४, श्री धोली देवी विश्वकर्मा (वडा सदस्य) धोली
- ५, श्री मैत्र बहादुर वडापक (वडा समिति) मैत्र  
नामान्त
- ६, श्री कल्यावती देवी रेग्मी (का.पा. सदस्य) कल्यावती

गैर उपस्थित

- १, श्री राजेश चौधरी (का.पा.)

प्रस्ताव नं. १, मौलिक संरचना निर्माण गर्ने सम्बन्धमा

निर्णय नं. १, प्रस्ताव नं. १ काय्ये धरलुलु जर्द बर्दगोरिया गा. पा. वडा नं. २ सुम्नेया स्थित साइलन्ट ट्याङ्क र हेनो सिद्ध ०-८-० कट्टा जग्गाका (हेलामी) लक्ष्मी स्वामिनी तथा सरसफाई उपमन्त्र समितिको मौलिक संरचनाहरू निर्माण गर्ने निर्णय सर्व संमत पारित गरियो ।

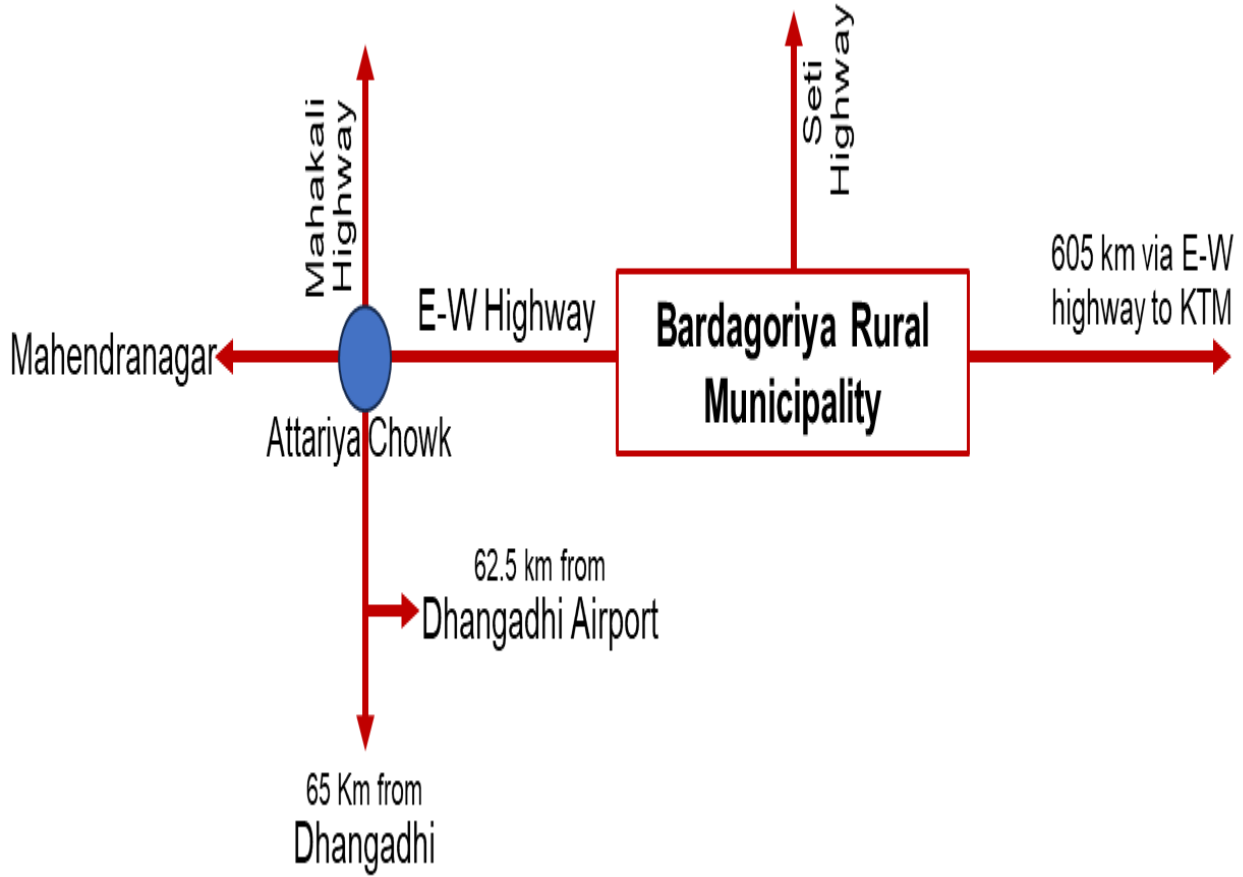
प्रस्ताव नं. २, सम्पत्ति निर्माण गर्ने सम्बन्धमा

