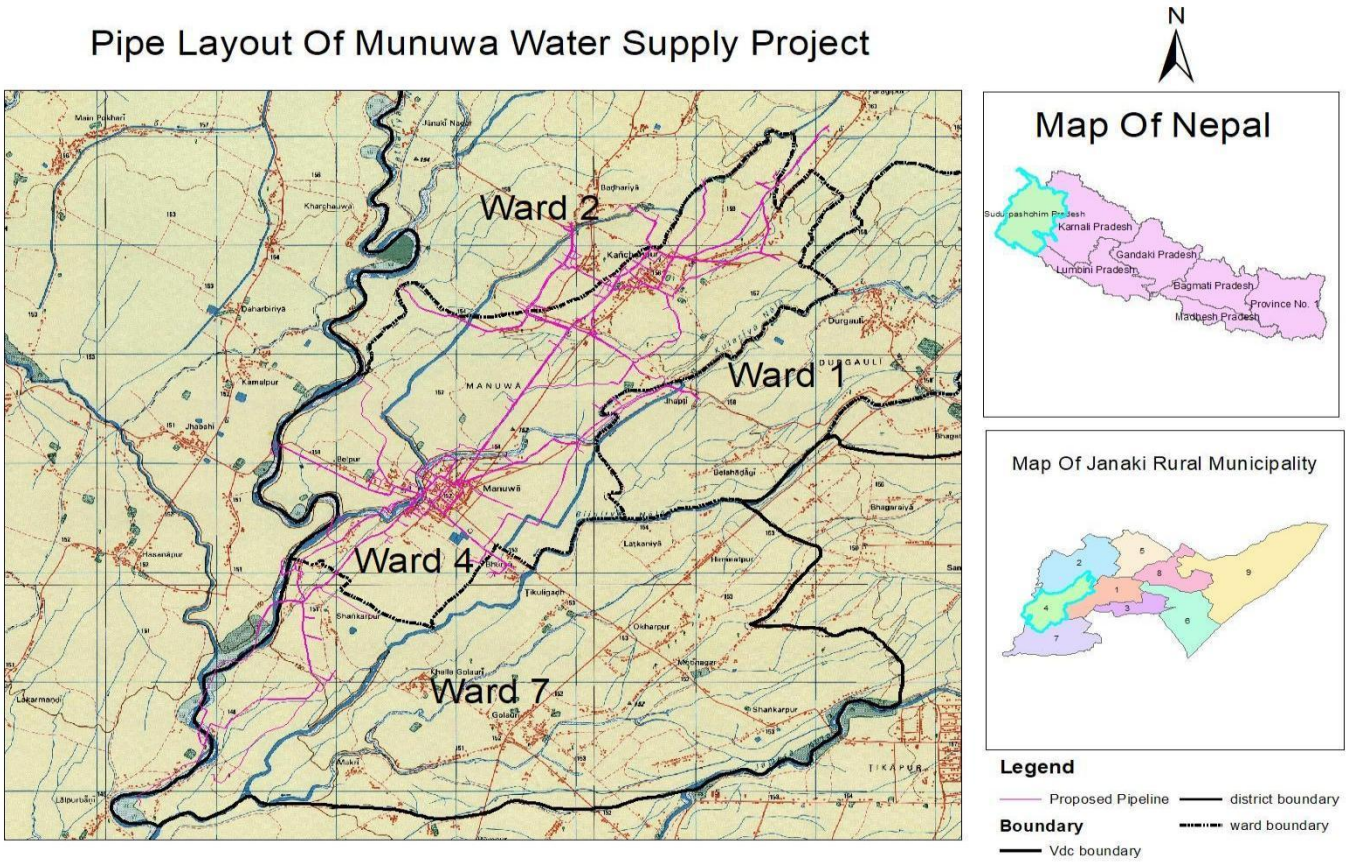
Government of Nepal
Ministry of Water Supply
Department of Water Supply and Sewerage Management
Water Sector Governance and Infrastructure Support Project
Project Implementation Unit
Janaki Rural Municipality, Durgauli, Kailali



Detailed Project Report of Munuwa Water Supply Project
Janaki Rural Municipality, Kailali

NP-DWSSM-290176-CS-QCBS

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

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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
DLP	:	Defect Liability Period
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
LPCD	:	Liter per Capita per Day
MoWS	:	Ministry of Water Supply
MWASH	:	Municipal Water and Sanitation Hygiene
MSL	:	Mean Sea Level
MST	:	Municipal Support Team
NOC	:	No Objection Certificate
OHS	:	Occupational Health and Safety
OHT	:	Over Head Tank
PAPs	;	Project Affected Persons
PIU	:	Project Implementation Unit
PMU	:	Project Management Unit
PPE	:	Personal Protective Equipment
RAP	:	Resettlement Action Plan
RM	:	Rural Municipality
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
WTP	:	Water treatment plant

Unit

%	Percent/ Percentage
CO2	Carbon dioxide
dB	Decibel
g	Gram
HHs	Households
Kg	Kilogram
Km	Kilometer
kV	Kilovolt
ltr	Liter
m	Meter
masl	Meter Above Sea Level
mm	Millimeter
MVA	Mega Volt Ampere
MW	Megawatt
NRs.	Nepalese Rupees
^{o}C	Degree Centigrade
sq.m.	Square Meter
Cum	Cubic meter

Executive Summary

The Government of Nepal is implementing the Water Sector Governance and Infrastructure Support Project (WaSGISP), funded by the World Bank ($80 million out of $100 million), to enhance water supply and sanitation services in six local governments in Karnali and Sudurpaschim Provinces. The project is executed by the Ministry of Water Supply (MoWS) and implemented by the Department of Water Supply and Sewerage Management (DWSSM) in collaboration with municipalities. Participating municipalities include Birendranagar, Sharada, Dipayal-Silgadhi, Janaki, Joshipur, and Bardagoriya.

The **Munuwa Water Supply and Sanitation (WSS) sub-project**, located in Janaki Rural Municipality and implemented by the Water Supply and Sanitation Division Office (WSSDO), Kailali, is currently not in operation. The primary water source for this sub-project is groundwater. A tube well has a design pumping discharge capacity of 24 liters per second (lps), with a design safe yield of 30 lps. However, the tube well requires proper rehabilitation and sealing to maintain performance. Two new borehole is proposed to be installed on the new OHT premises. Additionally, a laboratory building, dosing set, and 7 air valves have been incorporated into the sub-project to ensure its proper functionality.

The project serves Janaki Rural Municipality Ward No. 02, 04 and 07 settlements, including Kanchanpur Tole , Badhariya Tole, Santoshi Tole, Belpur Tole, Munuwa Tole, Girdharpur Tole, Bhursa Tole, shankarpur Tole, Jabalpur Tole. It involves extending and upgrading existing infrastructure to meet the growing population's needs, projected to rise from 9428 in 2027 to 13025 by 2047, with an average growth rate of 1.48 %. The estimated water demand by 2047 is 1.53 MLD.

The project relies on groundwater, with an existing tube well requiring minor rehabilitation and two tube well to be constructed and utilized as production wells for the 450 cum new OHT is integrated into the water treatment facility to address fluctuating levels of Iron. Water treatment includes an aerator chamber, fluctuation chamber and pressure filters and automatic chlorination unit. The system comprises two District Metering Areas (DMAs) and a 65,325.3-meter pipeline network, utilizing polyethylene and ductile iron pipes for enhancing efficiency and durability.

The system design includes household connections for 1676 households, equipped with water meters and flow control valves for equitable distribution. The project also proposes minor rehabilitation of existing infrastructure, including Tube well, Overhead Tank, buildings, and electrical facilities.

The high voltage transmission line of the 11 kVA line and transformer of 50 kVA have been already installed along with 315 watt solar panel in the existing OHT premises and , the installed transformer matches the electricity demands but the 50 kVA should be replaced by 100 kVA but there will be installation of 100kVA transformer in proposed OHT premises.

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).

Total Cost of Project: The project cost is estimated at NRs ……including a 23% allocation for contingencies and VAT. Unit costs and estimates are based on government norms and recent project data.

Environmental and social risk classification: Environmental and social risks are classified as 'moderate' (Category III) under the Environmental and Social Risk Management

Procedures outlined in Chapter 6 of the Environmental and Social Management Framework (ESMF). Accordingly, an Environmental and Social Management Plan (ESMP) has been formulated to identify and mitigate potential risks and ensure adherence to World Bank Environmental and Social Standards (ESS).

Environmental approval requirements: 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.

ESMP Implementation: An Environmental and Social Management Plan (ESMP) has been developed to mitigate potential risks and ensure sustainable development. The plan includes measures for environmental and social compliance, stakeholder roles, and a Grievance Redress Mechanism (GRM). A budget of NRs **1,500,000.00** is allocated for these measures. The ESMP highlights the project's commitment to community well-being, social accountability, and environmental protection.

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 Munuwa WSP Sub-Project is situated in Ward 04 of Janaki Rural Municipality (JRM), Kailali district, within the Sudurpaschim Province. . Geographically, the project area is positioned at a latitude of 28°33'44.591" N and a longitude of 81°04'59.298" E, with an elevation of 110 meters above mean sea level (MSL). The region has a warm and humid climate. It is surrounded by roads on three sides and agricultural land to the south.The area boasts a flat terrain with the Pathariya River and Kulariya Kulo meandering through ward no. 4. Approximately 14 km southwest of Lamki Chok, the Munuwa WSP Sub-Project is an existing groundwater-based initiative. The demographic composition of the project area is diverse in ethnicity. The population of the service area is estimated at 9428 in the survey year 2024. By the end of the design period in 2047, it is expected to grow to 13025 at an average weighted population growth rate of approximately 1.48%.

The proposed Munuwa WSS sub-project is an enhancement of an existing groundwater-based water supply project. Implementation began in the fiscal year 2062/063 with funding from the Water Supply and Sanitation Division Office, Kailali. The Janaki RM aims to further enhance the sub-Project with support from WaSGISP. Key infrastructure completed so far includes a 225-cubic-meter RCC overhead tank, tube well, an office building, a toilet, filter treatment plant, solar panel, an 11 kVA transmission line, a 100 kVA transformer, and a total of 22.39 km of distribution pipelines.

This sub-project involves rehabilitating the existing RCC overhead tank through waterproofing, cement panning, pressure grouting, and painting. The non-operational tube well will be rehabilitated and integrated into the new system by replacing the failed borehole. Additionally, a concrete-sealed platform will be constructed for the tube well to address contamination by E. coli and total coliform, as identified in water samples (*refer to Annex V for the Water Quality Test Report*). This contamination is

attributed to improper well sealing and storm water or wastewater leakage at the earth-contact point around the well perimeter.

A 65.32 km distribution pipeline will be installed, while the current 22.39 km pipe network will undergo leakage testing before being integrated into the new system. The total number of households connections required is 1,263. This includes 1,237 individual households, 11 public offices, four schools, and 10 temples and one brick factory. The existing three-room office building will be adapted to serve as a guard room, billing counter, and storeroom with minor repairs. A new toilet block and an electric control room are proposed for construction. The current temporary toilet building will be dismantled to manage the site's landscaping.

All proposed structures, except the distribution pipelines, will be accommodated within the OHT premises of the existing system. The proposed land for the sub-project is the existing Janaki WSS sub-project site, and the ownership belongs to Janaki RM *(the land ownership certificate is attached in Annex- VII*). The distribution pipelines will follow existing public road corridors like Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur Road. As the pipe laying area on the existing road is clear and already in public use, no additional land acquisition is required. 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.

Therefore, the project is designed to fulfill Janaki RM's priority needs for environmental and sanitation improvement and will contribute significantly to achieving environmental goals, enhancing the standard of living for the local residents, and ensuring conditions for sustainable economic development. The salient features of the Janakinagar WSS sub-project are given in the table –1 below.

Table 1: Salient Features of the Sub-Project

GENERAL INFORMATION		
1	Name of the Project	Munuwa Water Supply and Sanitation Sub-Project
2	Location Area	
	Province	Sudurpaschim
	District	Kailali
	Municipality	Janaki Rural Municipality
	Ward	02, 04, 07
3	Coverage Village	Kanchanpur , Badhariya, Santoshi Tole, Belpur, Munuwa, Girdharpur, Bhursa, shankarpur, Jabalpur and Jadupur
4	Present Household (2024)	1676
5	Survey Year	2024
6	Base Year (Project Completion Year)	2026
7	Design Year	2046
8	Present Population (2024)	9428
9	Population Growth Rate (%)(Weighted Average)	1.48
10	Design Population (2046)	13025
11	Beneficiary Institution	
	School	8
	Government Offices	7
	Temple	11
	Health Post	2
	Community Building	6
	Brick Factory	2
12	Design Water Demand (lpcd)	1532780

Socio-economic Status [1]			
1	**Ethnicity**	**Percentage (%)**	
	Tharu	75.08	
	Bhrahmin/Chhetri	15.91	
	Othar Janajati	3.29	
	Dalit	4.23	
	Muslim	1.49	
2	**Income Status (Bases on 10% Social and Economic Data Survey, 2024)**	**Percentage (%)**	
	Average Income Household	7	
	Low Income Household	13	
	Poor Income Household	80	
TECHNICAL ASPECT			
1	Type of Project	Ground Water Based Pumping,	
2	Name/Type of Source	Ground Water	
3	Source location	Kanchanpur, Janaki RM-04	
		Latitude: 28°33'44.591" N Longitude: 81°04'59.298"E	Latitude: 28°34'06.773" N Longitude: 81°05'34.005"E
4	Pumping Discharge(lps)	24 lps	
	Safe Yields (lps)	30	
Status Of Project			
1	Implementation Status	Partially completed by WSSDO, Kailali	
2	Year of Implementation	Fiscal Year 2062/63	
3	Operational Status	Partially functional	
4	**Project Components**		

[1] Baseline Survey data:- 2024

4(A)	**Completed Component**		
	OHT	225 Cum- (1)	
	Tube Well	3 but 2 functional	
	Office Building	1 (three Room)	
	Transformer	50 kVA (1)	
	Boundary Wall	Complete boundary	
	Pipe laying	22,395.9 meter existing 65,325.3 meter new. (total 87,723.32 meter)	
	Solar panel	No. 45, size: 66 cm*90 cm, 315 watt capacity	
	Water treatment plant	2 nos filter 1. Diameter (mm):- i. 1150 ii.680 2. Height (m) :- i. 3.20 ii. 1.60	
	HH connection	412	
	Toilet	1 (Dismantaled)	
4(B)	**New Components Proposed**	Existing	Proposed
1	Tube well Drilling		2
2	Balancing Ground Reservoir	175 cum	
3	Household connection and institutional connection	1263	
4	Water Treatment Plant		1
5	Distribution Pipeline works	65325.3 meter	
6	Toilet Block	1	1
7	Fire Hydrant	10	
8	Air Valve	9	
9	Total Length of Distribution pipe (km):	87,723.32 meter (existing 22,395.9 + planned 65,325.3) *Carried out along the existing road which is in public use*	
10	Boundary		1

11	Brick Chamber	39	
12	RCC Chamber	20	
12	Generator Room	1	1
13	Dosing house and Control Room	1	1
14	Guard Room		1
15	OHT		450 cum
16	Transformer	100 kVA	
17	Laboratory	1	
Available Facilities			
1	Access Road	Munuwa Bazar ;- 2.3 km, Joshipur Bazar ;- 9 km Durgauli Bazar :- 4 km	
2	Local Construction Material	Crusher with 5- kilometer range	
3	Water	Hand pumps	
4	Electricity	11kVA High tension Line with 50 kVA transformer at site	
Available Pipes and Proposed Pipes			
1	**Available Pipes**		
	Transmission Pipe		
	DI Pipe- 200 mm	86.8 meter	
	Distribution Pipe		
	HDPE (40 mm to 200 mm OD)	22,364 meter	
2.	**Proposed Pipes for distribution system (50 mm- 225 mm OD) PE pipes**	65,273 meter	
FINANCIAL			

Under WaSGISP, the following intervention is planned and the site condition as well as the land availability status is as per the Table 2 below:

Table 2: Proposed components, site condition and land requirement status

S.N	Component	Location	Kitta no.	Required land and ownership	Site condition	Land availability status	Likely E & S impact
1	OHT (2)	Janaki-4, Kanchan pur at Gyatri Aadharb hut School	219 (Ailani / public land)	3 kattha (1015.89 sqm), public land (Ailani) within the premises of Gyatri Aadharbhut School, ownership belonging to Janaki Rural Municipalit y	Flat barren land, without vegetation and structure	Available, Consent Letters for use of land from School management Committee and Ward Office are attached in Annex-IV	Since the site is barren land without vegetation and structure and also free of encroacher/in formal/illegal users, minimal E&S impacts are expected.
2	Tube well	Same site as S. N.1	Same site as S.N.1				
3	Treatment Plant (1)	Same site as S. N.1	Same site as S.N.1				
4	Toilet	Same site as S. N.1	Same site as S.N.1				
5	Ground reservoir	Janaki Rural Municipa lity, ward no. 4, within the OHT premises .Kanchan pur	223 (Munuwa Water Supply System/ Janaki RM's land)	6 kattha (2031.78 sqm), ownership belongs to Munuwa Water Syppy System of Janaki RM (land Ownership certificate is attached in Annex- III)	The site is the existing OHT premises which is surrounded by boundary walls. Major structures are already existing at the site and vacant land available within the area (6 kattha) will be utilized to construct additional structures. It is flat land without vegetation and there will be no impact on existing structures.	Available, which is already in the name of existing Munuwa Water Supply System (Annex-III)	The site is surrounded by boundary walls and major structures already existing and only additional structures will be built on available vacant land. There is no vegetation and no impact on structures, and it is also free from encroachers or informal/illeg al users. Hence E&S impacts are expected to be very minimal.
6	Office building	Same site as S. N.5					
7	Transformer	Same site as S. N.5					
8	Generator shed	Same site as S. N.5					
9	Valve chamber	Janaki Ward No 4 (10 villages)		200 m2/ Public land	Within the RoW of existing Road	Public land	No significant E&S impacts are expected during construction

S.N	Component	Location	Kitta no.	Required land and ownership	Site condition	Land availability status	Likely E & S impact
10	Fire Hydrant	Janaki-4 (10 villages)	-	35 m2 / public land	Within the RoW of existing Road	Public land	No significant E&S impacts are expected during construction
11	Distribution pipe line	Janaki-4 (10 villages)	-		Flat land	Narrow strip along the road alignment	No significant E&S impacts are expected during construction

Table 3: Pipe used for distribution network (meter)

PIPE RATING	Pipe Diameter	Actual Pipe Length (Total)	Design Pipe Length (Total)	Design length (Existing)	Design Length (New Pipeline)
6 KG PE/HDPE	75	11,865	13,051.4	5,942.4	7,109.0
	90	2,976	3,274.0	2,449.0	825.0
	110	3,484	3,832.5	800.8	3,032.0
	125	801	881.0	502.7	378.0
	140	2,851	3,136.3	556.6	2,580.0
	160	-	-	-	-
	180	3,443	3,787.4	3,401.8	386.0
	200	256	281.9	-	282.0
	225	-	-	0	-
	250	-	-		-
	315	1,529	1,682.3		1,682.0
	Sub-Total	**27,206**	**29,926.8**	**13,653.2**	**16,274.0**

10 KG PE/HDPE	50	36,886	40,574.6	1,290.5	39,284.0
	63	15,577	17,135.0	7,420.4	9,715.0
	Sub-Total	**52,463**	**57,709.6**	**8,710.8**	**48,999.0**
DI PIPE (EXISTING)	150				
	200	79	86.8	31.8	55
	Sub-Total	**79**	**86.8**	**31.8**	**55**
	TOTAL	**79,748.32**	**87,723.2**	**22,395.9**	**65,327.3**

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 a detailed Environment Study (Brief Environmental Study (BES), Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) is not mandatory. The screening report revealed that the proposed WSP does not lie in any National Parks /Protected areas or any critical aquatic and terrestrial habitat area. So, there are 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 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 objectives of this Environment and Social Management Plan (ESMP) is to mainstream environment 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, roles and responsibilities environmental and social risk management, monitoring of the sub-project.

1.5 Legal and Policy Framework

Under the legal and policy framework, a brief set 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 Munuwa WSS Sub- Project.

The ESMF reviewed the 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. Nine 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 Munuwa Water Supply System Sub-Project is located in Janaki Rural Municipality, specifically in Ward No.04 of Kailali District within the Sudurpaschim Province. Positioned 16 kilometers southwest of Lamki Chok, this groundwater-based project is currently under construction with partial operational functionality. The demographic composition of the project area exhibits diverse ethnicities.

Geospatially, the Overhead Tank (OHT) of the project is positioned at a latitude of 28°33'44.591" N and a longitude of 81°04'59.298" E, at an elevation of 110 meters above mean sea level (MSL). The region experiences a tropical climate characterized by high temperatures and humidity. The project area comprises a level agricultural terrain that benefits from irrigation channels stemming from the Kulariya canal. The Pathariya River delineates the boundary between the project area and the neighboring municipalities of Joshipur.

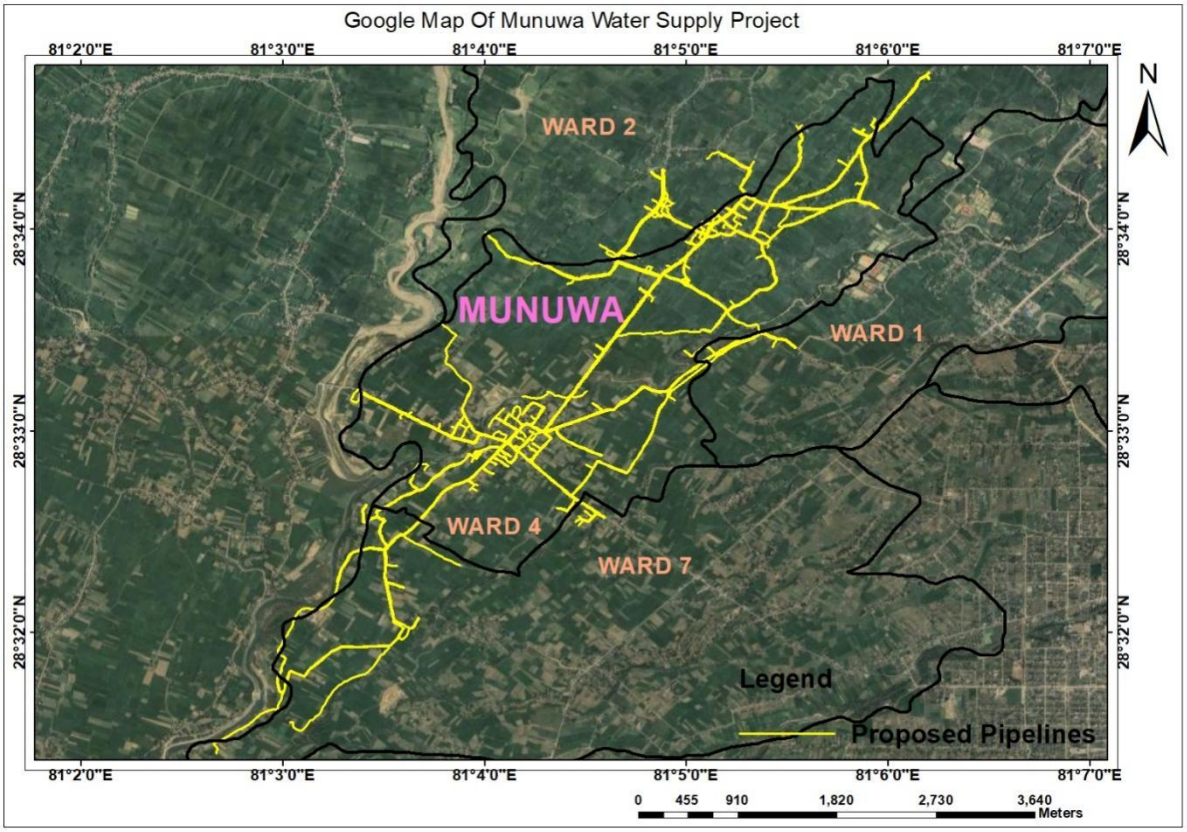

Figure 1: Location Map of Munuwa WSP, Ward no. 04

Figure 2: Location Map of Proposed land for Munuwa WSP

Figure 3: Location Site of Existing Munuwa WSP

2.2 Groundwater Availability

The Munuwa Water Supply and Sanitation (WSS) Project in Janaki RM is currently under implementation by the Janaki Rural Municipality. A total of 412 households are currently connected through metered connections. The completed components include a Tube well, Overhead Tank, distribution network, and an office building. While these components can be utilized with minor rehabilitation, additional necessary components are yet to be constructed. Despite being handed over to the RM, the project is only partially operational, with the remaining works scheduled to be completed through the current intervention from WaSGISP. Groundwater serves as the primary water source for this sub-project.

The tube well within the sub-project has a pumping capacity of 24 liters per second (lps), with a design safe yield of 30 lps. This data confirms that the safe yield capacity surpasses the pumping rate, ensuring that the current groundwater abstraction rate remains within safe parameters. The validity of this conclusion is further supported by the geophysical logs of existing tube wells located at the Overhead Tank (OHT) premises, indicating a sufficient yield to meet the projected demand without depleting the groundwater resource.

The geophysical logs and well logging reports of the boreholes at the OHT premises indicate auspicious conditions for sustainable groundwater extraction. Although these tube wells were drilled and developed several years prior, they require meticulous rehabilitation and sealing to preserve their operational efficacy. The design of the tube well structure, encompassing screens and the chosen tube well assembly, has been evaluated as satisfactory.

Table 4: Assessment of Existing Tube well Design

S.N	Description	Unit	Pump (1)	Pump (2)
1	Pumping Discharge	lps	22	22
2	Discharge of Well (m^3/s)	m^3/sec	0.024	0.030
3	Optimum screen entrance velocity (m/s)	m/sec	0.03	.03
4	Screen Clogged	%	50%	50%
5	Screen Diameter	m	0.15	0.15
6	Percent of Open Area	%	25%	25%

7	Length of screen	m	22	15
8	Design Discharge Capacity	lps	24	30
9	Safe Yield	lps	20	24

(Source: Water Supply and Sanitation Division Office (WSSDO), Dhangadhi,Kailali)

2.3 Physical Features

2.3.1 Topography and Land Use

The project area is situated in the Terai region, on the northern boundary of the Indo-Gangetic plain, nestled in the foothills of the Chure Mountains, with an altitude ranging from 140 m to 200 m above sea level. The Karnali River flows on the eastern border of the RM and across the river lies Bardiya National Park. The topography of the project area consists of flat lands moulded by Karnali River & perennial and ephemeral streams originating in the foothills (Chure) forming meandering gullies.

According to the municipal profile of Janaki Rural Municipality, about 74.4 % of the land is cultivable land while about 13.9% of land area is covered by Jungle. Similarly, 4.8% of the land is covered by water, 4.5% by sandy area and the remaining are grazing area, bushes and garden. The existing land use pattern of the Janaki Rural Municipality is given below table.

Table 5 : Land Use Pattern of Janaki Rural municipality

S.N.	Land Use Pattern	Area (Sq.km.)	Percentage (%)
1	Cultivated land	79.81	74.4
2	Jungle	14.87	13.9
3	Water covered area	5.11	4.8
4	Bushes covered area	1.88	1.8
5	Sandy area	4.86	4.5
6	Grazing area	0.67	0.6
7	Garden	0.06	0.1
Total		**107.27**	**100.0**

Source: Janaki Rural Municipality Profile

2.3.2 Geology

Geologically, the project area is situated in the Terai Zone of the Nepal Himalaya. The flatland of Terai forms the northern boundary of the extensive Ganga foreland basin. The alluvial accumulations in this region dating back to the Pleistocene and Holocene

periods were deposited by rivers originating within the Himalaya or even further beyond in the Tibetan Plateau. The thickness of these sediments' averages over 1,500 m. The project area primarily consists of a substantial layer of recent alluvium comprising gravel, sand, and clay. The subsurface geology is predominantly characterized by sediments from vast and merging fans, the deposits of the Ganga Basin expanding towards the north, and the sediments forming the Siwalik trough.

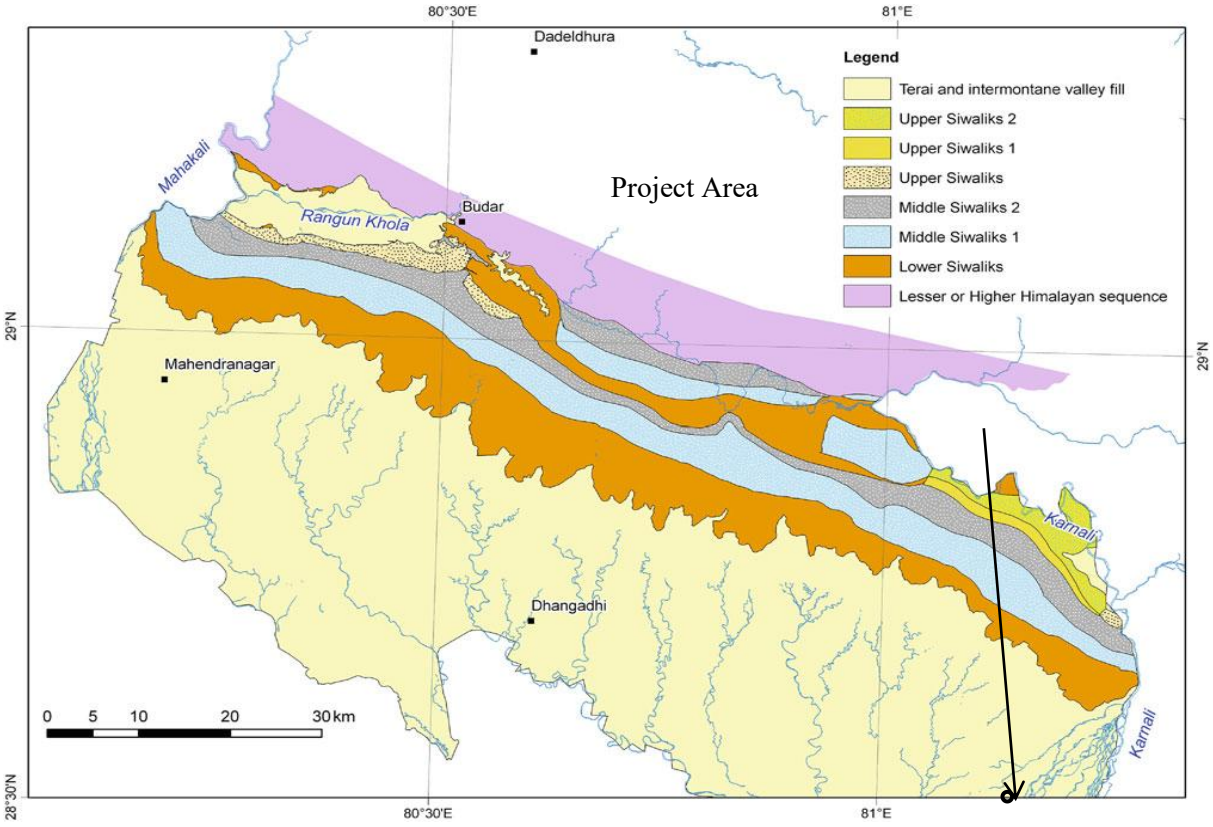

Figure 4: Modified Geological Map of Western Siwaliks and Terai[2]

2.3.3 Seismology

The Federal Democratic Republic of Nepal is situated in one of the dynamic continental collision zones globally, specifically within the Himalaya region where the likelihood of seismic activity is notably high. The National Seismological Center of Nepal has documented numerous significant earthquakes in the country's history, particularly within the Himalayan arc. Noteworthy events include the 1934 Bihar-Nepal Earthquake with a magnitude of 8 and the 2015 Gorkha Earthquake measuring Mw 7.8. Earthquakes ranging from magnitudes 6 to 7 primarily occur along the Main

[2] Source: Dhital, 2015

Himalayan Thrust (MHT) between the lower foothills and the upper Himalayan region. The seismic events typically originate at crustal depths of around 20 km, although shallow earthquakes reaching depths of 6 km can arise due to strike-slip faults. Consequently, this subproject will be meticulously planned and executed in compliance with seismic design standards and optimal engineering principles. The seismic data from Nepal spanning from 1964 to 2019, as documented in the IUSGS portal, is illustrated in Figure 4.

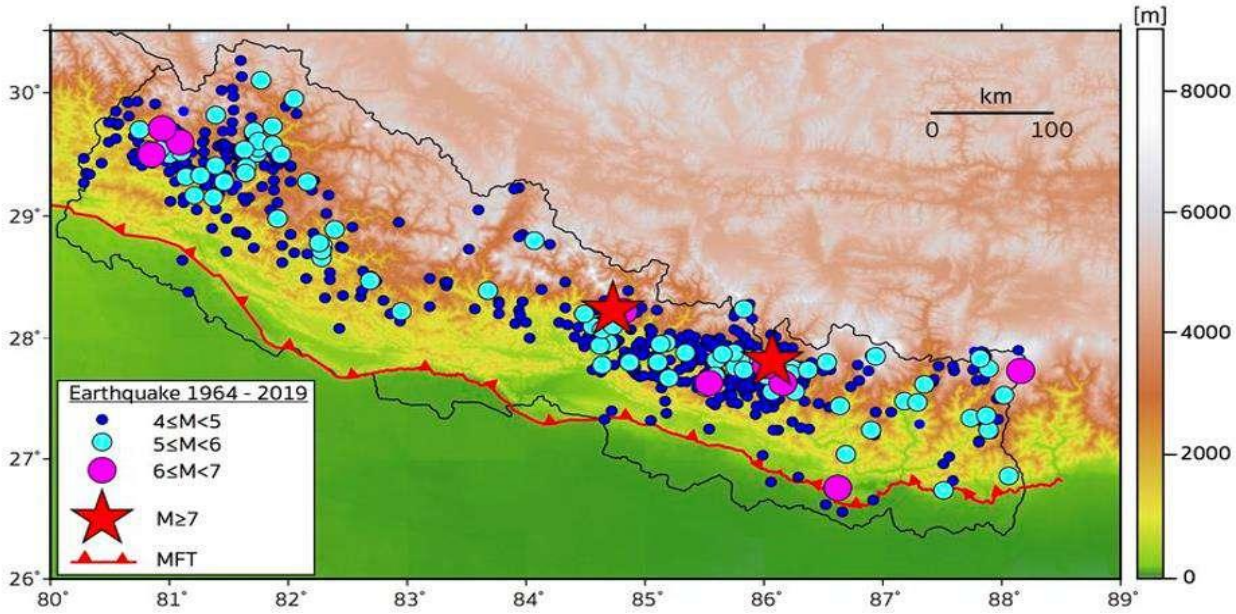

Figure 5: Seismicity map of Nepal from 1964-2019[5]

2.3.4 Climate

Temperature: The project area lies in Terai region with tropical climatic condition. The temperature rises as high as 38^{O}C during summer and falls as low as 9^{O}C during winter. Both the maximum and minimum temperature is increasing at the rate of 0.023^{O}C /year and 0.016^{O}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 1,860.47 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.

2.2.5 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.

2.3.6 Drainage Network

The project region is serviced by several ephemeral streams that originate locally, directing their flow into the Rora River, Pathariya Khola, and Kulariya Nadi towards the western and southern peripheries of the project site. The flat topography of the sub-project area eliminates any concerns regarding flooding or water accumulation.

2.3.7 Air and Water Quality and Noise Level

Point sources of air and water pollution were not discernible in the vicinity of the project area. The water quality examination of the existing tube wells situated at the sub-project site was conducted and found to be in accordance with the National Drinking Water Quality Standards. Generally, the ground water in Terai shows occasional increase in iron content and turbidity. Therefore, a water treatment system comprising aeration, filtration, and disinfection to adhere to the stipulations of the National Drinking Water Quality Standards for potable water (The Water Quality Test report of the Deep Tube well is enclosed in Annex VI).

Human activities and vehicular movement along the Setilok Marga and Munuwa-Gaudi tole road to the east are the primary sources of pollution in the vicinity of the OHT premises, where significant construction work is scheduled to occur. Furthermore, dust generated by vehicular movement on the unpaved internal roads in the distribution pipeline areas, such as Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole, Santoshi Tole , Munuwa Bazar to Joshipur Road., constitutes the main source of air pollution. Similarly, noise pollution within the project area primarily arises from vehicular movement, wind activity, and frequent visitors. The air

quality monitoring test and noise level monitoring have been conducted in December 2024 to establish the baseline, and the data from the monitoring report is provided in the table below.

Table 6: Air Quality Monitoring Report

National Ambient Air Quality Standards, 2012					location
S.N.	Parametere	units	Average time	Maximum concentration	OHT premises
1	TSP	µg/m^3	24-hr	230	-
2	$PM_{2.5}$	µg/m^3	24-hr	40	25
3	PM_{10}	µg/m^3	24-hr	120	55
4	Carbon monoxide	µg/m^3	24-hr	10000	400

Table 7: Sound Level Monitoring Report (December/25/2024)

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	OHT Premises	75.1	50.1	59.6	65
2	Ward office+ Health Post	65.2	48.5	56.1	65
3	Shree Rastriya Basic School	74.3	54.4	61.1	65

2.3.8 Soil Type and Quality

Topsoil 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 Munwa WSS Sub-Project is located at Janaki Rural Municipality Ward No. 4. In the subproject surroundings, various types of plant species were observed during

screening. . The project site is adjacent to Radha Krishna Mandir, and theplant species found around the WSP area 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*), Bamboo (*Bambusa vulgaris*), Malu (*Bauhinia vahlii*), and Liptis (*Eucalyptus tereticornis),* Gulmohar *(Delonix regia),*and Teak *(Tectona grandis).* However, the project site is far from the forest area and there is no vegetation on the site; the sub-project does not require any tree clearance.

2.4.2 Terrestrial and Avian Fauna

The sub-project area (OHT premises) is located adjacent to human settlements and activities. Terrestrial fauna is not observed in this area. As is known by the local people, the sub-project area was occasionally visited by Jackal (*Canis aureus*), Monkey (*Cercopithecidae*) etc. However, the sub-project area is not a wildlife habitat.

The common bird species found in Kailai district are also found in the sub-project area. These are: Parrot (Psittaciformes), Bulbul (Pycnonotus barbatus), Dhukur (Streptopelia orientalis.), Dangre Rupi (*Acridotheres tristis*.), Crow (Corvus), Tailorbird (Orthotomus sutorius), Kokale/ Grey treepie (*Dendrocitta formosae*), Vulture (Cathartidae, Accipitridae), Herons/Bagula (Ardeidae), Pigeon (Columbidae), Sparrow (Passeridae), Owl (Strigiformes), Cuckoo (*Cuculus canorus*), Dove (Columbidae), , Myna (*Acridotheres tristis*), Nightangle (*Luscinia megarhynchos*), Raven (Corvus corax) etc are the variety of common avian species found in the project area. However, the sub-project area is not a designated bird habitat.

2.5 Socioeconomic and Cultural Features

2.5.1 Demographic Characteristics

According to the National Population Census 2021, the total population of the Rural Municipality is 49,860, including 23,198 (46.5%) males and 26,662 (53.5%) females. This shows that the female population outnumbers the male population in the Rural Municipality. The sex ratio is 87.01. The total number of households is 11,041, with an

average household size of 4.52. The population density is 465 individuals per square kilometer.

According to National Population Census 2021 and Janaki Rural Municipality Village Profile, total population of ward no. 04 is 5521 (Population census 2021) including 2530 males and 2991 female. This shows that female population outnumbers male population in project area. But according to the baseline survey 2024, total households is 1223 with population 7166. The baseline survey in this ward revealed the notable presence of Janajati/ethnic groups (Tharu.) comprising approximately 75.08%, Brahmin/ Chhetri 15.91%, Other Janjati 3.29 %, Dalit 4.23% and Muslim is about 1.49 % in the project area. The Language spoken mainly depends on the caste/ethnicity. For the majority of people Tharu is the most common language of the people followed by Nepali and other adjoining hill languages.