निर्णय नं. २, प्रस्ताव नं. २ काय्ये धरलुलु जर्द कुराना नदिको काय्याली नालिक सम्पत्ति निर्माण गर्नका लागि १५ मि. लम्बाई र १५ मि. चौडाई जग्गा लक्ष्मी वि. पा. तथा सरसफाई उपमन्त्र समितिबाट उपबन्ध निर्माण गर्ने निर्णय सर्व संमत पारित गरियो ।





**डा. राजेश चौधरी**  
 वडा अध्यक्ष

**Annex III. Project location**



Annex IV: Land ownership certificate from Bardagoriya Rural Municipality Ward No-02 Office

**बर्दगोरिया गाउँपालिका**  
२ नं. वडा कार्यालय  
दोधरा कैलाली  
सुदूरपश्चिम प्रदेश नेपाल




च.स. :- २०८१/०८२ चालनी नं. :- २२११ मिति :- २०८२/०३/३२ नेपाल सम्बत :- १९४५ दिलागा षष्ठी

श्री बर्दगोरिया गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय  
मुडा कैलाली ।


**विषय :- सिफारिस गरि पठाईएको बारे ।**

उपरोक्ता विषय सम्बन्धमा कैलाली जिल्ला बर्दगोरिया/गाउँपालिका/नगरपालिका/उप नगरपालिका/महा नगरपालिका वडा नं. ०२ कुम्भियामा पूर्वमा गोरटो बाटो, पश्चिममा पक्की कालोपत्रे बाटो, उत्तरमा जंगल र दक्षिणमा प्राभेल बाटो यति चार किल्ला भित्र पर्ने अन्दाजी ०-८-०-० ऐलानी सार्वजनिक जग्गामा पक्की घेरा परखाल सहित पक्की तथा ट्याङ्की निर्माणको प्रकृया अगाडी बढाई दिनहुनका साथै उक्त जग्गा श्री लक्ष्मी खानेपानी उपभोक्ता तथा सरसफाई समितिको रहेको व्यहोरा सिफारिस साथ अनुरोध गरिन्छ

  
वडा अध्यक्ष


**गोपिन्द्र तिम.**  
वडा अध्यक्ष

Annex V: Four Forts Proved by Rural Municipality Office



## बर्दगोरिया गाउँपालिका

२ नं. वडा कार्यालय  
दोधरा कैलाली  
सुदूरपश्चिम प्रदेश नेपाल



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प.स. :- २०८१/०८२      चालनी नं. :- १३१३      मिति :- २०८२/०३/३२      नेपाल सम्बत :- १९४५ दिल्लागा षष्ठी


श्री बर्दगोरिया गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय  
मुढा कैलाली ।

**विषय :- चार किल्ला प्रमाणित सम्बन्धमा ।**

उपरोक्त विषय सम्बन्धमा कैलाली जिल्ला बर्दगोरिया/गाउँपालिका/नगरपालिका/उप नगरपालिका/महा नगरपालिका वडा नं. ०२ अन्तर्गत श्री लक्ष्मी खानेपानी उपभोक्ता तथा सरसफाई समितिको मातहतमा रहेको ऐलानी जग्गाको तपसिल बमोजिम चार किल्ला भएको व्यहोरा स्थानीय सरकार ऐन,२०७४ को दफा १२(२)द्वारा तपसिल बमोजिम प्रमाणित गरिन्छ ।


**तपसिल :-**

सि.नं.	साविक दोधरा गा.वि.स.	हाल बर्दगोरिया गा.पा. वडा नं.	किल्ला नं.	क्षेत्रफल	सि.नं. (नक्सा नं.)	पूर्व तर्फ	पश्चिम तर्फ	उत्तर तर्फ	दक्षिण तर्फ
१	२	२	ऐलानी	०-८-०-०		गोरटो बाटो	पढी कालोपत्रे बाटो	जंगल	ग्रामेल बाटो

  
(वडा अध्यक्ष)

**गोविन्द तिम.**  
डा अध्यक्ष

Annex VI: Land ownership letter of Land and their area from the ward no.2 of Bardagoriya RM



**बर्दगोरिया गाउँपालिका**  
२ नं. वडा कार्यालय  
दोधरा कैलाली  
सुदूरपश्चिम प्रदेश, नेपाल

प.स :- २०८२/०८३  
चालनी नं. :- ५०२  
श्री लक्ष्मी खानेपानी आयोजना  
बर्दगोरिया गाउँपालिका कैलाली ।

मिति :- २०८२/०६/२७  
नेपाल सम्बत :- १९४५

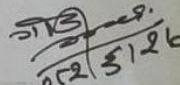
**बर्दगोरिया गाउँपालिका**  
२ नं. वडा कार्यालय  
दोधरा, कैलाली  
सुदूरपश्चिम प्रदेश, नेपाल