Table 8: Ethnic Distribution of Population of Munuwa WSP

Caste/Ethnic Status	Percentage (%)
Tharu	75.08
Brahmin / Chhetri	15.91
Other Janjati	3.29
Dalit	4.23
Muslim	1.49
Grand Total	**100.0**

Source: Field Survey 2024

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 and lentils like gram, red gram, black gram and pea, oil seeds like mustard, flax seed and sesame, vegetables like potato, onion, cauliflower, lady's finger, garlic. Livestock reared in the area include cow/oxen, buffalo, goat and pig. Poultry is also common in the area. Fisheries is also the occupation of few people. Meat and dairy are the major livestock products.

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 occupation. The business ventures besides commercial

agriculture include retail shops of daily utilities, electronics and electrical, construction materials, dairy shop and agricultural inputs (fertilizer and seeds) etc.

People have engaged into different groups according to their subjective interest and involvement for the welfare of those interest groups. People are involved in co-operative savings groups, mothers' groups, youth clubs, civil awareness centers, committees.

2.5.3 Available Public Service Facilities

There is an existing Water Supply & Sanitation Project in Janaki Rural Municipality ward no.4 Munuwa WSP that is currently in a partially operational phase. The service area encompasses 8 educational institutions, including higher secondary schools and basic schools, catering to students, staff, and teachers. Additionally, a health post is situated within this ward, where 15 female health care volunteers are actively engaged at the health center and immunization clinic. The entire ward now benefits from electricity supplied through the national transmission grid. Groundwater extracted via shallow tube wells serves as the primary source of drinking water. Furthermore, all settlements within the project area have been interconnected by a comprehensive road network. Financial institutions are also present in this ward, offering saving and credit services to the local community.

2.5.4 Places of Religious and Cultural Importance

There are 11 places of religious and cultural importance in this ward. They are Shiv Mandir, Church, Gumba, Maruwa Ghar.

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 Janaki Rural Municipality to address the GBV/SEA/SH issues. The Janaki RM has nominated GBV and SEA/SH focal person (Ms. Yamuna Bista). As per the consultation carried out with the local women, there are no significant cases related to GBV and if any such cases happen, then those cases are settled under facilatation of the local social leader (Badhghar). In case, if such cases are not resolved even under facilitation of the local social leader then they are reported to Rural Municipality 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 VIII.

3. Study Methods

The methods adopted to achieve the objective consists mainly of map reading to understand the frame of reference and field investigation of the identified Munuwa WSS Sub-Project including collection of field-based information and mapping. The methods included:

3.1 Literature Review and Secondary Data Collection

The assignment commenced with literature review and secondary data collection. The sources of relevant information included 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 reports relevant to the project, and climatological record of the project area from the Department of Hydrology and Meteorology (DHM).

3.2 Field Survey, Mapping and Verification of Secondary Data

The study was based on the on-site walkthrough of the Janakinagar WSS sub project area, mainly focusing on the proposed location. It also included focused group discussions (FGDs), formal consultation meetings, and Key informant interview (KII) with the local stakeholders including the local government 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 (Annex I) prepared after desk study, review of sub-project related documents, filing of different parameters and matters outlined in environmental and social screening checklist (such as feasibility studies, detailed engineering design reports, 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 work that included engineering design, drawing and mapping, analysis, quantification, 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 Munuwa WSSP sub-project is 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 Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to Belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur Road 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. kanchanpur which is near the OHT premises will be affected most and construction will be sequenced to ensure that trenches are backfilled 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 in Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to Belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur 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 Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to Belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur Road. 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 backfill 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 9 below.

Table 9: Environmental and Social Management Plan Matrix

Field	Impacts	Mitigations Measures	Responsible for Implementation	Monitoring Indicator	Cost NRs.	Frequency of Monitoring
1. Prior to Construction Activities						
Consents, permits, clearances, no objection certificate (NOC), etc.	Failure to obtain necessary consents, permits, NOCs, etc. for use of land and other property can result in design revisions and /or stoppage of works.	✧ Obtain all of the necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. ✧ Acknowledge in writing and provide report on compliance with all obtained consents, permits, clearance, NOCs, etc.	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 supply temporarily.	✧ 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. ✧ Coordinating with local water authorities and communicating with the public. ✧ Avoid relocating transformers and electrical pole as much as possible.	PST/MST/PIU	List of affected utilities and operators;		During detailed design phase
Drinking Water Supply	Extraction of unsatisfactory raw water quality	✧ During the detailed engineering design stage, test water samples from existing tube wells located near proposed tube wells. The water Quality Test of Deep Tube well has been done and Report is attached in *ANNEX VI.* ✧ The cumulative total daily water demand for	PST, PMU	Incorporated in final design and communicated to contractors	60,000.00	Prior to award of contract

		the Munuwa Water Supply Sub-Project has been estimated to be **1.53 MLD** by the end of the design period in 2046 and design discharge of **30** lps per DTW has been recommended for a safe yield. ✧ Design to include basic treatment using lime dosing, pressure filter and disinfection using Ca(CIO)2 and provisions for lab unit and kits.				
Stockpile areas, Storage areas, disposal areas, and workers camp (if needed)	Disruption to traffic flow and sensitive receptors	✧ Location of stockpile area, storage areas and workers camp area are proposed within OHT premises. ✧ The contractor's camp will be in existing OHT & proposed OHT premises at Kanchanpur, Janaki RM-04. ✧ 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.	PIU	OHT peripheryfor 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	1,40,000.00	During detailed design phase
Waste Generation	Generation of solid waste, waste water and other construction waste may cause pollution from work sites and workers camp (if any is established)	✧ The mechanism of safe disposal will be developed in the sub project site before the actual commencement of work, including provision of waste bins. ✧ Prohibition of unwanted litter and discharge of waste. ✧ Proper management of solid waste will be done using lined pits for waste disposal.	Janaki RM/Ward Office	Contractor records. visual inspection		During detailed design phase

	2. During Construction Activities					
	A. Physical Characteristics					
Community facilities	Disruption of natural drainage Damage to existing facilities like water supply and pavements (Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to Belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur Road)	✧ Avoid natural drainage pathways for pipe-laying works. ✧ Stockpile the excavated material at safe but nearby place to construction site under the satisfaction of Construction Supervision Engineer. ✧ Restore natural drainage system if the drainage system during construction is blocked. ✧ Conduct a detailed assessment to see if any drainage system exists. ✧ Design and implement temporary drainage solutions to manage water flow during construction. ✧ Prior permission has been obtained from the respective local authority for use of water for construction. Use of water for construction works shall not disturb local water users. ✧ If construction work is expected to disrupt, users of the community shall be informed 7 days in advance and again 1 day prior to start of construction. ✧ Coordinate with local water supply authorities to schedule any necessary rerouting or upgrades during low-demand periods, minimizing disruption. ✧ Set up temporary water distribution points or alternative supply lines to ensure continuous access to water for affected areas.	PIU/RM/ Contractor	List of any public or private infrastructure disturbed by the sub project works minutes of meetings with the locals or affected persons.		As per need, or field- inspection if any such case is foreseen

Ambient air	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. Seti Lokmarga, Kanchanpur to Badariya tole, Kanchanput to Jadupur, Kanchanpur to Santoshi Tole, kanchanpur to Munuwa , Munuwa Bazar, Bhursa to Belpur road, Munuwa to Jabalpur road, Munuwa to Girdharpur road, Kanchanpur tole, Santoshi tole	✧ 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 work commences. ✧ Water sprinkled on dry exposed surfaces and stockpiles of aggregates at least twice daily, or as necessary. ✧ If re-surfacing of excavated portion of roads cannot be done immediately, spread of crushed gravel over back filled surfaces ✧ Require trucks delivering aggregates and cement to have tarpaulin cover and maintain a minimum of 2" free board ✧ Limit the speed of construction vehicles on access roads to a maximum of 20 kph. ✧ Ensure use of equipment and fuel complying with applicable emission standards. ✧ Do not allow construction 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. Conducting once a year Air Quality Test for dust nuisance (PM 10 and PM 2.5) at key locations such as settlement,	Contractor/MST/ PIU	Location of stockpiles. Number of complaints from sensitive receptors. Heavy equipment and machinery with air pollution control devices. Certification that vehicles are compliant with air quality standards.	1,80,000.00	Daily monitoring by MST in coordination with PIU. Monthly visual inspection by PIU. Air quality monitoring, once a year.

		Kanchanpur, Munuwa Bazar, Bhursa tole, and Seti lok Marga RM-04 during the dry working season (August-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.				
Acoustic environment	Construction activities will be along the Row of existing roads (Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to Belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur Road) Temporary increase in noise level and	✧ 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 the least disturbance. ✧ Restrict noisy activities to daytime. ✧ Minimize drop heights when loading and unloading coarse aggregates. ✧ Horns should not be used unless it is necessary or unavoidable ✧ Utilize modern vehicles and machinery with the requisite adaptations to limit noise and exhaust emissions and ensure that these are maintained to manufacturers' specifications at all times. ✧ All vehicles and equipment used in construction shall be fitted with exhaust silencers. Use silent type generators (if required) ✧ 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 avoid any use of pneumatic drills or heavy vehicles in	Contractor/ MST/PIU	-Results of monitoring noise levels (Maintain maximum sound levels not exceeding 70 decibels when measured at 10 m or more from the construction sites) -Number of complaints from sensitive receptors		Daily monitoring in coordination with PIU Monthly inspection by PIU. Noise level measurement, once a year.

	vibrations may be caused by excavation equipment, and the transportation of equipment materials, and people.	the vicinity. Complete work in these areas quickly. ✧ Providing ear mufflers to workers operating high dB construction equipment. ✧ Implementing regular inspection & maintenance of construction/transportation vehicles to ensure compliance with National Noise Standard Guidelines (NVMES, 2069 B.S., 2012). ✧ Conduct noise level test by MST in coordination with the PIU or by a third party once a year during the peak construction stage at specified locations near schools, hospital and Munuwa Bazar , Kanchanpur chowk and Rainbow school and Janta Secondary School.				
Waste disposal	Pollution of water and land resources, and cases of vector borne diseases due to haphazard waste disposal. Generation of solid waste and wastewater from construction sites and labor camps.	✧ Waste minimization and waste segregation (organic and inorganic) at source will be carried out. ✧ Organic waste generated from the camps will be composted or properly managed in a compost pit within the camp area by following the waste management guidelines. If feasible, compost will be distributed to be used in the nearby agricultural fields. ✧ Construction debris will be disposed at designated spoils site only (as recommended in the C-ESMP) and the efforts will be made to minimize such waste through reuse, reduction, and recycling concepts. ✧ Hazardous waste will be segregated from	Contract or	On-site situation in campsites (if any), work sites and their vicinities	10,000.00	Monthly monitoring by PIU.

		non-hazardous waste. ✧ Contractors responsible for handling, treating, and disposing of hazardous waste will be reputable, licensed by relevant national regulatory agencies, and follow good international industry practices for the type of waste handled. ✧ Hazardous waste will be stored in sealed containers, kept away from sunlight, wind, and rain. Storage will prevent the commingling or contact between incompatible wastes and allow for inspections to monitor leaks or spills. ✧ Disposal of hazardous waste will comply with all applicable local and international regulations ✧ Awareness raising events will be carried out. ✧ Decommissioning waste will be re-used and sold to local scrap dealers.				
	B. Biological Characteristics					

Vegetation	- Loss of vegetation cover during construction works. However, at present, no tree clearance is envisaged during construction - Pressure on the Laligurans CF for its products like firewood, timber and non-timber forest products	✧ Greenery promotion around the construction sites and road alignments where possible ✧ Tree felling will be avoided, and if any such cases occur, prior approval from the local bodies will be received and compensatory plantation @ 1:10 will be carried out ✧ Species of local economic significance and values will be planted ✧ Providing alternative fuel to worker for cooking ✧ 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.	Contract or	Area of greenery that has been cleared Number of trees cut (only if unavoidable) Complaints or grievances by the locals	5,00,000.00	Monthly monitoring by PIU.
	C. Socioeconomic Characteristics					
Community activities	The construction related activities that impede access will disturb the local residents.(disturbances to local activities due to obstacle in movement during pipe laying may occur in service areas of Seti Lokmarga, Kanchanpur to Munuwa Road, Munuwa to Jabalpur	✧ To minimize disturbances, construction work will be conducted as soon as possible. ✧ Disturbances to local activities due to obstacles in movement during pipe laying may occur in service areas of kanchanpur, Munuwa Bazar, Santoshi tole. ✧ The pipe trench will have a depth of 90 cm and a width of 30 cm plus OD for larger than 110 mm and 40 cm for smaller OD. 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	Contract or	Time schedule of construction work; Information related to construction activity to local residents Number of temporary diversions sign, signboards etc.		Daily (or whenever there are construction activities) by the Contractor/MST Monthly visual inspection by PIU

	Road, Munuwa to Shankarpur Road, Bhursa to Girdharpur Road, Munuwa to Belpur Road, Kanchanpur to Badariyapur Road, Badhariya to Jadupur Road and Jadupur to Santoshi Tole Road, Santoshi Tole , Munuwa Bazar to Joshipur Road	impact, the pipeline installation will be carried out in short sections of 500 meters at a time, with testing and back filling completed promptly, within a week. ✧ 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. ✧ Temporary diversions and signboards will be provided for the pedestrians. ✧ Ramps, where necessary, will be provided to ensure access to houses and other service areas. The ramps provided will be of sturdy material and of sufficient width.				
Labor camp management	- Poor sanitation practices by the workforce of 40 to 45 labors (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	✧ Labor Camp will be located within the OHT premises. ✧ Provide adequate health care facilities within construction sites and provide first aid facility round the clock ✧ Proper ventilation will be provided in the camp. Separate rooms for men and women workers will be managed. Raised bed is the minimum standard of bedding in labor camps. ✧ Install sanitary facilities for workers to avoid open defecation by construction of temporary toilets. Separate toilets will be established for males and females. ✧ Provide and maintain proper drinking water, sewerage, and waste disposal	Contract or	✧ Daily entry-sheet of the work force in the camp sites. ✧ Number of local people versus outside workers in the sub-project area will be regularly monitored	1,46,000.00	Monthly inspection at camp sites (if any) by PIU.

	- Changes in social structure, cultural and traditional practices of the rural people due to exposition to the outside workforce - Conflict between Local and Outside Workers and erosion of law and order situation of the project area	facilities at the camps. ✧ Ensure no wood is burnt by any worker on or off site. Camps shall be provided free of cost, with electricity and regulator & adequate fuel supplies of LPG or Kerosene ✧ 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 local economy through employment and cash flow. ✧ 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. ✧ A Code of Conduct (CoC) will be prepared 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. ✧ The camp shall not be in the vicinity of landslides and flood plains. ✧ Preference will be given to the local people in project related jobs and subsidiary opportunities				
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	✧ Mandatory use of safety measures (PPEs) such as masks, helmet, hand gloves and rubber boots, etc. ✧ The laborers will be insured for their health and safety. ✧ Provide safe drinking water for labors ✧ The first aid box will be kept in a proper and easily accessible place. ✧ Prohibit child labor and forced labor in all construction activities. ✧ Provide comprehensive training to all workers on occupational health and safety practices. This should include proper use of personal protective equipment (PPE), safe work procedures, emergency protocols, and awareness of specific hazards related to the construction site. ✧ 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 outfits should be available on the site. Some of the work force should be trained to wear the outfit. The contractor should also make provisions for an ambulance to take injured for ill person to the nearest hospital, if needed	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	50,000.00	Daily (or when there is a construction activity) by the Contractor/MST. Monthly visual and document inspection by PIU

		✧ Construction workers will be trained in job hazards, emergency procedures and any other relevant safety measures. ✧ Active sites will be well demarcated and bounded. Excavated sites will be well bounded with hard barricades, where necessary. ✧ Unauthorized entry to active construction sites and stockpile sites will be strictly regulated. ✧ Movement of vehicles for construction activities will be strictly regulated under safety guidelines. ✧ Code of Conduct (CoC) will be implied for the workforce so that they have no conflict with the local communities. ✧ Systematic labor registration procedures will be adopted for keeping up-to-date information of all workers including contact details of the person to be contacted in case of emergency. ✧ Drivers with authorized license holders will only be allowed to operate construction vehicles. ✧ Workers and staff at the construction site will be provided with proper training to ensure that workers are trained in what to do in the event that an accident occurs on site. ✧ The contractor's supervisors will be instructed to conduct 'prework instructions' to the workers everyday - explaining to them about the nature of works, condition of the site, and associated risks as well as safety				

		measures. ✧ The agreement with a nearby health institution will be put in place by the contractor. ✧ Contractor will be responsible to maintain the records of each and every accident and incidence ✧ Contractor's team, staff and laborers can also make use of the GRM to raise complaints / grievances if any				
Social Harmony	✧ Changes in social structure, cultural and traditional practices of the rural people due to exposition to the outside workforce ✧ Conflict between Local and Outside Workers and erosion of law and order situation of the project area	✧ The 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. ✧ Special instruction will be given to all workers to act in a responsible manner during and after the working hours, respecting the rights, properties and practices of local people. ✧ 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 local economy through employment and cash flow. ✧ Preference will be given to the local people in project related jobs and subsidiary opportunities ✧ 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. ✧ A code of conduct (CoC) will be prepared 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.				
GRM, Social Disturbance / Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and Communicable diseases	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.	(i) Regarding SEA/SH, GBV ✧ Locals will be given due priority for any employment opportunity ✧ GRM will be established for the workers, focal person handling GRM including SEA/SH will be assigned, and every laborer will be informed of the GRM. ✧ Follow Code of Conduct which applies to staff, laborers and other employees at works site, personnel of subcontractors, any other personnel assisting in the execution of the sub project works. ✧ CoC will be signed, oriented on the CoC to ensure it is understood by those	PIU	✧ Regular monitoring and supervision of construction site/ camp ✧ Information related to SEA/SH, Human trafficking, GBV, HIV AIDS and Communicable diseases	50,000.00	Daily (or when there is a construction activity) by the Contractor. MST/ PIU Rural Municipality

		signing, and strictly adhered to and monitored for all workers. Signed copies of the code of conduct will be maintained. ✧ Separate toilets will be provided for male and female workers ✧ SEA/SH, GBV awareness raising activities, training and stakeholder engagements such as community-based awareness programs, and school-based awareness programs will be carried out. The focal person (Yamuna Bist) of Anti-harassment Cell Department of Women and children under social development unit of Janaki RM will be part of trainings, awareness programs regarding SEA/SH. ✧ SEA/SH grievances received by Levels 1 and 2 GRM will be referred to PIU/RM with utmost confidentiality. Individuals can also take their grievances to the focal person of Department of Women and children under social development unit of Janaki RM. Awareness program for women and against the gender-based violence will be conducted for the workers as well as the local community regarding these concerns ✧ 4 orientations/training courses with at least 25 participants in each training; to be conducted during Pre-construction and during Construction period. ✧ Awareness program for women and				

		against the gender-based violence will be conducted for the workers as well as the local community including school children regarding these concerns. (ii) HIV AIDS & Communicable diseases ✧ 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 ✧ Distribute HIV & AIDS awareness materials in collaboration local health related agencies ✧ 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 ✧ Health screening of the workers will be carried out before joining them into workforce ✧ Emergency Response Plan will be 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	✧ 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. ✧ Grievances box will be installed in Contractors and labor camps.	Rural Municipality/ Contractor	Copies of citizenship card or other valid personal ID card will be seen if any doubt		Daily by the Contractor. MST Monthly visual inspection by PIU

		✧ Child labour & forced labour will be strictly prohibited ✧ Copies of citizenship card or other valid personal ID card will be kept in record of the workers ✧ Awareness among the workers and the local community (at least two) will be conducted ✧ Equal wage for male and female workers will be ensured				
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	✧ Contractor's will maintain adequate space and adequate lighting, temporary fence, barriers and signage at worksites; ✧ Children and community members will be prohibited from active construction sites. ✧ Proper fencing of stockpile areas ✧ Awareness programs on communicable diseases and hygiene practices will be carried out ✧ Disseminate the GRM to communities and affected stakeholders during consultations, community meetings, Bhalmansa meetings and through local media and newspapers. ✧ . ✧ 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	Rural Municipality/Contractor	✧ Number of permanent signs, barricades and flagmen on worksites ✧ Number of complaints from sensitive receptors; ✧ Number of walkways, signs, and metal sheets placed at sub project location	1,00,000.00	✧ Daily by the Contractor/ MST. ✧ Monthly visual inspection by PIU

		impacts, as well as the proposed prevention, mitigation, and emergency response measures. ✧ Active sites will be well demarcated and bounded. Excavated sites will be well bounded with hard barricades. ✧ Unauthorized entry to active construction sites and stockpile sites will be strictly regulated. ✧ Movement of vehicles for construction activities will be strictly regulated under safety guidelines. ✧ A Code of Conduct will be implied for the workforce so that they have no conflict with the local communities. ✧ Provision of ramps will be made where trenching works are being carried out to provide access to houses and businesses.				
	3. During Operation and Maintenance Phase					
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 and spontaneous vomiting.	✧ All disinfection chemicals require proper storage and handling practices ✧ Provide safe storage for chemicals ✧ Ensure that the person is hired, with knowledge of chlorine use for disinfection process during operation ✧ Ensure use of PPE while using chemicals ✧ Use of chlorine guideline as per WHO ✧ Training on the handling and dosage of chemicals will be given to the staff. Ensure there is storage area for chemicals in compliance with the Material **Safety Data Sheet (MSDS)** for each substance. This	Contractor during DLP; WSUC or Operator after DLP	Visual inspection		Daily (or as needed) by the operator.

		includes: • Storing chemicals in appropriate containers that are compatible with the substances. • Ensuring proper labeling and segregation of incompatible chemicals (e.g., acids and bases, oxidizers and flammables). • Maintaining temperature, ventilation, and humidity controls as specified in the SDS. • Implementing secondary containment measures to prevent spills or leaks. ✧ Ensuring easy access to spill kits, eye-wash stations, and fire extinguishers in case of emergencies." ✧ Additional measures, as required, will be defined in the **O&M manual** of the water treatment facility and operation of the pipeline.				
Water bodies	Water pollution due to effluent produced from the periodic. Back washing of the filter plant, 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.	✧ A settling tank is proposed for decanting of the slurry from the effluent during backwash	Contractor during DLP; WSUC or Operator after DLP	Visual inspection Effluent sampling		For first year, DSMC After that WSUC daily inspection or as needed. Effluent sampling by the operator, only when necessary or practical.
Drinking water supply	Delivery of unsafe water due to source	✧ The operations and maintenance plan and training for staff will cover;	Contractor	Visual inspection		Daily or as needed visual

system	contamination, leakage in pipes	(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 Safety Data Sheet (MSDS)** for each substance. (iii) ensure capacity of WSUC to implement quick response to hazardous substance/waste spills; (iv) Implement Safeguard Policy Statement (SPS)-complaint EMP and WSP. This policy ensures that the water supply sub-project is environmentally and socially sustainable; and (v) Monitor water quality.	during DLP; WSUC or Operator after DLP	Water Quality reports WTP records in the logbook		inspection by the operator. Quarterly or as needed water quality testing by the operator.
-Pollution and nuisance due to sludge removal and its disposal	If the effluents from the WTP and wastewater 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, the likeliness of occurrence of this case is very low.	✧ The treatment plant will be cleaned on a regular basis. ✧ Quality of the effluent will be regularly monitored to ensure that the effluent meets the GoN tolerance limits of discharge of wastewater from combined wastewater treatment plant ✧ The operation and maintenance of the WTP will be carried out on a timely and regular basis as per its **O&M plan**. ✧ **Standard Operation Procedure (SoP)** will be adopted for the operation of WTP. Sludge will be handled only by designated	Contractor during DLP; WSUC or Operator after DLP	Visual inspection Water Quality reports WTP records in the logbook		Daily or as needed visual inspection by the operator. Quarterly or as needed water quality testing by the operator.

		trained team authorized by the municipality and taken to taken to the Tikapur fecal Sludge management (FSM) treatment plant. stored in closed container. Sludge will be disposed to the sludge drying bed or other designated place under coordination and permission of the municipality				

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 training and awareness programs have been planned and is given in Table. The PMU PST, PIU, and MST can be consulted for such training. Experts/Consultants can also be the resource persons to impart training. These experts shall be appointed based on specific needs for the training.

Table 10: Details of Proposed Training Program

S.N	Title	Objective	Time of training	Duration/ Days	Participants
1	Orientation on E&S orientation 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 the Contractor	1 Day	PMU/PST/PIU/ MST/MWASH 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	1 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 labour/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 labour/contractor	-To raise road safety consciousness among the road users	During construction/During trench excavation along the road.	1 Day	PIU/MST/Contractor/MWASH unit
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 Cost of Environmental Mitigation

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 8. These costs exclude mitigation actions that are typically theContractor'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 Munuwa WSS Sub-Project 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 11: Mitigation Budget

S.N.	Items & Headings	Unit	Qty.	Rate	Total, NPR	Reference
	Provisional Sum amount					
1	Water quality test	Samples	30	2000.00	60000.00	Dhangadhi Lab
2	Air quality and Noise level monitoring	Samples	2	90000.00	180000.00	Consulting with the air, water and noise level monitoring lab.
4	Greenery promotion	Job	LS	500,000.00	500,000.00	Consulting with Nursery.
5	Water Sprinkling	Job	LS	50,000.00	50000.00	As per the site accessibility.
6	No horn sign installation	Job	LS	20,000.00	20000.00	As per local market price
7	Waste collection bins	Job	LS	10,000.00	10000.00	As per local market price

8	PPE and First Aid	Job	LS	50,000.00	50000.00	As per local market price
9	Environment and Social Awareness, Worker's & Community's Health and Safety and WASH Promotion *(Events will be conducted for workers as well as community)*					
(i)	Environmental and Social Awareness (during Pre-construction phase and construction phase; at least 30 participants/event)	Events	2	25,000.00	50000.00	
(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	25,000.00	50000.00	
(iii)	Community level awareness on WASH and Sanitation	Events	2	20,000.00	40000.00	
(iv)	Labour Camp management	Job	LS	146000.00	146000.00	
10	Stockpile/Construction Waste Disposal Management	Job	LS	1,40,000.00	140000.00	
11	Environment & Social safeguards (grievance meetings, site monitoring, etc.)	Meetings /Events	18	8,000.00	144000.00	
12	Information dissemination materials and medium					
	(a) Leaflets	Job	LS	10,000.00	10000.00	Consulting with local press & media.
	(b) PSA (local media)	Job	2	25,000.00	50000.00	Consulting with local press and media.
	Total				**15,00,000.00**	(In Words: Fifteen Lakhs 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 submitting 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 the effectiveness of mitigation measures.

Compliance monitoring will be conducted to monitor the compliance of proposed mitigation measures and monitoring activities. 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.

4.5 Environmental and Social 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, 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 12: Compliance Monitoring Plan

Issues	Indicators	Method	Schedule	Location	Responsible	Agencies to be consulted
Construction Phase						
Approval of operation plan of Janaki Rural Municipality with proposed intervention	Approval letter	Review of approval letter	Prior initiation of work or Prior procurement	Janaki 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	Janaki Rural Municipality	PIU/RM	
Mitigation management (Compliance with ESMP)	Budget allocation for mitigation measures and monitoring	Review of project budget document	Annual	Janaki 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	Annual	Janaki Rural Municipality	RM/PIU/MST	

		actions				
Operation Phase						
Operation phase mitigation management	Budget allocation for mitigation measures for operation phase	Review of project budget document	Annual	Janaki Rural Municipality	RM/MWASH Unit	
Implementation of operation phase monitoring	Monitoring report and budget allocation for corrective actions	Review of monitoring report and budget allocation for corrective actions	Annual	Janaki Rural Municipality	RM/MWASH Unit	

Table 13: Impact Monitoring Plan

Parameter	Indicators	Method	Location	Frequency & Schedule	Agencies to be consulted
Construction Phase					
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	
Biological Environment					
Vegetation	No. of trees felled, and area of site cleared	Site observation and record checking	Embankment site	Daily	
Socio-economic and Cultural Environment					
Existing infrastructures	Damages of road and culvert, access to houses	Observation and discussion with local people	Access road	Weekly during construction	
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, labor records	Site visits, visual inspections, reports and photographs, review of workers' grievances register		Regular	
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		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	Observation and record checking	Daily	
Gender, children and vulnerable group	Number of such people employed	Review of attendance and discussion	Construction site	Weekly	
Operation Phase					
Physical Environment					
Land pollution	Open defecation and garbage disposal places	Direct observation	Water Supply & Sanitation Project site and surrounding	Monthly	
Biological Environment					
Vegetation	Survival of plantations	Site observation and counting	Plantation sites	Monthly for 5 years	
Socio-economic and Cultural					
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 business/other related ventures	Interview with local people	Water Supply & Sanitation Project site and surrounding	Annually	Municipality/ Wards

4.6 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 months form the date of contract signing.

4.7 Project Environmental Management Framework and the Key Stakeholders

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

The key stakeholders including the Janaki 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 the Contractor's daily compliance monitoring.

f. **Contractor:** The Contractor is responsible for planning, executing, supervising, inspecting and directing 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 carry out 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 specialists of MST prepare the site-specific environmental and social management plan (ESMP) report. E&S specialists support and provide guidance to PIU to ensure that the relevant E&S instruments/ESMP/ESSR/ESCoP etc. are implementated effectively.

i. **Affected Wards, Municipality and District Coordination Committee (DCC):** Provide recommendations to the proponent with comments and suggestions and assist the proponent in the project implementation.

4.8 Social Accountability and Grievance Redress Mechanism

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 to stakeholder's query and concerns. At first instance, the project-affected grievance 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 procedures.

GRM has been initiated, and ward Level GRC has been formed at the project's ward level. At the 1st level (Rural Municipality level), the staffing of the Grievance Redress Committee (GRC) includes RM Vice Chairperson, Administrative officer, PIU Manager, MWASH Unit chief. The notice regarding the formation of ward Level GRC and RM Level GRC has been published and shared with the stakeholders.

The 2nd level GRC will be 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 take 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 sub project 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 at 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 Janaki Rural Municipality to resolve the GBV/SEA/SH issues The Janaki RM has nominated GBV and SEA/SH focal person (Mrs Yamuna Bist). 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. As per the requirement of the World Bank, the PMU, in support of the World Bank, will prepare and implement the SEA/SH Action Plan before the implementation of the project

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At Federal Level

Project Steering Committee (PSC) Led by Ministry of Water Supply (MoWS)

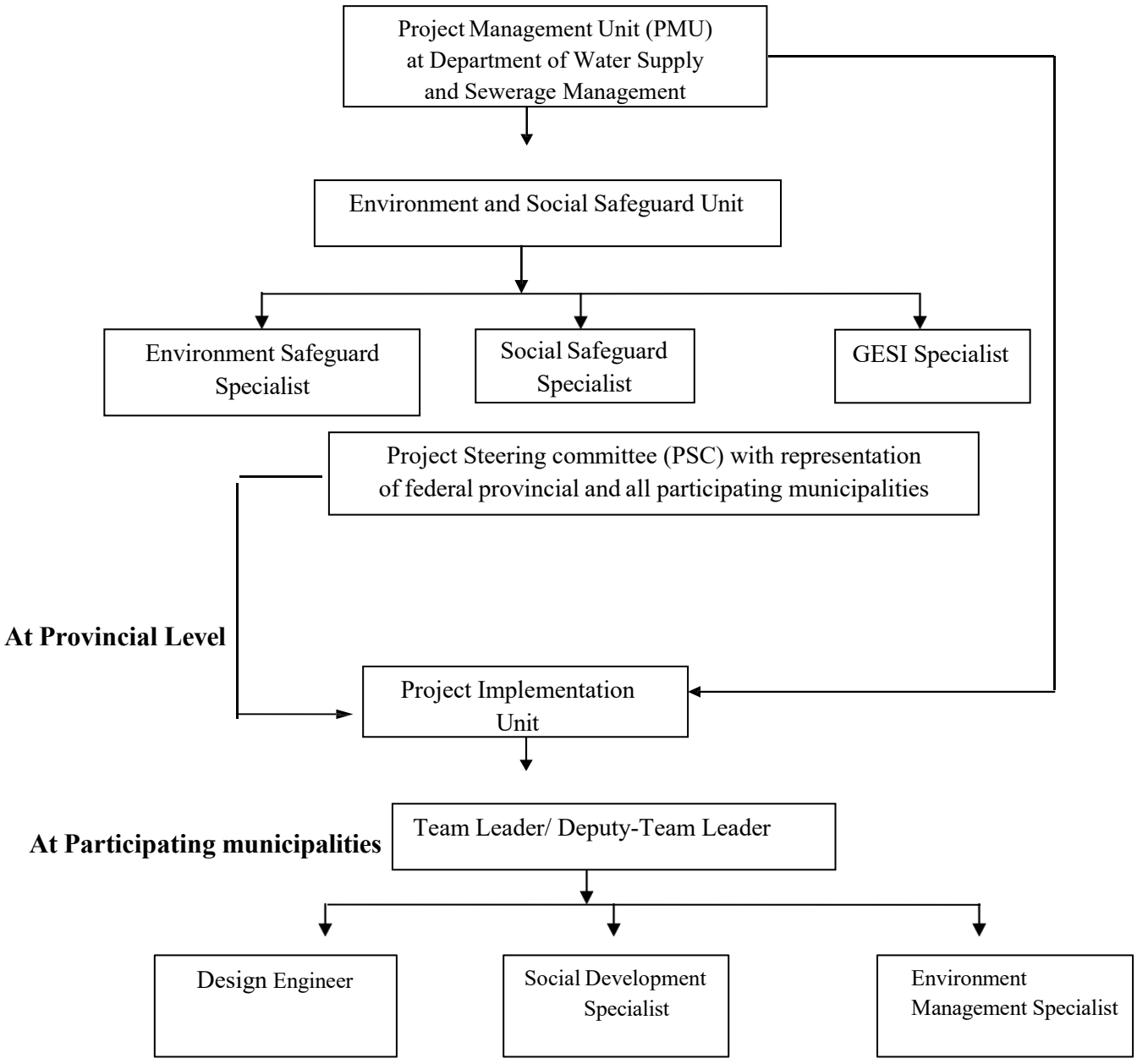


Figure 6: Organogram of E & S Activities Related to The Project

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 areas 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 Janaki Rural Municipality ward no.01, people expressed their concerns about various kinds of environmental impacts caused by the project. People around the selected site 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 14: Public Concern and Mitigation Measures

Public concerns	Mitigate measures
Dust during construction	Regular water sprinkling and speed limits
Noise during construction	Prepare reasonable construction program; Avoid night construction as much as possible;
Waste water 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 land fills 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 back filling and placed the caution board at both side of excavated trench. Pre-information to the local people

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 12 below.

Table 15: Stakeholder Engagement Plan

During Construction				
Topic	**Stakeholders**	**Engagement Method**	**Frequency**	**Responsibility**
▪ Disclosure of ESMP (and updated ESMP), including C-ESMP ▪ ESMF, SEP, and LMP ▪ Delineate Labour Influx Management Procedures ▪ Activities	▪ Janaki Rural Municipality and concerned officials of the Municipality and MWASH Units ▪ Project affected Ward chairs	▪ 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) ▪ Community radio and local media	Periodically throughout project implementation For planned construction activities, the community will be informed a week before the construction work and a day before construction work	PIU/MST Contractors

planned for SEA/SH and GBV ▪ Awareness of HIV and other communicable diseases ▪ GRM for SEA/SH ▪ Project GRM ▪ Planned construction activities	▪ Tole Committees ▪ Local Community of the project area ▪ Community Leaders ▪ Local CBOs and NGOs working on WASH and GBV	▪ Notice Boards ▪ Periodic information disclosure activities	in the construction-planned areas.	
▪ 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

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, Tole 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 16: Proposed Strategy for Information Disclosure

Target stakeholders	**List of information to be disclosed**	**Methods and timing proposed activities**
Project implementation phase		
• Government officials (Federal, provincial, and Municipality officials including the wards) • District line agencies	• Planned and ongoing activities • Regular updates on project status, including the implementation of ESMP, C-ESMP, ESMF, LMP, SEP • GRM • SEA/SH and GBV activities	• Sharing project update and reports through meetings • Consultation and face-to-face meetings • Information boards, leaflets, and brochures • PMU/PIU websites
• CBOs and NGOs working on WASH • Local NGOs and CBOs working on GBV • Community leaders • National & local Media • Local Community	• Project concept and planned activities • ESMF, IEE, SEP, Labour Influx management procedures • SEA/SH Activities and GRM procedures for SEA/SH • GRM procedure • Planned construction activities	• Information boards, leaflets, and brochures • PMU/PIU websites • Meetings and workshops
• Individuals and communities with a focus on vulnerable groups, including IPs, women, and Dalits • Local NGOs and CSOs working on WASH and GBV	• Project concept and activities • E&S procedures and management plans (ESMP, C-ESMP) • GRM procedures, ESMF and Labour Influx management procedures, SEP and • Planned construction activities • SEA/SH activities and GRM procedure for SEA/SH • Revised project information if any	• Regular release of public notices through mass media, community radio, television, and social media • Regular updates of information on the PMU/PIU website • Distribute information leaflets and brochures to public • Air project information/ messages through community radio • Periodic small group meetings with vulnerable and IP groups • 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)

6. Conclusion and Recommendation

Munuwa WSS sub-project in Janaki Rural Municipality aims to enhance water supply infrastructure while minimizing environmental and social impacts. The major construction work of this WSS sub-project has already been completed. The current intervention under DWSS sub-project include the enhancement of the existing OHT, laying 87,723.32-meter (87.72 km) distribution pipeline, installation of 1,265 new HH connection, other minor repair and maintenance works. A key component of this sub-project is the installation of 65,325.3 meters (65.32 km) of new pipeline along existing roads which are in public use.

The DWSS sub-project does not transverse any protected areas or private land. It does not involve any physical displacement. Therefore, the project is anticipated to have moderate environmental and social impacts and has been classified as Category III. The identified impacts are addressed through a site-specific Environmental and Social Management Plan (ESMP).

The ESMP outlines measures to obtain necessary consents, manage waste, and mitigate disruptions during construction. Occupational health and safety measures include personal protective equipment and first aid provisions. During operation, water quality and infrastructure maintenance will be monitored for long-term sustainability. Overall, the project exemplifies responsible development practices, ensuring community well-being and environmental protection. A total of NRs 15,00,000.00 is allocated for mitigating construction and operation phase impacts. These costs are meticulously considered, ensuring financial feasibility and comprehensive coverage of environmental management responsibilities and legal liabilities.

In conclusion, the ESMP demonstrates the project's dedication to responsible environmental stewardship. Through compliance with environmental legislation and regulations, such as the Environment Protection Act and Environment Protection Rule, the project ensures accountability. The plan includes impact and compliance monitoring across various environmental and social aspects, reflecting a holistic approach. Furthermore, the ESMP

articulates the duties of stakeholders and accentuates social accountability through the establishment of a Grievance Redress Mechanism (GRM) at both the project and central levels. This thorough framework highlights the project's commitment to sustainable development and the reduction of adverse environmental and social consequences.