**बिषय :- जानकारी सम्बन्धमा ।**

उपरोक्ता बिषय सम्बन्धमा यस बर्दगोरिया गाउँपालिका वडा नं. २ मा नयाँ लक्ष्मी खानेपानी आयोजना निर्माण गरि खानेपानी विस्तार गर्न टंकी निर्माण तथा अन्य संरचना निर्माण गर्नका लागि यस आयोजनाको मुहान रहेको देहाय बमोजिमको स्थान बर्दगोरियन वडा नं. २, रमाइलो डाँडा र काँडा खोला मूल वडा कार्यालय भवन देखि उत्तर तर्फको जग्गा र बर्दगोरिया मन्दिर देखि पूर्व तर्फको सार्वजनिक ऐलानी जग्गा भएको र उक्त मूलबाट बगेर जाने पानी कहि कतै प्रयोग नभई खेर गईरहेको हुँदा उक्त मूल संरक्षण गरि खानेपानी योजनाको रूपमा काम गर्नको लागि कुनै किसिमको विवाद नरहेको व्यहेरा जानकारीका साथ अनुरोध गरिन्छ ।

तपसिल:-

सि.नं.	निर्माण हुने संरचना	संरचना निर्माण हुने स्थान	संरचनाले ओगट्ने क्षेत्रफल	कैफियत
१	सम्प वेल (SUMP WELL) तथा जेनेरेटर/विद्युत ट्रान्समिटर	काँडा खोलाको किनार	२ <del>सेमी</del> कट्टा	
२	टंकी निर्माण पानी प्रसोधन तथा कार्यालय संचालन भवन	रमाइलो डाँडा, बर्दगोरिय २ कैलाली	८ कट्टा	

  
०२/०६/२७  
**गोविन्द वि.क.**  
डा अध्यक्ष

**Annex VII: Members of Laxmi WSUC**

<b>SN</b>	<b>Name</b>	<b>Designation</b>
1	Mr. Puran jaishi	Chairman
2	Mr. Jhirkule Damai	Vice-chairman
3	Mr. Tapendra Dhungana	Secretary
4	Ms. Dinesh Kumari Singh	Treasurer
5	Mr. Tej Bam	Member
6	Mr. Shree Ram Bhatta	Member
7	Ms. Dhanasara B.K.	Member
8	Ms. Maya Tharu Chaudhary	Member
9	Mr. Netra Prasad Upadhaya	Member

**Annex VIII: Water Quality test of Water from the Kada River collected by making small trenches on the riverbed.**

S.N.	Parameter	Observed Values	NDWQS Limit
<b>Physical</b>			
1	Conductivity ( $\mu$ mhos/cm), max.	432	1500
2	pH at 28°C	7.2	6.5-8.5
3	Taste & Odor	N.O.	N.O.
4	Turbidity (NTU), max.	4.74	5(10)
<b>Chemical</b>			
5	Ammonia (mg/l), max.	0.44	1.5
6	Nitrate (mg/l), max.	0.76	50
7	Chloride (mg/l), max.	2.19	250
8	Iron (mg/l), max.	<0.05	0.3
9	Total Hardness (mg/l), max.	246	500
10	Sulphate (mg/l)	<0.4	250
11	Residual Chlorine (mg/l)	<0.04	0.1-0.05
12	Magnesium (mg/l), max.	<0.05	0.2
13	Arsenic (mg/l), max.	<0.005	0.05
14	Fluoride (mg/l)	0.23	0.5-1.5
15	Copper (mg/l), max.	<0.05	1
16	Zinc (mg/l), max.	0.06	3
17	Aluminium (mg/l), max.	<0.01	0.2
<b>Biological</b>			
18	E. coli., (MPN Index/100ml)	152	Nil

**Annex IX: Safety Related Signs and Waste Management Practices**

SIGNAL NOTICE			
			
First Aid प्राथमिक उपचार	Emergency Meeting Point याकामिक भेला हुने ठाउँ	Fire Extinguisher जारी विकल्प उपकरण	Fire hose जारी विकल्प पाइप
DANGER SIGNS			
			
Keep Out विषम क्षेत्र- राई नभने	Danger खतरा - खुला खान्दा	Danger of open trench खतरा - खुला ट्रेन्च	No operation without safety guards सुरक्षा सार्वजनिक से उपकरण नभने नभने
INSTRUCTION SIGNS			
			
Do Not Touch छुन नभने	Do Not Eat/Drink Here खाने/पिने नभने यहाँ	Slow Sign for Traffic Control रुक्ने सङ्केत	Directional Exit Sign खुला बाहिर तिर
SAFETY AND SAFETY INSTRUCTION SIGNS			
			
Safety Gloves Required सुरक्षा कपडा आवश्यक	Safety Vests Required सुरक्षा कपडा आवश्यक	Safety Glasses Required सुरक्षा चशमा आवश्यक	Safety Shoes Required सुरक्षा चप्पल आवश्यक