Annex- I: Environmental and Social Screening Checklist

I- Sub-project Background

1	Name of the Sub Project	Munuwa Water Supply and Sanitation Project
2	Location	Municipality/ Rural Municipality: Dugauli Ward No: 04 District: Kailali Province: Sudurpaschim Altitude: 110 Meter.
3	Co-ordinate (GPS)	Latitude: 28°33'44.591" N Longitude: 81°04'59.298"E
	Project's boundaries in four directions and the area of influence	Three side by road and one side by the agricultural land
4	Type of Sub-project	Water Supply
5	Proponent	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)
A	**Environmental Screening**		
1	Is the sub-project site located within any National parks/ protected areas or any critical aquatic and terrestrial habitat area?	No	The sub-project will utilize existing major infrastructures of Munuwa WSS system and additional required infrastructures will be constructed within the premises of existing OHT. The proposed site is located at Janaki RM-04, which is barren land 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 Janaki RM-04 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	Existing OHT premises is already enclosed by boundary wall and it does not transverse in any protected area or wildlife 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	Project area is surrounded by agricultural land and already bounded by Wall but proposed to strength the wall.
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 Terai region. So, there is no risk of landslide, soil erosion prone area.
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. Pipelines are designed to bury below 90 cm depth, so there are no any activities to induce water logging.
8	Will the proposed sub-project endanger indigenous Plant species of ecological significance?	No	There is no any impact on plant species because major structures have already been constructed and additional structures will be constructed within the existing OHT premises which is barren land. The sub-project area don't bear flora/fauna species with ecological importance.
9	Is there any public infrastructure (School, hospital, health post) in the surrounding area of the project site? If yes, provide brief descriptions.	No	There is no any infrastructure around the site. It is surrounded three sides by road and remaining side by agriculture land
10	Will the construction activities cause any damage to the existing local roads and other infrastructures/Utilities?	No	The construction activities will not cause any damage to the existing local roads and other infrastructures because major infrastructure has already completed. There is enough allocated land to construct required additional structures.
B	**Social Screening**		
	Land acquisition		
1	Does the sub-project require land acquisition?	No	There is enough land within the premises of existing OHT for

			the construction of requird building, which is already acquired by the existing Munuwa WSP. Now. The land is belong to Rural Municipality.
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 available land is sufficient; hence private land acquisition is not required for this sub-project.
3	Has sub-project managed enough land for Construction? If Yes, how? explain briefly	Yes	The sub-project has managed enough land belonging to the Rural Municipality.
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 because the sub-project will utilize the existing Munuwa WSP site which is sufficient.
5	If private land acquisition is required, will there be a loss of productive land?	No	Private land acquisition is not required.
6	If private land acquisition is required, will there be any physical/economic displacement and impact on livelihoods?	No	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 encroachments 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.
	Cultural Heritage		
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.
	Indigenous and vulnerable People		
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.
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
	Labor and working conditions			
1.	How many workers are likely to be hired for the proposed works? How many workers are estimated to be women?	Total 50 numbers of workers are estimated for the proposed works 20 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 Janaki 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: 30 Engineers: 1 Technician/overseer:1 Security guards: 2 Others: 10		

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:25 Contracted workers:40 Primary suppliers' workers: 25 Community workers: 20		
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 OHT 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.
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		WSP is in partially operational Phase so there is no any risk of handling of risk electrical equipment
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 nationallaws 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 ofcommunicable 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.
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.
Resource Efficiency and Pollution Prevention and Management				
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 waste water during construction.
3.	Will it create dust pollution around the sites?	Yes		Due to transportation dust pollution will create in sites and also during the agricultural harvesting time.
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.
7.	Will it temporarily stop or impact/pollute the water supply and sanitation system in and around the site?		No	No water supply will not be affected.
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.
9.	Will any liquid waste, or an item containing liquids (including oils), needs to be transported off-site for reuse, recycle ordisposal 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.
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.		
Potential Community and Occupational Health and Safety Impacts				
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 may be any risk.
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	Such provision is not envisaged.
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.
	Stakeholder Engagement			
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 Janaki 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 Bhalmansa (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 Bhalmansa in all community to solve common issues within their community.
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		
Contextual risk				
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]		No	
4.	Which political parties won the last local election? [Municipal and the ward of the project site]			Rural Municipaly by Nagarik Unmukti Party and Ward – Nagarik Unmukti Party

5.	Which political parties won the last parliamentary election from the Constituency of the project site?			UML
6.	What are the major economic activities in the municipality? [Hint: Occupation, local exports, etc.]			Agriculture, vegetable, daily wages base labour, foreign employment
7.	Please name the major industries/institutions located in the municipality.	Brick industry, Rice mill, Block Udyog		
8.	Which are the major market centers in the s sub-project area and how far are they?			Munuwa Bazar ;- 2.3 km, Joshipur Bazar ;- 9 km Durgauli Bazar :- 4
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 Janaki Rural Municipality.

III. Checklist for ESS7 and particularly to FPIC

ESS7: Indigenous Peoples	**Yes**	**No**	**No Impact**	**Positive Impact**	**Negative Impact**	**Remarks**
Does the project footprints lie in areas where indigenous people is present including (area of influence)	Yes		No impact			Munuwa WSP is located in Janaki Rural Municipality ward no-04. The surrounding community is mixed with Tharu, Brahmin/Chhetri and other caste/ethnic groups. Tharus are the original inhabitants of this 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 belongs to Janaki Rural Municipality. 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. Thus, there will be no any physical displacement of IPs.
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 Janakinagar 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 premises of the existing 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		No	No Impact			The site is already acquired by Munuwa WSP and belongs to Janaki Rural

forest product, medicinal plants /grazing or pasture lands/forest/cropping areas)/loss of access to such assets and resources 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)?						Municipality and the major infrastructure will be be constructed in the premises itself. Major interventions under the project will be pipe laying work, but it will be limited within the existing road width that is in public use. Therefore, the impact on natural resources or loss of access to such resources is not anticipated.
Will the project lead to the utilization or commercial development of natural resources on lands and territories claimed by IPs?		No	No Impact			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? *(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)*		No	No Impact			There is no impact on tangible cultural heritage.
Will the project have significant impact on intangible cultural heritage that is material		No	No impact			There is no impact on intangible cultural

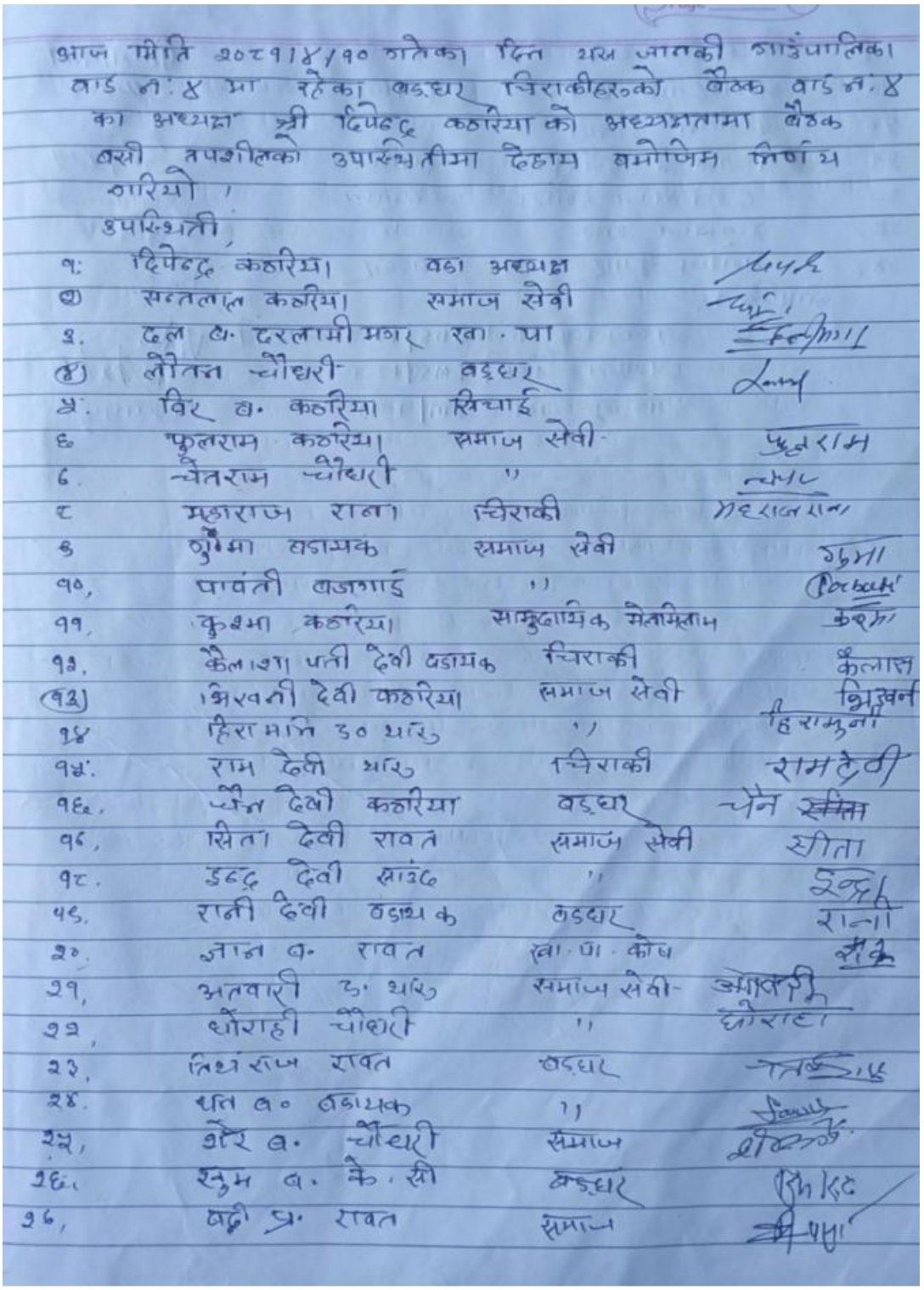
to the identity and/or cultural, ceremonial, or spiritual aspects of the affected community? *(Intangible cultural heritage may include practices, representations, expressions, knowledge, and skills, as well as associated instruments, objects, artifacts, cultural spaces that IP communities recognize as part of their heritage like traditional handicrafts such as Bamboo weaving, oral traditions, performing arts and so on)*						heritage.

Screening Team **Screening Date: - 29/July/2024**

Position	Name	Contact Number	Signature
Deputy Team Leader	Jay Raj Pant	9851192731	
Design Engineer	Dhanraj Mandal	9844251018	
Environmental Management Specialist	Prashant Chaudhary	9842229769	
Social Development Specialist	Krishna Raj Pant	99848875708	
Social Mobilizer	Manju Baidha	9863589764	

Annex II: Minutes of meeting /Consultation Meeting

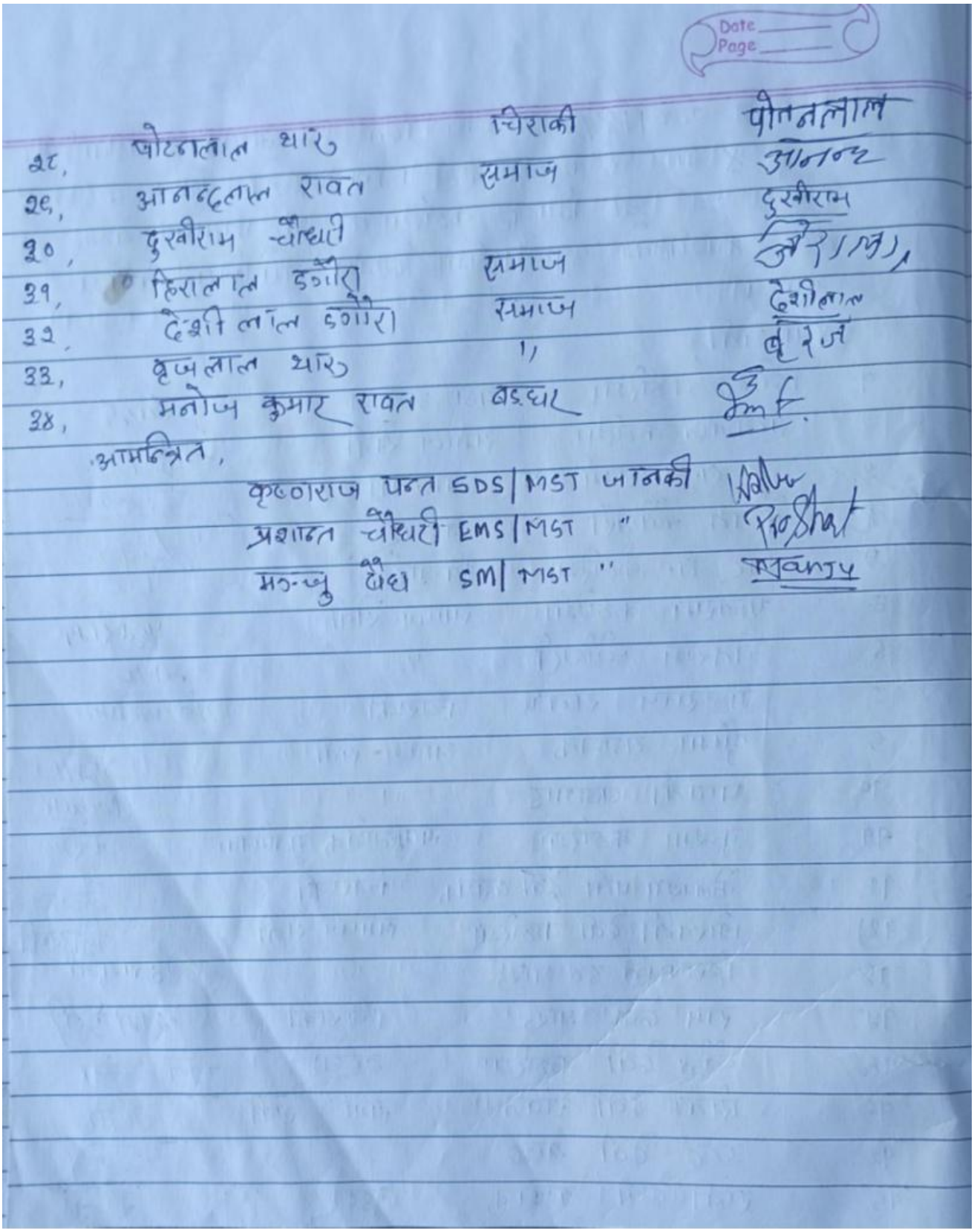
1. Public Consultation meeting



आज मिति २०८१।४।१० गतेका दिन श्री जानकी गाउँपालिका वार्ड नं: ४ मा रहेका वडाघर चिराकीहरुको बैठक वार्ड नं: ४ का अध्यक्ष श्री दिपेन्द्र कठरिया को अध्यक्षतामा बैठक बसी तपशीलको उपस्थितीमा देहाय बमोजिम निर्णय गरियो ।

उपस्थिती,

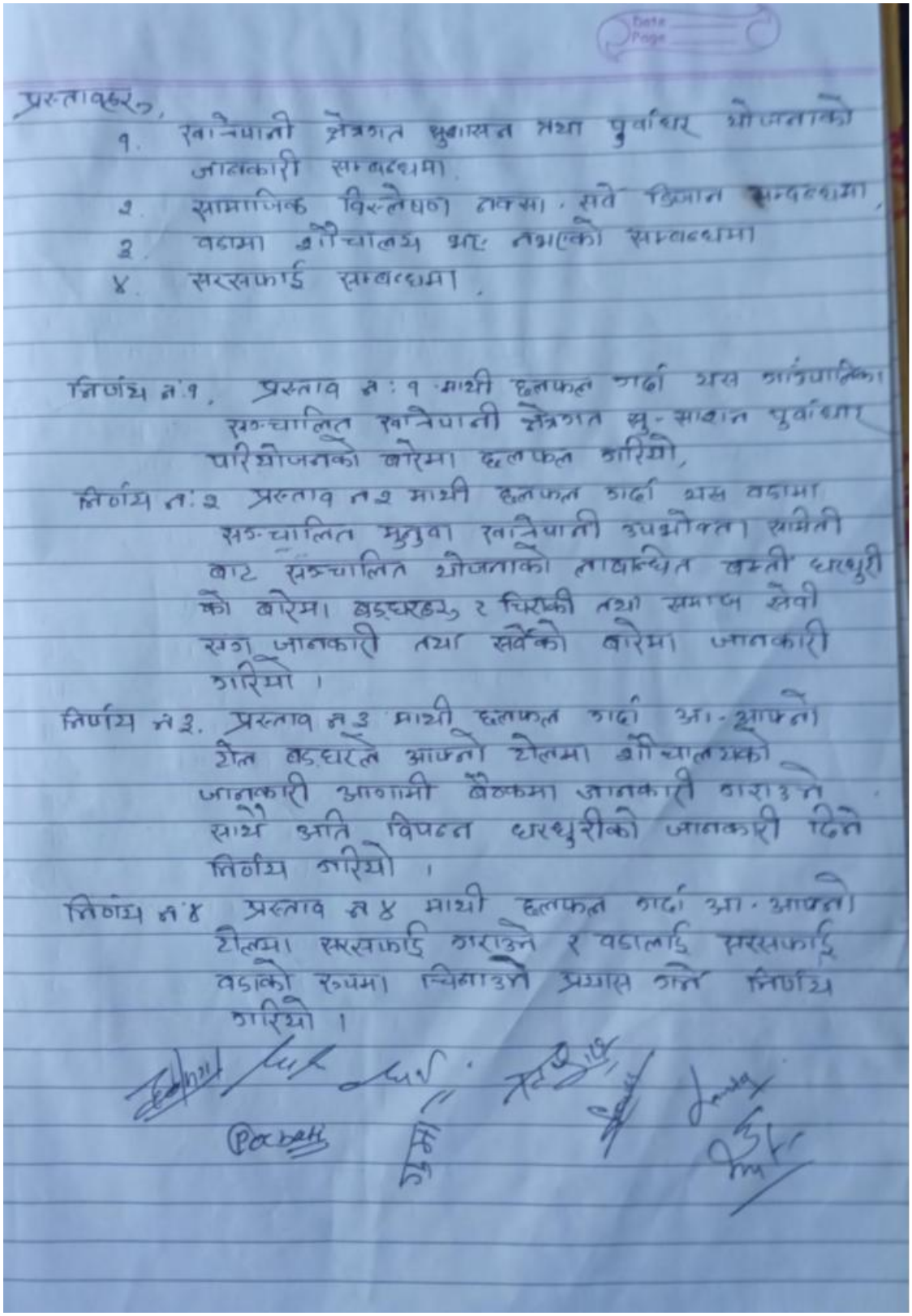
१.	दिपेन्द्र कठरिया	वडा अध्यक्ष	
२.	सन्तलाल कठरिया	समाज सेवी	
३.	देल ब. दरलामी मगर	खा. पा	
४.	लौतन चौधरी	वडाघर	
५.	वीर ब. कठरिया	सिचाई	
६.	फुलराम कठरिया	समाज सेवी	फुलराम
७.	चेतराम चौधरी	"	
८.	महाराज राना	चिराकी	महाराज राना
९.	पुर्णमा बडायक	समाज सेवी	
१०.	पार्वती बजगाई	"	
११.	कुशमा कठरिया	सामुदायिक मेलमिलाप	
१२.	कैलाशपती देवी बडायक	चिराकी	कैलाश
१३.	अरवती देवी कठरिया	समाज सेवी	
१४.	हिरामति ३० घरु	"	हिरामती
१५.	राम देवी घरु	चिराकी	रामदेवी
१६.	चैन देवी कठरिया	वडाघर	चैन
१७.	सिता देवी रावत	समाज सेवी	सीता
१८.	इन्द्र देवी साउद	"	
१९.	रानी देवी बडायक	वडाघर	रानी
२०.	जान ब. रावत	खा. पा. कोष	
२१.	अतवारी ब. घरु	समाज सेवी	
२२.	धौराही चौधरी	"	धौराही
२३.	तिर्थराज रावत	वडाघर	
२४.	पति ब. बडायक	"	
२५.	शेर ब. चौधरी	समाज	
२६.	रुम ब. के. सी	वडाघर	
२७.	बद्री प्र. रावत	समाज	



२८, जोटनलाल थारु चिराकी पोतनलाल
२९, आनन्दलाल रावत समाज आनन्द
३०, दुखीराम चौधरी दुखीराम
३१, हिरालाल डंगौरा समाज
३२, देशी लाल डंगौरा समाज देशीलाल
३३, बृजलाल थारु " बृजराज
३४, मनोज कुमार रावत बडघर

आमन्त्रित,

कृष्णराज पन्त SDS/MST जानकी
प्रशान्त चौधरी EMS/MST "
मञ्जु चौधा SM/MST "



प्रस्तावहरु,

१. खानेपानी क्षेत्रगत सुधारसंग तथा पुर्वाधार योजनाको जानकारी सम्बन्धमा
२. सामाजिक विश्लेषण तालिम संचे विषयमा सम्बन्धमा
३. वडामा वोर्चालय भए नभएको सम्बन्धमा
४. सरसफाई सम्बन्धमा

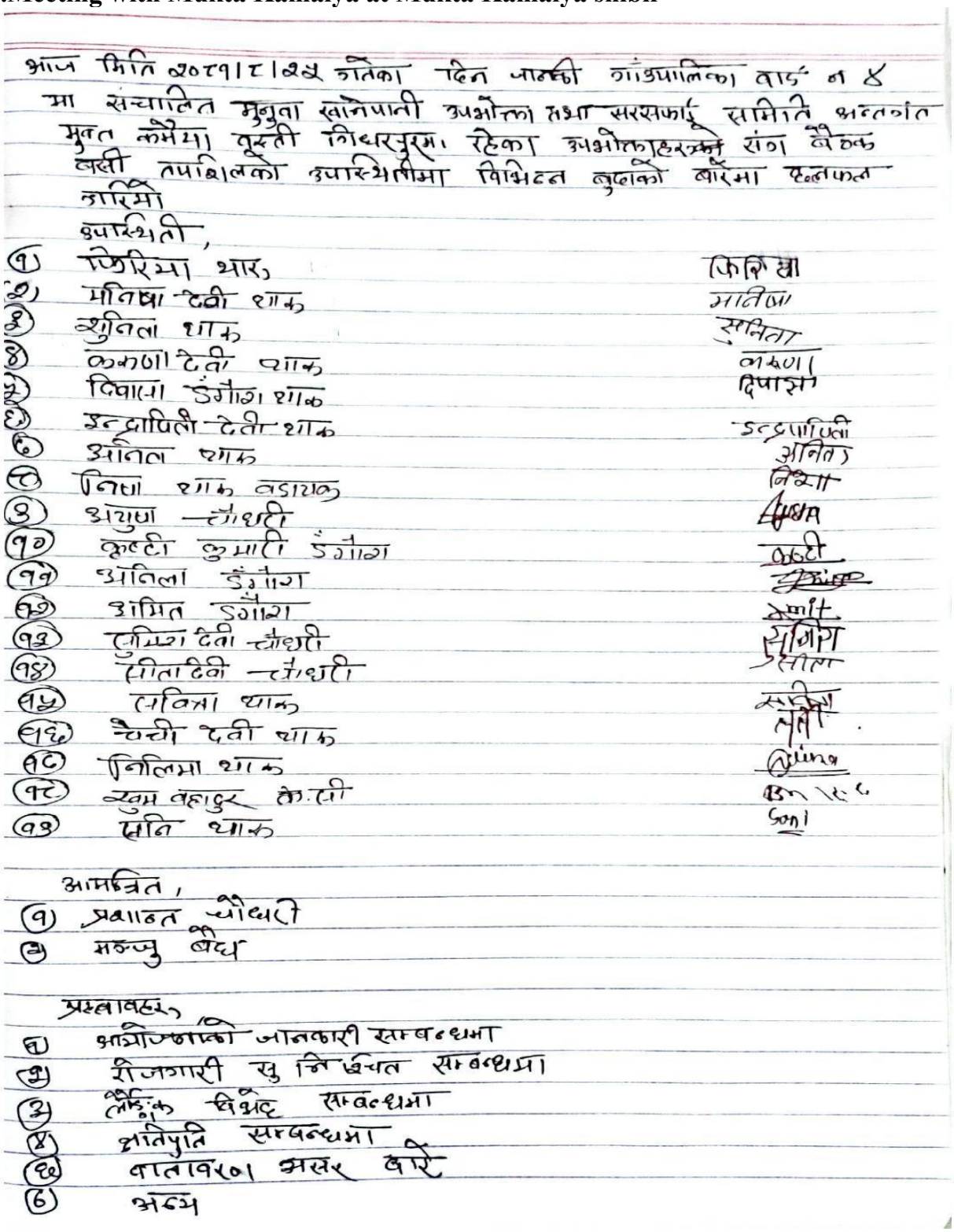
निर्णय नं १, प्रस्ताव नं: १ माथी छलफल गर्दा यस गाउंपालिका स्वःचालित खानेपानी क्षेत्रगत सु-सासन पुर्वाधार परियोजनको बारेमा छलफल गरियो,

निर्णय नं: २ प्रस्ताव नं २ माथी छलफल गर्दा यस वडामा स्वःचालित मुहुवा खानेपानी उपभोक्ता समिती बाट स्वःचालित योजनाको लाभग्रहित बस्ती घरधुरी को बारेमा छड्घरहरु र चिरकी तथा समाज सेवी संग जानकारी तथा सर्वेको बारेमा जानकारी गरियो ।

निर्णय नं३. प्रस्ताव नं ३ माथी छलफल गर्दा आ.आफ्नो टोल छड्घरले आफ्नो टोलमा वोर्चालयको जानकारी आगामी बैठकमा जानकारी गराउने साथै अति विपदन घरधुरीको जानकारी दिने निर्णय गरियो ।

निर्णय नं ४ प्रस्ताव नं ४ माथी छलफल गर्दा आ.आफ्नो टोलमा सरसफाई गराउने र वडालाई सरसफाई वडाको रुपमा चिनाउने प्रयास गर्ने निर्णय गरियो ।

2.Meeting with Mukta Kamaiya at Mukta Kamaiya shibir



आज मिति २०८१।८।२२ गतेका दिन जानकी गाउँपालिका वार्ड नं ४ मा संचालित मुक्त कमैया खानेपानी उपभोक्ता तथा सरसफाई समिति अन्तर्गत मुक्त कमैया बस्ती तिधरघुरम। रहेका उपभोक्ताहरुको संग बैठक बसी तपशिलको उपस्थितीमा विभिन्न बुदाको बारेमा छलफल गरियो।

उपस्थिती,

(१) फिरिया थारु — फिरिया
(२) मनिषा देवी थारु — मनिषा
(३) सुनिता थारु — सुनिता
(४) कमला देवी थारु — कमला
(५) दिपाना उँगोरा थारु — दिपाना
(६) इन्द्रावती देवी थारु — इन्द्रावती
(७) अनिता थारु — अनिता
(८) निधा थारु वडायक — निधा
(९) अयुधा चौधरी — Ayudha
(१०) कुट्टी कुमारी उँगोरा — कुट्टी
(११) अनिला उँगोरा — अनिला
(१२) अमित उँगोरा — Amit
(१३) सुनिता देवी चौधरी — सुनिता
(१४) सीता देवी चौधरी — सीता
(१५) सविना थारु — सविना
(१६) चेची देवी थारु — चेची
(१७) निलिमा थारु — Nilima
(१८) खुम बहादुर डंगौरा — [illegible]
(१९) सति थारु — Sati

आमन्त्रित,

(१) प्रबाहत चौधरी
(२) मन्जु बैद्य

प्रस्तावहरु,

(१) आयोजनाको जानकारी सम्बन्धमा
(२) रोजगारी सुनिश्चित सम्बन्धमा।
(३) लैङ्गिक विभेद सम्बन्धमा
(४) क्षतिपुर्ति सम्बन्धमा
(५) वातावरण असर बारे
(६) अन्य

(१) प्रस्ताव नं १ मार्फत छलफल गर्दा खानेपानी कार्यालय सु-शासन तथा पुर्वाधार सहयोग आयोजना, अन्तर्गत संचालित जानुकी खानेपानी आयोजना जानकी ४ मा सम्बन्धित सबै सरोकार - वालाहरु, जनकार हरुको र उक्त आयोजना यथाशीघ्र निर्माण र निर्माण गुणस्तरीय हुन यो सम्बन्धमा विस्तृत छलफल गरियो, साथै खा. पा.को गठन गर्दा अपनाइने विधि र प्रक्रिया बारेमा समेत जानकारी दिने कार्य गरियो ।

(२) खानेपानी योजना निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय बासिन्दालाइनै दिनु पर्ने सम्बन्धमा विस्तृत छलफल गरियो

(३) यस जानकी गा. पा. वार्ड नं ४ क्षेत्रमा धेरैलु हिंसा भयो लैङ्गिक विभेद सम्बन्धी केसै समस्या नदेखिएपनि बाहिरी कामदार र स्थानिय समुदाय बिच हुनसक्ने झैझगडा वा अन्य कुनै गतिविधिको सम्बन्धमा पालना गर्नुपर्ने आचार संहिताको बारेमा जानकारी दिई विस्तृत छलफल गरियो ।

(४) खानेपानी निर्माणको क्रममा हुनसक्ने ध्वनी वायु, प्रदुषण जस्ता समस्याहरु, र यसको न्यूनिकरण गर्ने सम्बन्धमा छलफल गरियो

(५) खानेपानी योजनाको निर्माण गर्दा यस योजनाको पाईप लाईन गाड्दा सकभर कुनै सार्वजनिक स्थल

(8) प्रस्ताव नं ६ माथि छलफल गर्दा यस जानकी गा.पा. वडा ६ निधरपुर बस्तीमा जम्मा ३२ धारा्रुरी रहेको जस मध्य ६ धारा्रुरीले १,१ कठ्ठा जग्गा पारेका छन् भने ३६ धारा्रुरीको जग्गा नरहेको तर सम्पुर्ण धार। जडान गर्ने कार्य सहमतिमतमा गर्नुपर्ने साथै यस बस्तीमा बाहीको उच्च जोखीम रहेको। हुदा उच्च जोखिम सार्वजनीकको अवस्था पनि सार्वजनीक धार। राख्ने माग गर्ने सर्वसम्मत निर्णय गरियो ।

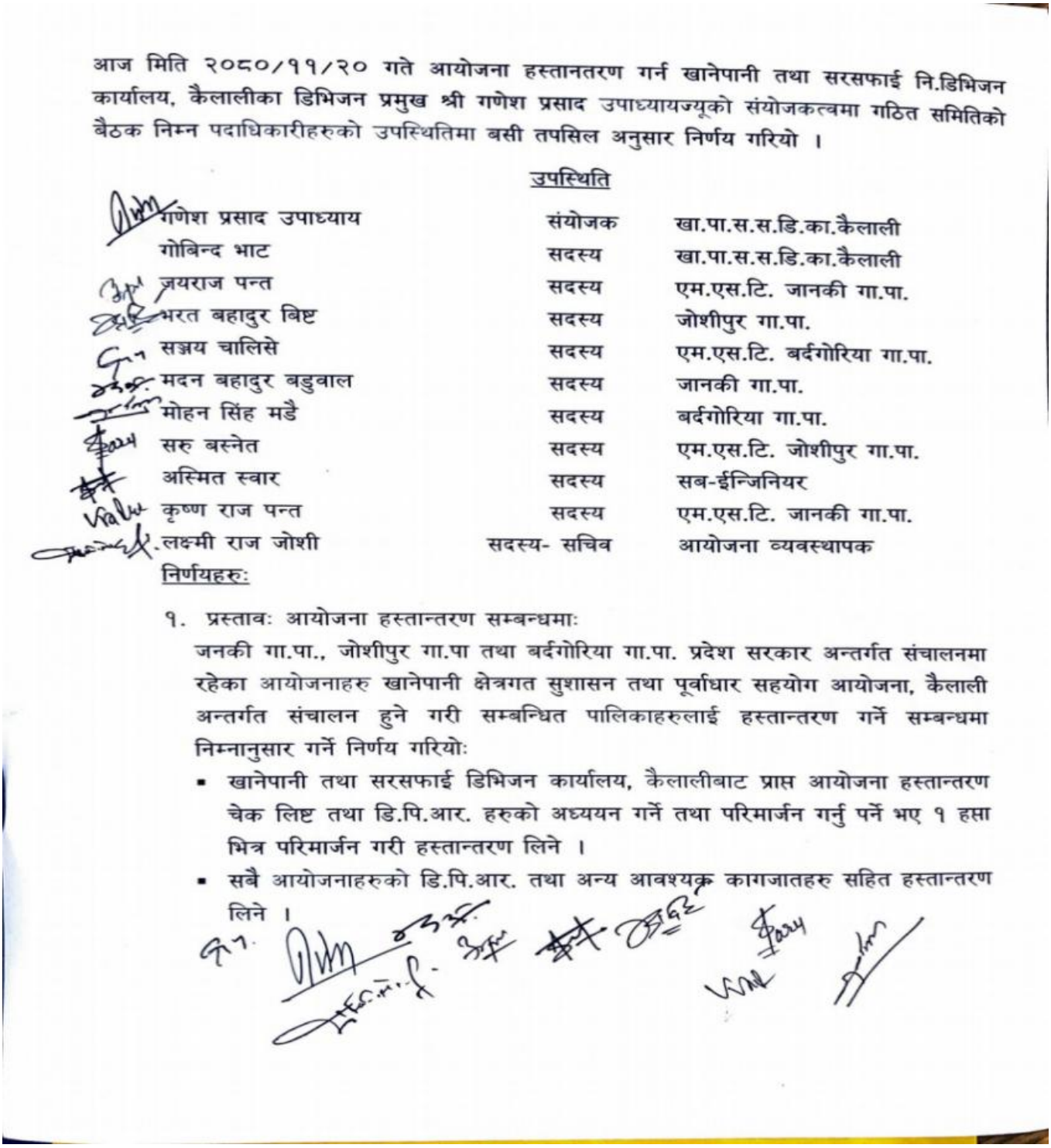
सुजीता

मानेला

लक्ष्मण

सुनिता

3. Meeting regarding the handover of Munuwa WSS to Janaki Rural Municipality at DWSSM Office, Dhangadhi; Kailali



आज मिति २०८०/११/२० गते आयोजना हस्तानतरण गर्न खानेपानी तथा सरसफाई नि.डिभिजन कार्यालय, कैलालीका डिभिजन प्रमुख श्री गणेश प्रसाद उपाध्यायज्यूको संयोजकत्वमा गठित समितिको बैठक निम्न पदाधिकारीहरुको उपस्थितिमा बसी तपसिल अनुसार निर्णय गरियो ।

उपस्थिति

गणेश प्रसाद उपाध्याय	संयोजक	खा.पा.स.स.डि.का.कैलाली
गोबिन्द भाट	सदस्य	खा.पा.स.स.डि.का.कैलाली
जयराज पन्त	सदस्य	एम.एस.टि. जानकी गा.पा.
भरत बहादुर बिष्ट	सदस्य	जोशीपुर गा.पा.
सञ्जय चालिसे	सदस्य	एम.एस.टि. बर्दगोरिया गा.पा.
मदन बहादुर बडुवाल	सदस्य	जानकी गा.पा.
मोहन सिंह मडै	सदस्य	बर्दगोरिया गा.पा.
सरु बस्नेत	सदस्य	एम.एस.टि. जोशीपुर गा.पा.
अस्मित स्वार	सदस्य	सब-ईन्जिनियर
कृष्ण राज पन्त	सदस्य	एम.एस.टि. जानकी गा.पा.
लक्ष्मी राज जोशी	सदस्य- सचिव	आयोजना व्यवस्थापक

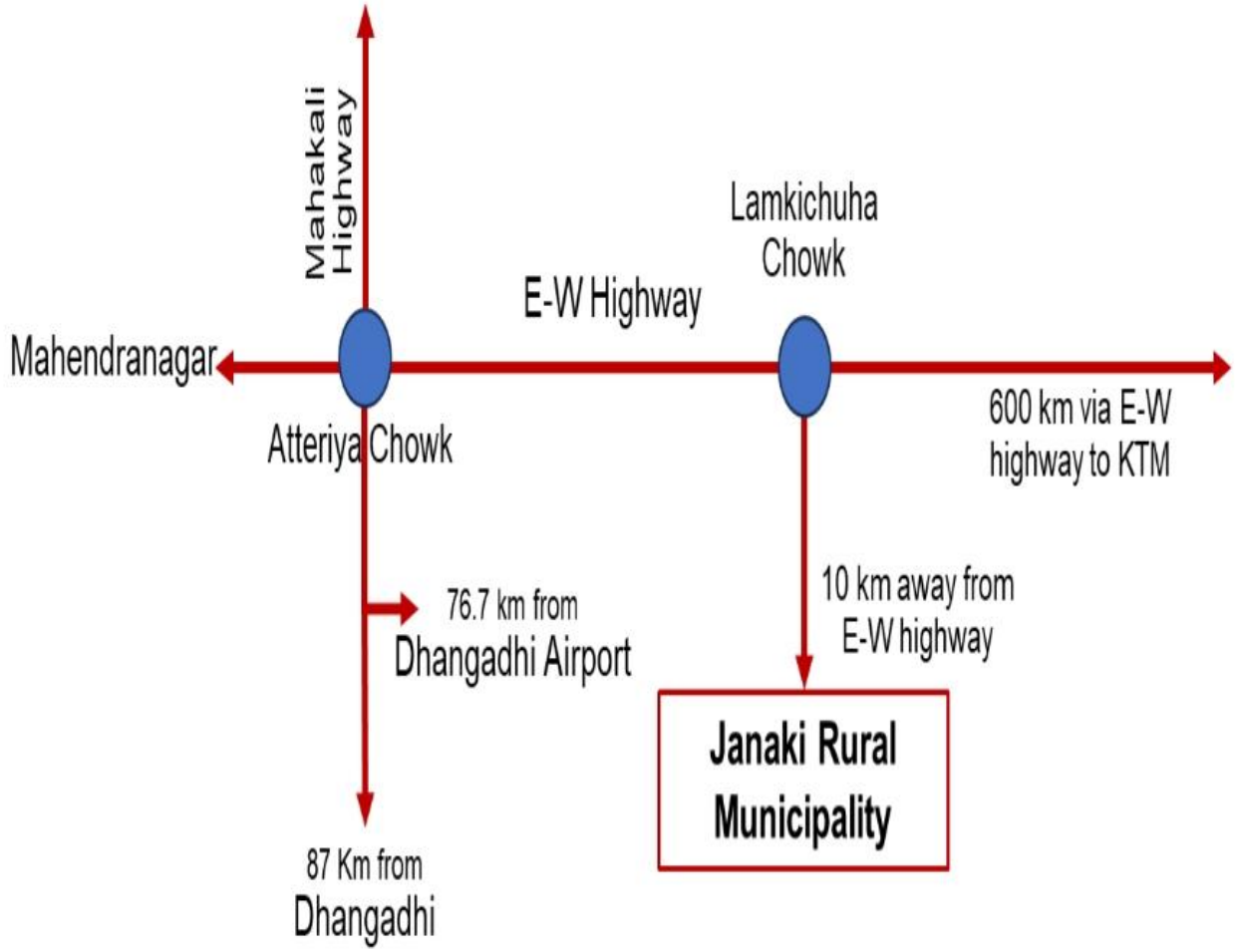
निर्णयहरु:

१. प्रस्तावः आयोजना हस्तान्तरण सम्बन्धमाः

जनकी गा.पा., जोशीपुर गा.पा तथा बर्दगोरिया गा.पा. प्रदेश सरकार अन्तर्गत संचालनमा रहेका आयोजनाहरु खानेपानी क्षेत्रगत सुशासन तथा पूर्वाधार सहयोग आयोजना, कैलाली अन्तर्गत संचालन हुने गरी सम्बन्धित पालिकाहरुलाई हस्तान्तरण गर्ने सम्बन्धमा निम्नानुसार गर्ने निर्णय गरियोः