**Annex X: Photographs**



1. During focus group discussion (FGD) with Women Group at Bardagoriya RM-02; Kumbhiya in 13<sup>th</sup> May 2025.



2. During FGD with water users' group and marginalized group at Ward-02 Office; Dogra in 13<sup>th</sup> May 2025

3. Proposed land location for Laxmi WSP



4. Filed Visit at Ramailo Dada ( proposed Office Site)

5. Propose Sump well Aera Site ( at Kadha River)

**Annex XI: Monitoring format**

**लक्ष्मी खानेपानी आयोजनाको  
वातावरणीय प्रभाव अनुगमन फारम (निर्माण चरण)**

अनुगमन गरेको मिति		समय	
अनुगमनको स्थान			
अनुगमन गर्ने व्यक्तिको नाम			
अनुगमन गर्ने व्यक्तिको पद			

तलको तालिकामा उल्लेख गरिएका सूचकहरूलाई दिइएको विधि प्रयोग गरी अनुगमन गर्ने परिणाममा छ, छैन वा निश्चित संख्या (परिमाण) आउने भए सो उल्लेख गर्ने

सूचक	विधि	परिणाम वा परिमाण		प्रतिकार्य वा सुधारात्मक कार्य (सल्लाह सुझाव निर्देशन केहि दिएको भए सो उल्लेख गर्ने)
		छ	छैन	
धुवाँ धुलो उत्सर्जन	वाटो र कार्यस्थल अवलोकन गर्ने	छ	छैन	
ध्वनी प्रदुषण	वाटो र कार्यस्थल अवलोकन गर्ने	छ	छैन	
व्यक्तिगत सुरक्षा उपकरणहरू लगाईएको	कार्यस्थल अवलोकन गर्ने	छ	छैन	
खुला रुपमा दिशा पिसाब गरेको	कार्यस्थल अवलोकन गर्ने	छ	छैन	
फोहरमैला जथाभावी फालेको	कार्यस्थल अवलोकन गर्ने	छ	छैन	
काटिएको रुखको संख्या	ठुटाको संख्या गन्ने र अभिलेख हेर्ने			
सडकमा नयाँ खाल्टो परेको र हिलो भएको	वाटो अवलोकन गर्ने	छ	छैन	
कामदारका अभद्र व्यवहारका घटना	स्थानीयलाई सोध्ने	छ	छैन	
कार्य क्षेत्रमा दुर्घटना र क्षतिको विवरण (संख्या र किसिम)	ठेकेदारलाई सोध्ने र अभिलेख हेर्ने			
निर्माणमा स्थानीय व्यक्तिको सभागिता (संख्या)	अवलोकन गर्ने, सोध्ने र हाजिरी हेर्ने			
निर्माणमा महिला सहभागिता (संख्या)	अवलोकन गर्ने, सोध्ने र हाजिरी हेर्ने			
निर्माणमा जनजातिको सहभागिता (संख्या)	अवलोकन गर्ने, सोध्ने र हाजिरी हेर्ने			
निर्माणमा दलितको सहभागिता (संख्या)	अवलोकन गर्ने, सोध्ने र हाजिरी हेर्ने			
निर्माणमा बालबालिकाको (१४ र १६ वर्ष मुनिको) सहभागिता (संख्या)	अवलोकन गर्ने, सोध्ने र हाजिरी हेर्ने			

अनुगमनको गर्ने व्यक्तिको समग्र क्रियाकलापको बारेमा थप र व्यक्तिगत टिप्पणी	
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*Environmental & Social Management Plan (ESMP) Report for Laxmi Water Supply Project  
Ward no. 2, Bardagoriya Rural Municipality*

अनुगमनकर्ताको सुझाव	
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जाँच/रुजु गर्ने अधिकारीको नाम र सही	
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**लक्ष्मी खानेपानी आयोजनाको**

**वातावरणीय प्रभाव अनुगमन फारम (संचालन चरण)**

यस किसिमको अनुगमनलाई नियमित क्रियाकलापमा समावेश गर्ने, अवस्था हेरी मासिक, अर्धवार्षिक वा वार्षिक रूपमा अनुगमन गरी अभिलेख सुरक्षित राख्ने

अनुगमन गरेको मिति		समय	
अनुगमनको स्थान			
अनुगमन गर्ने व्यक्तिको नाम			
अनुगमन गर्ने व्यक्तिको पद			

तलको तालिकामा उल्लेख गरिएका सूचकहरूलाई दिइएको विधि प्रयोग गरी अनुगमन गर्ने परिणाममा छ छैन वा निश्चित संख्या (परिमाण) आउने भए सो उल्लेख गर्ने

सूचक	विधि	परिणाम वा परिमाण		सल्लाह सुझव वा निर्देशन केहि भए सो उल्लेख गर्ने
धुवाँ धुलो उत्सर्जन	बाटो र सार्वजनिक शौचालय क्षेत्र अवलोकन गर्ने	छ	छैन	
ध्वनी प्रदुषण	बाटो र सार्वजनिक शौचालय क्षेत्र अवलोकन गर्ने	छ	छैन	
खुला रूपमा दिशा पिसाब गरेको	सार्वजनिक शौचालय क्षेत्र वरपर अवलोकन गर्ने	छ	छैन	
फोहरमैला जथाभावी फालेको	सार्वजनिक शौचालय क्षेत्र वरपर अवलोकन गर्ने	छ	छैन	
नियमित सरसफाई गरिएको		छ	छैन	
वृक्षारोपण गरिएको बिरुवा जागेको हुर्केको	संख्या गन्ने र रोपेको संख्यासँग दाँज्ने			
सडकमा नयाँ खाल्टो परेको र हिलो भएको	बाटो अवलोकन गर्ने	छ	छैन	
स्थानीय व्यक्तिद्वारा संचालित व्यवसाय	अवलोकन गर्ने र सोध्ने			
स्थानीय महिलाद्वारा संचालित व्यवसाय	अवलोकन गर्ने र सोध्ने			
स्थानीय जनजातीद्वारा संचालित व्यवसाय	अवलोकन गर्ने र सोध्ने			
स्थानीय दलितद्वारा संचालित व्यवसाय	अवलोकन गर्ने र सोध्ने			

अनुगमनको गर्ने व्यक्तिको समग्र क्रियाकलापको बारेमा थप र व्यक्तिगत	
जाँच/रुजु गर्ने अधिकारीको नाम र सही	

**लक्ष्मी खानेपानी आयोजनाको  
नियमपालन अनुगमन फारमको ढाँचा (निर्माणपूर्व वा निर्माण चरण)**

अनुगमन गरेको मिति		समय	
अनुगमनको स्थान			
अनुगमन गर्ने व्यक्तिको नाम			
अनुगमन गर्ने व्यक्तिको पद			

सूचक	विधि	परिणाम वा परिमाण		कैफियत वा केहि थप टिप्पणी
		छ	छैन	
प्रस्तावित विकासलाई समावेश गरी सामूदायिक वनको कार्ययोजना स्वीकृतिको पत्र	कार्ययोजना र स्वीकृतिको पत्र अध्ययन	छ	छैन	
ठेक्का सम्झौतामा वातावरण व्यवस्थापन सम्बन्धी बुँदा संलग्न	स्वीकृत प्रस्ताव वा ठेक्का सम्झौता अध्ययन	छ	छैन	
वातावरण व्यवस्थापनको लागि बजेट विनियोजन	बजेट दस्तावेज अध्ययन	छ	छैन	
प्रभाव अनुगमन गरे नगरेको	अनुगमन बजेट वा अनुगमन प्रतिवेदन अध्ययन र सुधारात्मक कार्यको प्रगति	छ	छैन	

स्थलगत अवलोकनको आधारमा न्यूनीकरणका क्रियाकलापको कार्यान्वयनको अवस्था

सूचक	परिणाम वा परिमाण		कैफियत वा केहि थप टिप्पणी (उपाय आवश्यक भए नभएको बारेमा समेत)
	छ	छैन	
थोत्रा सवारीसाधनको प्रयोग	छ	छैन	
बाटो र कार्यस्थलमा पानी छर्केको	छ	छैन	
निर्माण सामग्री ढुवानीको क्रममा छोपेको	छ	छैन	
.....	छ	छैन	
.....			
.....			

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## **Glossory**

**Accessibility** refers to the identification and elimination of obstacles and barriers to provide access to the physical environment, to transportation, to information and communications and to other facilities and services.

**Biodiversity** is the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems.

**Critical habitat** is defined as areas with high biodiversity importance or value, including: (a) habitat of significant importance to Critically Endangered or Endangered species, as listed on the International Union for the Conservation of Nature (IUCN) Red List of threatened species or equivalent national approaches; (b) habitat of significant importance to endemic or restricted-range species; (c) habitat supporting globally or nationally significant concentrations of migratory or congregatory species; (d) highly threatened or unique system; and (e) ecological functions or characteristics that are needed to maintaining the viability of the biodiversity values described above in (a) to (d)

**Cultural heritage** is defined as resources with which people identify as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions

**Disadvantaged or vulnerable** refers to those who may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of a project's benefits . Such an individual/group is also more likely to be excluded from/unable to participate fully in the mainstream consultation process and as such may require specific measures and/or assistance to do so . This will take into account considerations relating to age, including the elderly and minors, and including in circumstances where they may be separated from their family, the community or other individuals upon which they depend.

**Habitat** is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the nonliving environment . Habitats vary in their sensitivity to impacts and in the various values society attributes to them

**Land acquisition** refers to all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way . Land acquisition may also include: (a) acquisition of unoccupied or unutilized land whether or not the landholder relies upon such land for income or livelihood purposes; (b) repossession of public land that is used or occupied by individuals or households; and (c) project impacts that result in land being submerged or otherwise rendered unusable or inaccessible . "Land" includes anything growing on or permanently affixed to land, such as crops, buildings and other improvements, and appurtenant water bodies.