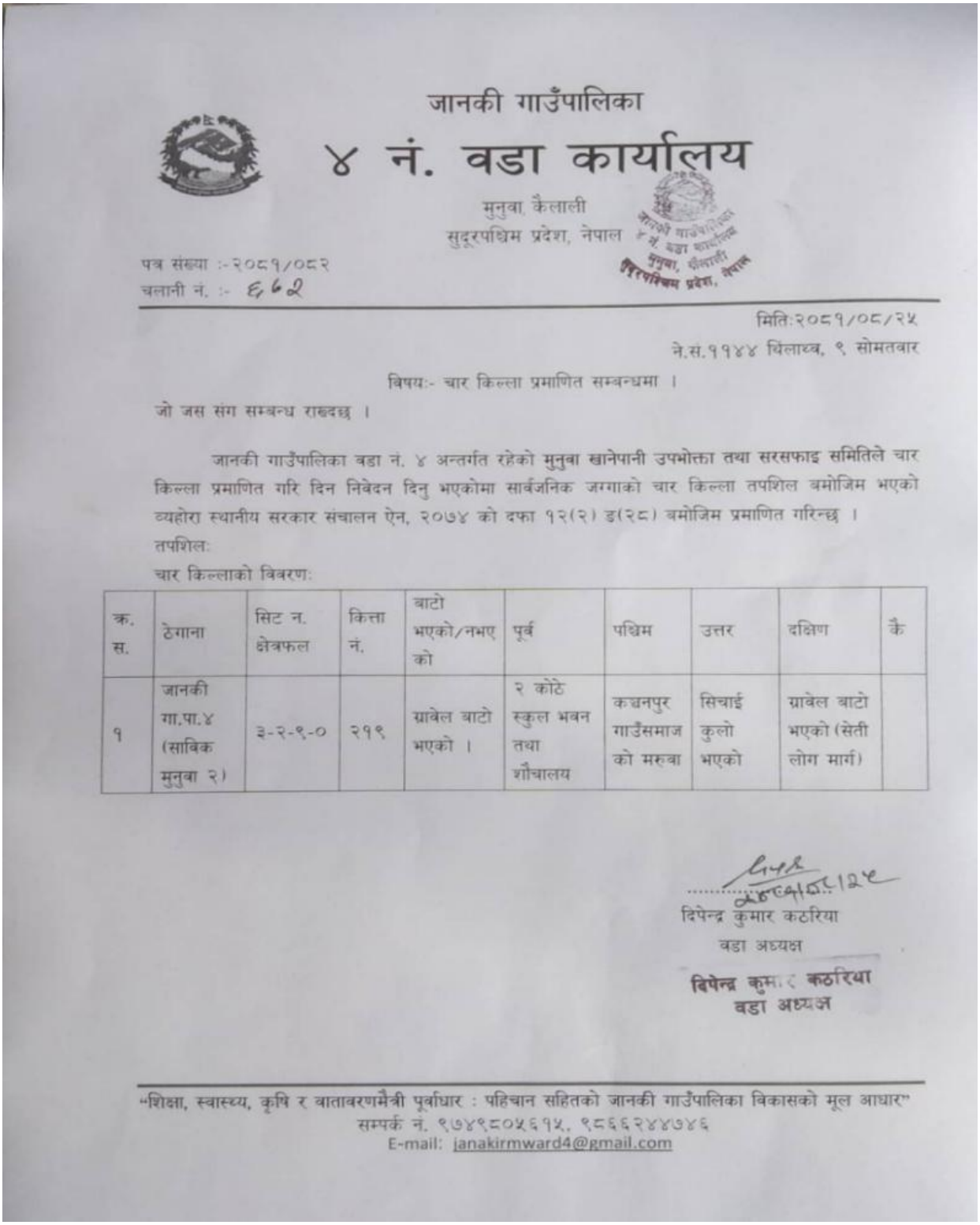
- खानेपानी तथा सरसफाई डिभिजन कार्यालय, कैलालीबाट प्राप्त आयोजना हस्तान्तरण चेक लिष्ट तथा डि.पि.आर. हरुको अध्ययन गर्ने तथा परिमार्जन गर्नु पर्ने भए १ हप्ता भित्र परिमार्जन गरी हस्तान्तरण लिने ।
- सबै आयोजनाहरुको डि.पि.आर. तथा अन्य आवश्यक कागजातहरु सहित हस्तान्तरण लिने ।

Annex III:Location map of Munuwa WSS sub-project



Annex IV: Document related to proposed Site for New OHT

A. Four Forts Proved by Ward. 04 of Janaki Rural Municipality Office



जानकी गाउँपालिका

४ नं. वडा कार्यालय

मुनुवा, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

पत्र संख्या :-२०८१/०८२
चलानी नं. :- ६६२

मिति:२०८१/०८/२५
ने.स.११४४ श्रिलाथ्व, ९ सोमतवार

विषयः- चार किल्ला प्रमाणित सम्बन्धमा ।

जो जस संग सम्बन्ध राख्दछ ।

जानकी गाउँपालिका वडा नं. ४ अन्तर्गत रहेको मुनुवा खानेपानी उपभोक्ता तथा सरसफाइ समितिले चार किल्ला प्रमाणित गरि दिन निवेदन दिनु भएकोमा सार्वजनिक जग्गाको चार किल्ला तपशिल बमोजिम भएको व्यहोरा स्थानीय सरकार संचालन ऐन, २०७४ को दफा १२(२) ड(२८) बमोजिम प्रमाणित गरिन्छ ।

तपशिल:

चार किल्लाको विवरण:

क्र. स.	ठेगाना	सिट न. क्षेत्रफल	कित्ता नं.	बाटो भएको/नभए को	पूर्व	पश्चिम	उत्तर	दक्षिण	कै
१	जानकी गा.पा.४ (साबिक मुनुवा २)	३-२-९-०	२१९	ग्रावेल बाटो भएको ।	२ कोठे स्कुल भवन तथा शौचालय	कञ्चनपुर गाउँसमाज को मरुवा	सिचाई कुलो भएको	ग्रावेल बाटो भएको (सेती लोग मार्ग)	

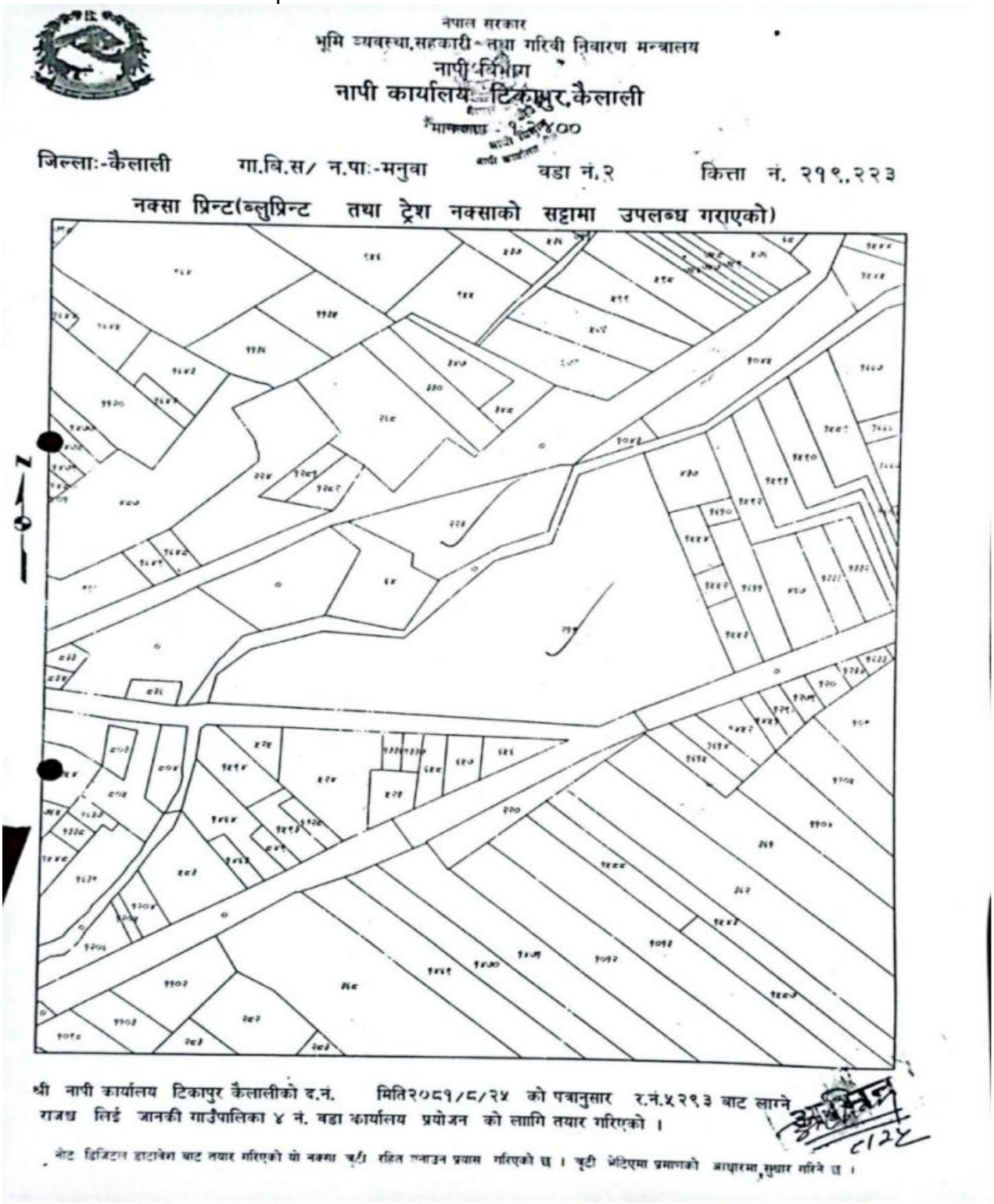
२०८१।८।१२५

दिपेन्द्र कुमार कठरिया
वडा अध्यक्ष

दिपेन्द्र कुमार कठरिया
वडा अध्यक्ष

"शिक्षा, स्वास्थ्य, कृषि र वातावरणमैत्री पूर्वाधार : पहिचान सहितको जानकी गाउँपालिका विकासको मूल आधार"
सम्पर्क नं. ९७४९८०५६१५, ९८६६२४४७४६
E-mail: janakirmward4@gmail.com

B. Sketch of Land of Proposed Site



C: Lal Purja of the Land

भूमि व्यवस्था,सहकारी तथा गरिबी निवारण मन्त्रालय
नापी विभाग
नापी कार्यालय टीकापुर,कैलाली

जिल्ला :- कैलाली
गा.वि.स. :- मनुवा
वडा नं. :- २

मिति :- २०८१/०८/२५
ने.स.११४५

आ.ब. :- ०८१/०८२

च.नं. 6 2८

श्री जानकी गा.पा. ४ नं. वडा कार्यालय
मनुवा,कैलाली

उपरोक्त विषयमा तहां कार्यालयको पत्र संख्या. २०८१/०८२ को च.नं. ६७१ मिति २०८१/०८/२५ को प्राप्त पत्रानुसार फिल्ड बुक उतार गरी पठाईएको व्यहोरा अनुरोध छ ।

कि.नं. २९ र २२३ को फिल्ड बुक उतार

D: Letter of approval from School for the land

IEMIS : 710260003

श्री गायत्री आधारभुत विद्यालय

जानकी गा. पा.-४, कैलाली

स्थापनाः २०४७

पत्र संख्याः २८९१०८२

चलानी नं.: २७

मितिः २८९१०८/२४

जो जससँग सम्बन्ध राख्दछ ।

विषय :- जानकारी संम्बन्धमा ।

उपर्यक्त विषय सम्बन्धमा यस विद्यालयसँग मुनुवा खानेपानी उपभोक्ता तथा सरसफाइ समितिले जग्गा माग गरेकोले मिति २०८१/०८/२३ गते बसेको विद्यालय व्यवस्थापन समितिको बैठकले मुनुवा खानेपानी उपभोक्ता तथा सरसफाइ समितिलाई जग्गा दिने भनि निर्णय गरेको प्रतिलिपि समेत यसै पत्रसँग संलगन गरी पठाएको व्यहोरा जानकारी गराउदछु ।

बोधार्थ

१. जानकी गाउँपालिकाको -४, नं. वडा कार्यलय, मुनुवा, कैलाली
२. मुनुवा खानेपानी उपभोक्ता तथा सरसफाइ समिति जानकी -४, कञ्चनपुरल, कैलाली
३. कञ्चनपुर गाउँ समाज जानकी ४, कञ्चनपुर, कैलाली

गगन थापा मगर

अध्यक्ष

वि.व्य.स

E: Letter of Ward 04 for the further proceed of construction

जानकी गाउँपालिका

४ नं. वडा कार्यालय

मुनुवा, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

पत्र संख्या :-२०८१/०८२
चलानी नं. :- ६७

मिति २०८१/०८/२५ गते
ने.सं.११४५ थिलाथ्व,९ बुधवार

विषयः- सिफारिस सम्बन्धमा ।

श्री जानकी गाउँपालिका
गाउँ कार्यापालिकाको कार्यालय
दुर्गौली, कैलाली

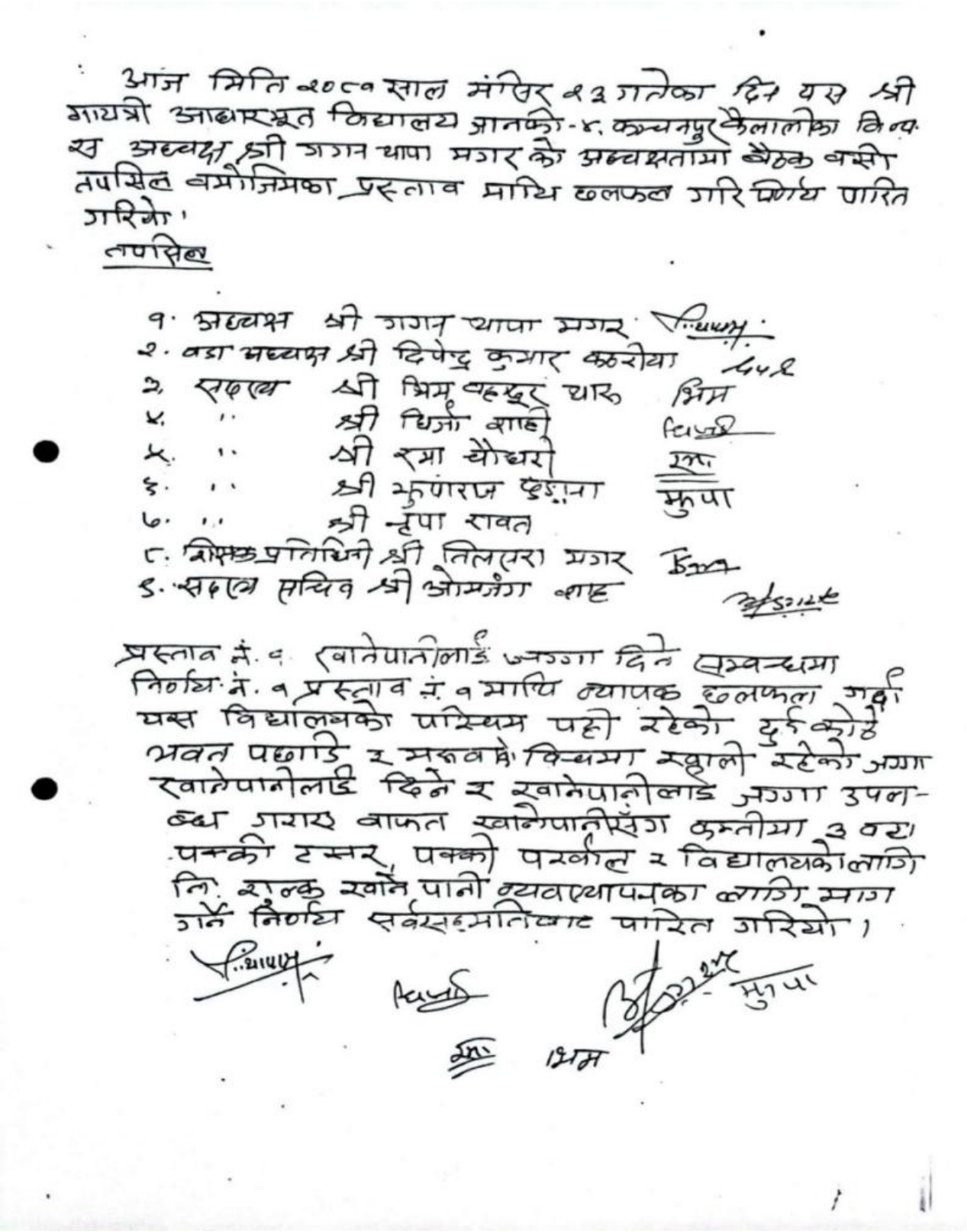
उपरोक्त सम्बन्धमा यस जानकी गाउँपालिका ४ नं. वडा अन्तर्गत श्री गायत्री आधारभुत विद्यालय कन्चनपुर, कैलालीको मिति २०८१/०८/२४ गते पत्र संख्या २०८१/०८२ चलानी नं. २७ को प्राप्त पत्र अनुसार मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति जानकी ४ कन्चनपुर कैलाली लाई ओभरहेड टंकी, बोरिङ्ग, चौकीदार क्वाटर, पम्पहाउस, फिल्टर जडान, कार्यालय भवन र पर्की घेरबारको लागि जग्गा माँग भएको हुदा उक्त संरचना निर्माणको लागि साविक मुनुवा गा.वि.स. वडा नं. २ कित्ता नं. २१९ सार्वजनिक स्थल विद्यालयले भोग चलन गर्दै आएको जग्गा मध्य पश्चिम पत्ती ०-३-० कट्ठा जग्गा कन्चनपुर गाउँ समाज जानकी ४ कन्चनपुर, कैलालीको मरुवालाई छोडी सो भन्दा पूर्व विद्यालयको दुई कोठे भवन र शौचालयको पश्चिम खाली जग्गामा मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति जानकी ४ कन्चनपुर कैलालीलाई दिने भनि श्री गायत्री आधारभुत विद्यालयको विद्यालय व्यवास्थापन समितिको मिति २०८१/०८/२३ गतेको निर्णय अनुसार सो व्यहोरा सिफारिस साथ अनुरोध गरिन्छ ।

२०८१०५२८

दिपेन्द्र कुमार कठरिया
वडा अध्यक्ष
दिपेन्द्र कुमार कठरिया
वडा अध्यक्ष

"शिक्षा, स्वास्थ्य, कृषि र वातावरणमैत्री पूर्वाधार : पहिचान सहितको जानकी गाउँपालिका विकासको मूल आधार"
सम्पर्क नं.९७४९८०५६१५,९८६६२४४७४६
E-mail: janakirmward4@gmail.com

F: Minute of Munuwa WSUC and School about the land



आज मिति २०८७ साल मंसिर २३ गतेका दिन यस श्री गायत्री आधारभूत विद्यालय जानकी-४, कञ्चनपुर कैलालीका विद्यालय अध्यक्ष श्री गगन थापा मगर को अध्यक्षतामा बैठक बसी तपसिल बमोजिमका प्रस्ताव माथि छलफल गरि निर्णय पारित गरिगो।

तपसिल

१. अध्यक्ष श्री गगन थापा मगर
२. बडा अध्यक्ष श्री दिपेन्द्र कुमार कटरीया
३. सदस्य श्री भिम बहादुर चारु भिम
४. " श्री धिर्जा शाही
५. " श्री रमा चौधरी रमा
६. " श्री कृष्णराज पुडासैनी कृपा
७. " श्री रूपा रावत
८. शिक्षक प्रतिनिधि श्री तिलसरा मगर
९. सदस्य सचिव श्री ओमजंग शाह

प्रस्ताव नं. १ खानेपानीलाई जग्गा दिने सम्बन्धमा निर्णय नं. १ प्रस्ताव नं १ माथि व्यापक छलफल गर्दा यस विद्यालयको पश्चिम पट्टी रहेको दुई कोठे भवन पछाडि र सरुवाले विद्यालय खुलो रहेको जग्गा खानेपानीलाई दिने र खानेपानीलाई जग्गा उपलब्ध गराए वापत खानेपानीसँग कम्तीमा ३ वटा पक्की टङ्कर, पक्को पर्खाल र विद्यालयको लागि छुट्टै नि. शुल्क खाने पानी व्यवस्थापनका लागि माग गर्ने निर्णय सर्वसम्मतिबाट पारित गरियो।

रमा भिम

Annex V: Document related to existing OHT

A: Water Quality Test Report

Government of Nepal
Ministry of Water Supply
Department of Water Supply and Sewerage Management
Federal Water Supply and Sewerage Management Project
Water Quality Testing Laboratory
Dhangadhi, Kailali

Water Quality Test Report

Sample Id:	**318/080/081**	**Sampled By**	**Sender**
Sender/Client:	**AARVEE-FBC-PARAGON, JV (Dhani Ram Chaudhary)**	**Sampling Date**	**2081/02/11**
Source:	**Underground**	**Reported Date**	**2081/03/09**
Sampling Point:	**Tap**		
Address:	**Janaki-04, Munuwa, Kailali**	**Sample Condition:**	**OK**