**Livelihood** refers to the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

**Natural habitats** are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.

**Pollution** refers to both hazardous and nonhazardous chemical pollutants in the solid, liquid, or gaseous phases, and includes other components such as thermal discharge to water, emissions of short and long-lived climate pollutants, nuisance odors, noise, vibration, radiation, electromagnetic energy, and the creation of potential visual impacts including light.

**Pollution management** includes measures designed to avoid or minimize emissions of pollutants, including short- and long-lived climate pollutants, given that measures which tend to encourage reduction in energy and raw material use, as well as emissions of local pollutants, also generally result in encouraging a reduction of emissions of short- and long-lived climate pollutants.

**Greenhouse Gas (GHG)** is a gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect. The greenhouse effect plays a huge role to maintain the average temperature of Earth's surface. The primary greenhouse gases in Earth's atmosphere are water vapor (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and ozone (O<sub>3</sub>). The vast majority of anthropogenic carbon dioxide emissions come from the combustion of fossil fuels, principally coal, petroleum (including oil), and natural gas, with additional contributions from deforestation and other changes in land use which are called sources or the drivers of GHG.

**Climate trends:** Patterns in climate variables such as temperature and precipitation observed in historic datasets.

**Hazard:** The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss of property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources. In this report, the term hazard usually refers to construction - related physical events or trends.

**Legislative Provisions**

S.N	Legal Provisions	Description	Relevancy concerning Project
1	<b>Constitution of Nepal</b>	<p>The Constitution of Nepal is the main legal document, which emphasizes the right to a clean environment of the people, natural resources protection, preservation, and its prudent use. Rights regarding the clean environment, under article 30:</p> <p>Under the Constitution of Nepal, Article 51(g) environmental policies put in place for sustainable development. It highlights protecting the environment while using natural resources in the most effective way possible. The state will lessen the impacts of climate change, raise awareness about environmental cleanliness and conservation and motivate people to use eco-friendly technology and renewable energy. Moreover, it involves managing deforestation, controlling pollution in the air and water and conserving different species to keep nature balanced and defend its heritage.</p>	Laxmir WSP helps to fulfill the rights of people to live in a clean environment along with fulfilling the basic needs by providing clean water and healthy environment.
2.	<b>Environment Protection Act 2076 (2019 AD)</b>	Section 3 of the Act requires the proponent to conduct environmental studies concerning the prescribed proposals of any developmental works. Subsection 2 of this act provides the framework for the environmental study report prepared according to sub-section (1) shall, in fulfillment of the process as prescribed, be submitted to the relevant bodies of the Government of Nepal for approval.	Environmental Studies, and approval of the report from the authorized body before construction of any project is mandatory to minimize the negative impacts in Nepal which is addressed in EPA, 2019.
3.	<b>Environmental Protection Rule, 2077 (2020 AD)</b>  <b>[First Amendment on 2078 (2021)]</b>	Under the Environmental Protection Rules (2020) first amendment (2021), rule (3) as mentioned in annex (1), Section (F) (Energy, Water Resources, and Irrigation Sector) sub-section (1), a proponent shall be required to carry out the Brief Environmental Studies for construction of transmission line project less than 66 kV in forest land for another purpose.	This rule provides the overall guidance to what type of environmental studies is required according to the project by the Government of Nepal.

4.	<p><b>Nepal</b></p> <p><b>Environmental Policy, and Action Plan, 2050(1993)</b></p>	<p>The aims of NEPAP are:</p> <ul style="list-style-type: none"> <li>● To manage natural, and physical resources efficiently, and sustainably</li> <li>● To balance the development efforts, and environmental conservation for sustainable fulfillment of basic needs</li> </ul> <p>To preserve endemic, and endangered species, and their habitats; the promotion of private, and public institutions for biological resources inventory, and conservation</p> <p>To safeguard national heritage</p> <p>To mitigate the adverse environmental impact of development projects, and human actions</p> <p>To integrate environment, and development through appropriate institutions, adequate legislation, and economic incentives, and sufficient</p> <p>public resources</p>	<p>Laxmi WSP should follow the aims of Nepal to protect, and conserve the physical, biological, and social environment during the construction of component of WSP</p>
5.	<p><b>Labor Act, 2074 (2017 AD)</b></p>	<p>This labor Act was made under the management of parliament under sub-clause 1 of clause 296 of the Constitution of Nepal. Sub-section 3 of Section 2 states that the employees should not be compelled to other work other than they are assigned for. In addition, Sub-section 5 of Section 2 states about the prohibition of child labor in any organization, and sub-section 6 of Section 2 states that there should not be any kind of discrimination among the employee's regard of religion, ethnicity, gender, origin, language, or intelligence or other kinds of characters.</p>	<p>The construction of a project is only possible when the rights of labor are secure. In this project, the contractor should follow this act strictly.</p>
6.	<p><b>Child Labor (Prohibition, and Regulation) Act, 2056 (2000 AD)</b></p>	<p>As per section 3 of this act, no child has not attained the age of 14 years shall be engaged in works as a laborer.</p>	<p>Child labor is strictly prohibited in this project, and contractors should follow this act.</p>

7.	<b>Solid Waste Management Act, 2068 (2011 AD)</b>	This act has been formulated to minimize solid waste products from the target area by setting rules, and regulations on solid waste management (SWM) in the country to develop a better environment for the systematic, and effective management of solid waste, and to involve all the concerned stakeholders in SWM practice. The main features of this act are the discussion of the 3R principle (Reduce, Reuse, and Recycle). 3R principle seems to be very beneficial as it not only increases the life of landfill site but also saves the money which could be used for other infrastructure development. Section 4 of the act assigns the local body to manage or use the solid waste discharged or dumped in the collection center, transfer station, or treatment plant or collected during cleaning.	These acts provide the overall framework to manage the solid waste generated from households to the project level. Also, the proponent should manage the waste generated during construction.
8.	<b>Solid Waste Management Rules, 2070 (2013 AD)</b>	The solid waste management rule was formulated as per the provision made in article 50 of the Solid Waste Management Act, 2068. This regulation has emphasized the segregation of waste at source, and mentioned that the responsibility of proper disposal, and management of source belongs to the producers themselves. Section 3 of the rule describes the segregation, and management of solid waste. It has been mentioned that it is essential to segregate degradable, and non-degradable solid waste at the source.	These rules provide the overall framework for how to reduce the volume of waste disposed of at the source during the construction of the substation.
9.	<b>United Nations Framework Convention on Climate Change (UNFCCC), 1992</b>	UNFCCC, Signatories: 165. Parties: 195. (1), Article (4), commitment (f) states climate change considerations into account, to the extent feasible, in their relevant social, economic, and environmental policies, and actions, and employ appropriate methods, for example, impact assessments, formulated, and determined nationally, to minimize adverse effects on the economy, on public health, and the quality of the environment, of Sub-projects or measures undertaken by them to mitigate or adapt to climate change. After it entered into force on 21 March 1994, it	The goal of this sub-project is to construct the water treatment plant and distribution pipe line to all the resident of the Ward 7 of Bardagoriya RM by minimizing the environmental pollution.

		mandates the individual state for prioritization of resource conservation with development.	
10.	<b>ILO 169</b>	<p>The main objective of this convention is to secure the rights of indigenous, and tribal people along with the gender equality, and non-discrimination of workers during work. Article 1 on the First Part of this convention mainly focused on the following points:</p> <p>the social, cultural, and economic conditions of tribal people in independent countries differentiate from other parts of the national community, and their status is managed fully or partially by their customs or traditions or by special laws or regulations;</p> <p>people in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries, and who, irrespective of their legal status, retain some or all of their own social, economic, cultural, and political institutions.</p> <p>Self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.</p> <p>The use of the term people in this Convention shall not be construed as having any implications as regards the rights which may attach to the term under international law.</p>	Nepal is the part of ILO convention that's why ILO 169 should strictly follow during construction, and implementation of any types of development project.
11.	<b>Environment and Social Management Framework</b>	ESMF is to guide Motinagar sub-projects in the area of E&S management using appropriate instruments, methodologies, procedure and responsibilities during the project cycle. DWSSM and the project partners shall apply during design and development of the sub-projects in order to comply with the Government of Nepal E&S	Main guiding document for E&S study to identify issues and recommending appropriate practical augmentation/mitigation measures.

*Environmental & Social Management Plan (ESMP) Report for Laxmi Water Supply Project  
Ward no. 2, Bardagoriya Rural Municipality*

		regulations and the Financiers' standards on E&S assessment and management, Involuntary Resettlement, Indigenous People, Gender, etc.).	
12.	<b>Environmental and Social Policy (ESP)</b>	This policy speaks for the mandatory E&S requirements for each Project like, screening, DDR, E&S Assessment, ESMP, ESMF, Information Disclosure, Consultation and Monitoring and Evaluation.	Mandatory requirement for ESMP study
13.	<b>Environmental and Social Standards of WB.</b>	Nine associated mandatory environmental and social standards (ESSs) set out more detailed environmental and social requirements relating to the ESMP	ESMP requirement

## Code of Conduct (CoC) on GBV

### खानेपानी क्षेत्रगत सुशासन तथा पूर्वाधार सहयोग आयोजना कार्य स्थलमा हुने यौनजन्य तथा महिला हिंसा सम्बन्धी आचार संहिता व्यक्तिगत आचार संहिता

म, ..... यो आचार संहिता पालना गर्नु मेरो दायित्व हो  
भनी स्वीकार गर्दछु । म कुनै पनि यौनजन्य तथा महिला हिंसा जस्ता कार्यमा संलग्न हुने छैन  
। आयोजनाको कामको शिलशिलामा यो आचार संहिता पालना गर्न सहमत छु ।

१. म जातजाति धर्म, भाषा, लिङ्ग, उमेर, राजनितिक वा सामाजिक हैसियत, भौगोलिकता, पहुँच  
वैवाहिक स्थिति वा अन्य कुनै पनि आधारमा भेदभाव नगरी सबैलाई सम्मानजनक र समान  
रूपमा व्यवहार गर्नेछु ।
२. सामाजिक सन्जालको प्रयोग गरी अश्लील शब्द, दृश्य सामग्री वा कार्यालय समय अघिपछि  
वार्तालाप मार्फत सहकर्मी/कामदारलाई यौन दुर्व्यवहार गर्ने छैन ।
३. कार्यस्थलमा सिट्टी बजाउने, चुम्बन गर्ने, व्यक्तिगत उपहार दिने आदि जस्ता कार्य गरी कर्मचारी,  
सहकर्मी कामदारलाई यौन दुर्व्यवहार गर्ने छैन ।
४. कुनै पनि प्रलोभन/धम्की देखाई जस्तै पदोन्नती लोभ देखाएर, जागिर नदिने धम्की दिएर शोषण  
गरेर आदि) यौन दुर्व्यवहार पक्षमा संलग्न हुने छैन ।
५. कार्य समयावधि भित्र कुनै पनि मदिराजन्य तथा लागुपदार्थको सेवन गर्ने छैन ।
६. आयोजनाका सरोकारवाला वा वरपरका समुदायका सदस्यहरूलाई कुनै पनि म लैङ्गिक हिंसा तथा  
यौनजन्य दुर्व्यवहार गर्ने छैन ।
७. कुनै पनि कर्मचारी, श्रमिक विरुद्ध हिंसा गरिएको दोषी ठहरिएमा प्रचलित संघिय, प्रादेशिक,  
स्थानिय सकार वर्ल्ड बैंकको कानून, नीति नियम अनुसार सजाय/दण्डित जरिवाना तिर्न तयार  
हुनेछु ।
८. कार्य गर्ने शिलशिलामा सम्मानजनक निर्देशनहरूको पालना गर्दछु । (वातावरणीय+सामाजिक)
९. मेरो जिम्मेवारी कुशलता र लगनशीलता पूर्वक पुरा गर्नेछु ।
१०. सम्बन्धित कार्यालय/कम्पनीले सञ्चालन गरेको विभिन्न प्रशिक्षण कार्यक्रममा सक्रिय रूपमा भाग  
लिनेछु ।
११. आयोजनाका प्रत्यक्ष लाभदायक सदस्य/समुदायमा यौन दुर्व्यवहार/शोषण गर्ने छैन ।
१२. विश्वासनीयता नैतिक उल्लंघनको रिपोर्ट गरेमा कुनै कामदार विरुद्ध बदला लिने छैन ।

१३. कार्य स्थलमा लैङ्गिक सम्बेदनशिल भाषाको प्रयोग गर्ने छैन ।
१४. कार्यस्थलमा महिला हिंसा तथा यौनजन्य क्रियाकलापलाई प्रोत्साहन गर्ने खालका गतिविधी गर्न दिने छैन
१५. कार्यस्थलमा महिला तथा यौन हिंसा गतिविधीहरूलाई प्रोत्साहन गर्ने छैन ।
१६. १८ वर्षभन्दा मुनिका बालिकाहरूमा कुनै डिजिटल मिडिया मार्फत वा कुनै माध्यमबाट स्वीकृति लिई वा नलिई यौनजन्य क्रियाकलाप सहभागी हुनेछैन, यदि नाबालिका स्वीकृति लिई यौनजन्य क्रियाकलाप गरेमा क्षमा हुँदैन ।
१७. आयोजना कार्यान्वयनको बेलामा यौनजन्य दुर्व्यवहार/यौन शोषण भएमा वा आचार सहिता उल्लघन गरेमा वडा/नगरपालिका स्तरमा रहेको गुनासो सुनवाई सयन्त्रमा तुरुन्त निवेदन/जानकारी दिनेछु ।
१८. कार्यस्थलमा कसैले यौनजन्य दुर्व्यवहार सम्बन्धी शंकास्पद व्यवहार गरेमा वा शंकास्पद कार्य गरेमा तुरुन्त टोली प्रमुख/प्रबन्धकलाई जानकारी/निवेदन दिनेछु ।

माथि उल्लेखित आचार सहिता राम्ररी पढे र बुझेको छु र कार्यस्थलमा कडाईका साथ पालना गर्दछु भनी हस्ताक्षर गर्दछु ।

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व्यवस्थापक/टोली प्रमुख

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कर्मचारी/कामदार