S.N	Parameters	Unit	Observed Values	NDWQS, 2079 BS	Analyzed Methods
1.	Taste &Odor	-	Non-Objectionable	Non-Objectionable	Sense Observation
2.	pH	-	7.5 @25°C	6.5 - 8.5	4500-H+, APHA 22nd Edition
3.	Turbidity	NTU	<0.01	5	2130 B, APHA 22nd Edition
4.	Total Dissolved Solid	mg/l	353	1000	TDS Meter
5.	Electrical Conductivity	µS/cm	529 @32°C	1500	2510 B, APHA 22nd Edition
6.	Calcium	mg/l	80	200	3500 Ca- B, APHA 22nd Edition
7.	Total Hardness as $CaCO_3$	mg/l	228	500	2340 C, APHA 22nd Edition
8.	Total Iron	mg/l	<0.01	0.30 (3)	3111 B, APHA 22nd Edition
9.	Arsenic	mg/l	<0.01	0.05	Arsenic Test Kit
10.	Manganese	mg/l	<0.01	0.20	3111 B, APHA 22nd Edition
11.	Ammonia	mg/l	0.13	1.50	Ammonia Test Kit
12.	Nitrate	mg/l	0	50	4500-NO_3^-B, APHA 22nd Edition

Analyzed by
केमिष्ट

Notes
1. *This report is applicable to the sample received in the laboratory for analysis.*
2. *This test report shall not be reproduced without the written approval of the laboratory.*

B: Four Forts of the existing OHT

जानकी गाउँपालिका

४ नं. वडा कार्यालय

मुनुवा, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

पत्र संख्या :-२०८१/०८२
चलानी नं. :- ५४९

मितिः२०८१/१०/३०
ने.सं.११४५ सिल्लाथ्व, १२ बुधवार

विषयः- चार किल्ला प्रमाणित सम्बन्धमा ।

जो जस संग सम्बन्ध राख्दछ ।

जिल्ला जानकी गाउँपालिका ४ नं. वडा अन्तर्गत मुनुवा खाने पानी उपभोक्ता तथा सरसफाई समिति जानकी-४ कैलालीको सचिव रामेश्वर प्रसाद रेग्मी ले चार किल्ला प्रमाणित गरि दिन निवेदन दिनु भएकोमा मुनुवा खाने पानी उपभोक्ता तथा सरसफाई समिति जानकी-४ कैलाली प्रतिऐलानी जग्गा रहेको जग्गाको चार किल्ला तपशिल बमोजिम भएको व्यहोरा स्थानीय सरकार संचालन ऐन, २०७४ को दफा १२(२) ड(२८) बमोजिम प्रमाणित गरिन्छ ।

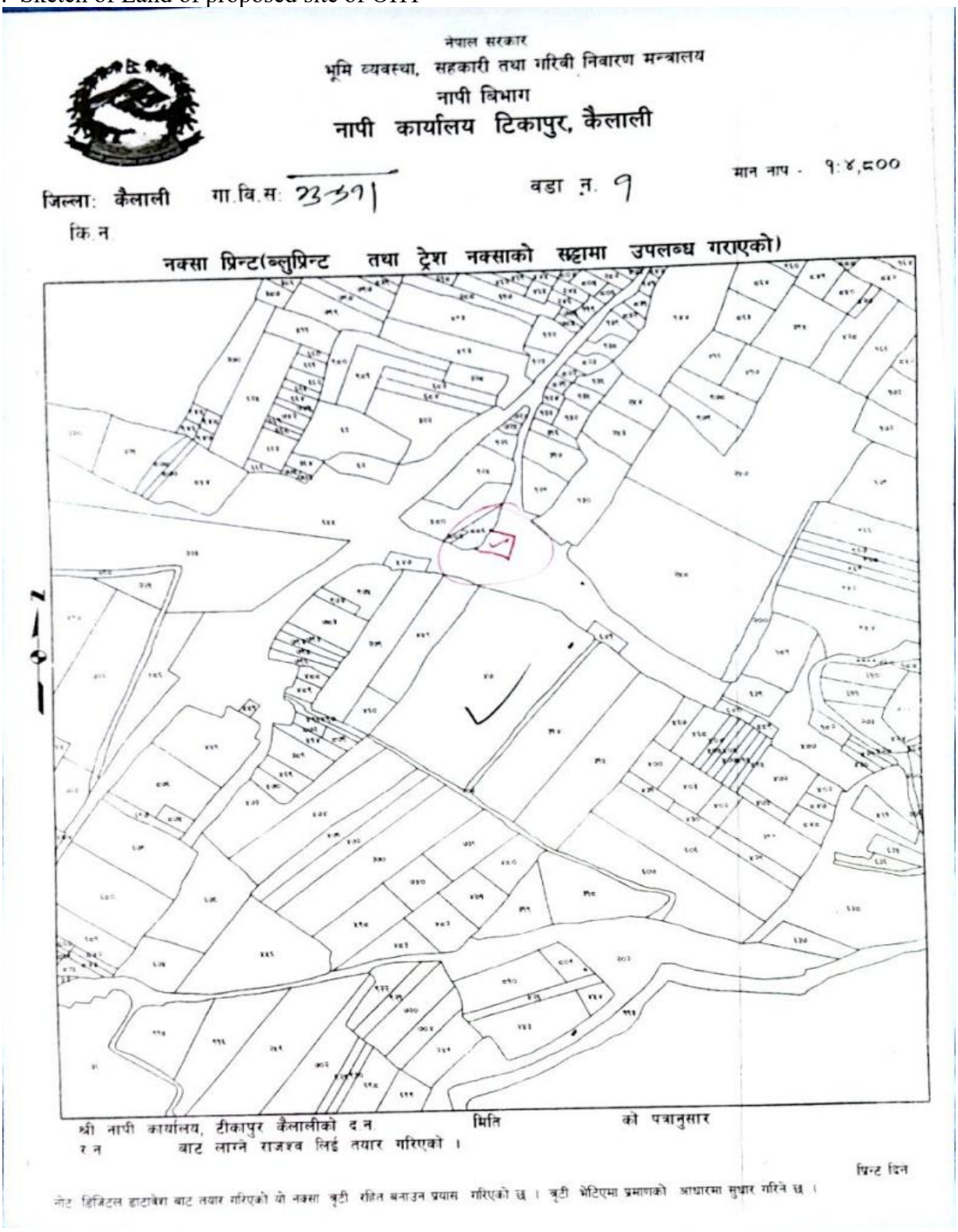
तपशिलः

चार किल्लाको विवरणः

क.स.	ठेगाना	सिट न. क्षेत्रफल	किल्ला नं.	बाटो भएको/नभएको	पूर्व	पश्चिम	उत्तर	दक्षिण	कै
१	जानकी गाउँपालिका ४ साविक मुनुवा-१	०-६-०-० अन्दाजी	प्रतिऐलानी	ग्राभेल बाटो भएको	ग्राभेल बाटो भएको	कि.नं. ८८६ को जग्गा भएको	ग्राभेल बाटो भएको	ग्राभेल बाटो भएको	

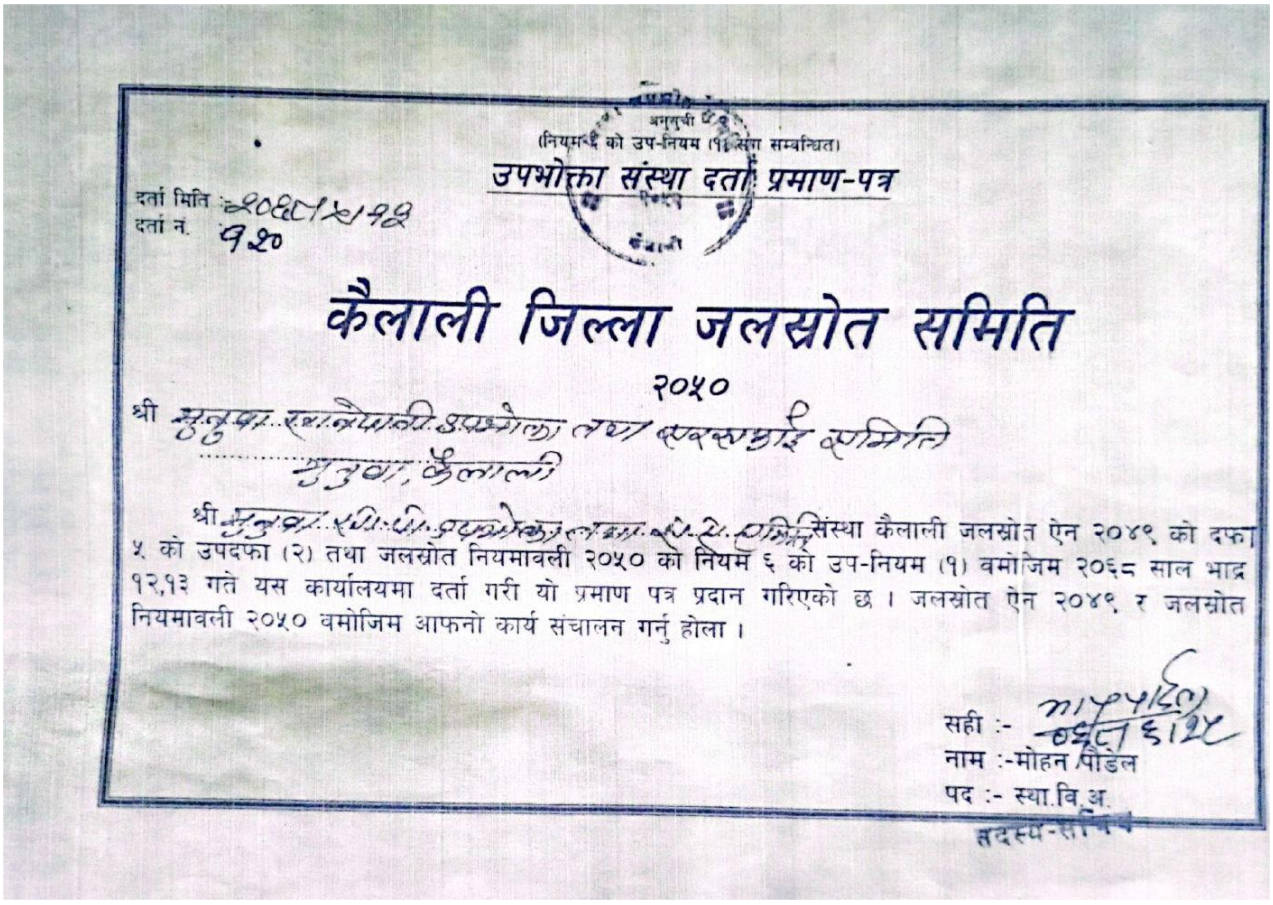
२०८१.१०.३०
दिपेन्द्र कुमार कठरिया
वडा अध्यक्ष
दिपेन्द्र कुमार कठरिया
वडा अध्यक्ष

C. Sketch of Land of proposed site of OHT



D.

D: Certificate of Registration of Munuwa WSUC



अनुसूची ५ (क)
(नियमावली को उप-नियम (१) संग सम्बन्धित)

उपभोक्ता संस्था दर्ता प्रमाण-पत्र

दर्ता मिति :- २०६८/१०/१२
दर्ता नं. १२०

कैलाली जिल्ला जलस्रोत समिति

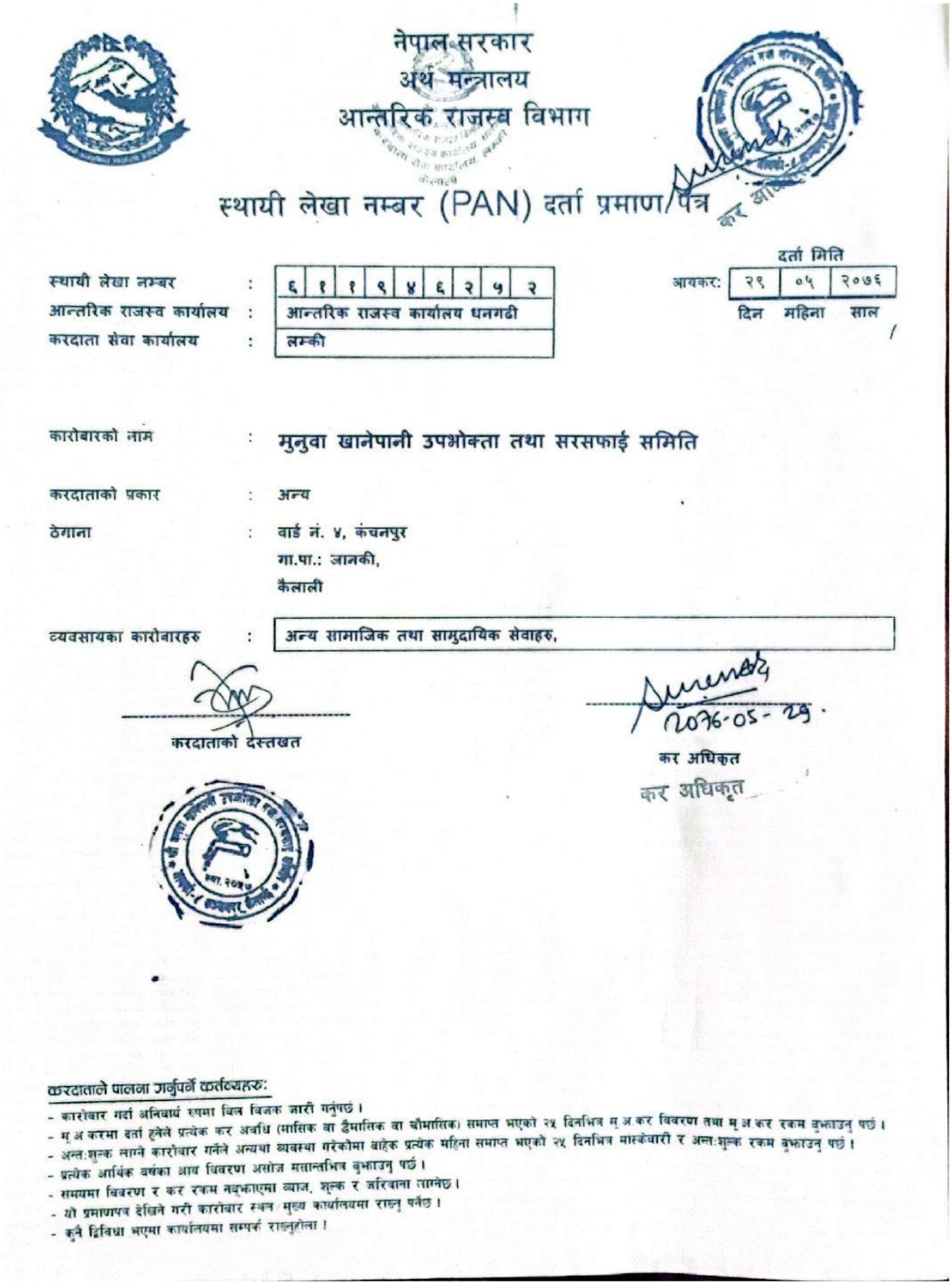
२०५०

श्री मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति
मुनुवा, कैलाली

श्री मुनुवा खा.पा.उ.स.तथा स.स. समिति संस्था कैलाली जलस्रोत ऐन २०४९ को दफा ५ को उपदफा (२) तथा जलस्रोत नियमावली २०५० को नियम ६ को उप-नियम (१) बमोजिम २०६८ साल भाद्र १२,१३ गते यस कार्यालयमा दर्ता गरी यो प्रमाण पत्र प्रदान गरिएको छ । जलस्रोत ऐन २०४९ र जलस्रोत नियमावली २०५० बमोजिम आफनो कार्य संचालन गर्नु होला ।

सही :-
नाम :-मोहन पौडेल
पद :- स्था.वि.अ.

E: PAN Number of the Munuwa WSUC



नेपाल सरकार
अर्थ मन्त्रालय
आन्तरिक राजस्व विभाग

स्थायी लेखा नम्बर (PAN) दर्ता प्रमाण/पत्र

दर्ता मिति

स्थायी लेखा नम्बर	:	६	१	१	९	४	६	२	५	२
आन्तरिक राजस्व कार्यालय	:	आन्तरिक राजस्व कार्यालय धनगढी								
करदाता सेवा कार्यालय	:	लम्की								

आयकर: २९ (दिन) ०५ (महिना) २०७६ (साल)

कारोबारको नाम : मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति

करदाताको प्रकार : अन्य

ठेगाना : वार्ड नं. ४, कंचनपुर
गा.पा.: जानकी,
कैलाली

व्यवसायका कारोबारहरु : अन्य सामाजिक तथा सामुदायिक सेवाहरु,

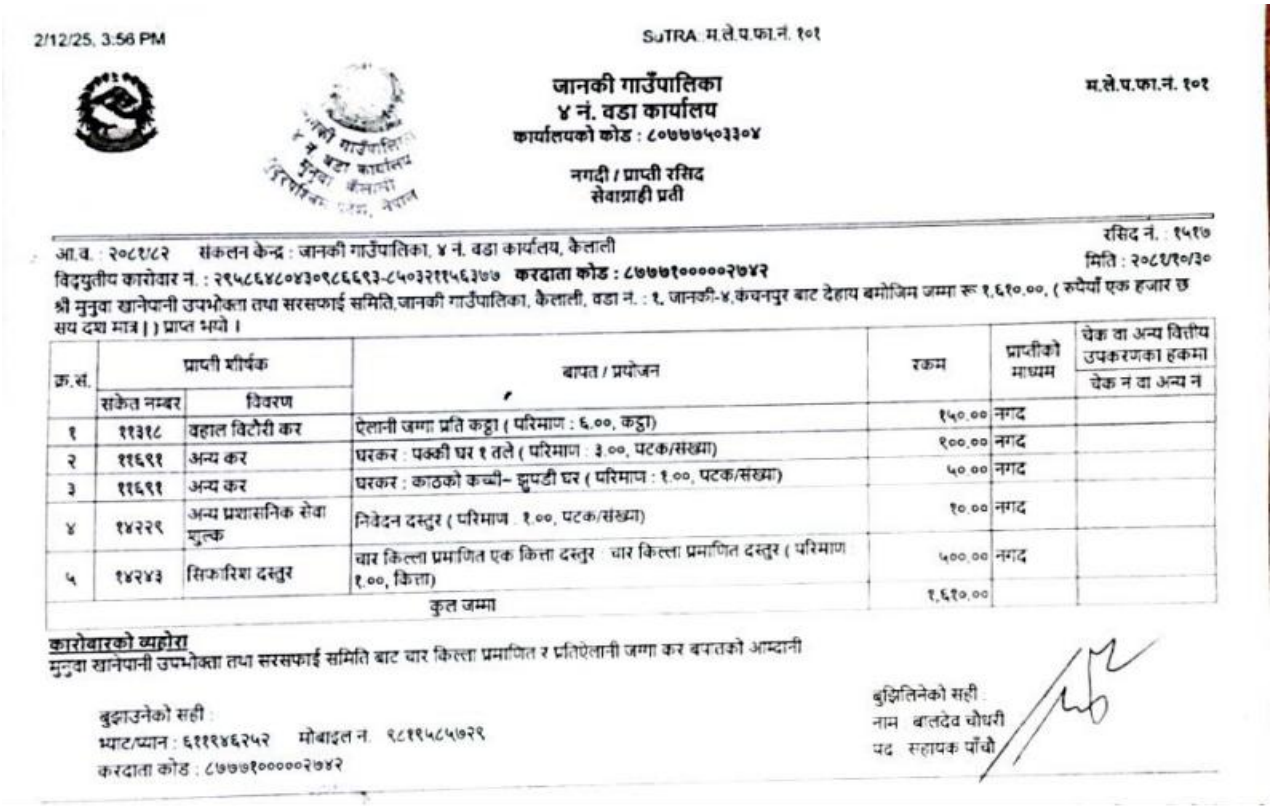
करदाताको दस्तखत

2076-05-29.
कर अधिकृत
कर अधिकृत

करदाताले पालना गर्नुपर्ने कर्तव्यहरु:

- कारोबार गर्दा अनिवार्य रुपमा बिल बिजक जारी गर्नुपर्छ ।
- मू.अ.करमा दर्ता हुनेले प्रत्येक कर अवधि (मासिक वा त्रैमासिक वा चौमासिक) समाप्त भएको २५ दिनभित्र मू.अ.कर विवरण तथा मू.अ.कर रकम बुझाउनु पर्छ ।
- अन्त:शुल्क लाग्ने कारोबार गर्नेले अन्यथा व्यवस्था गरेकोमा बाहेक प्रत्येक महिना समाप्त भएको २५ दिनभित्र मासिकेवारी र अन्त:शुल्क रकम बुझाउनु पर्छ ।
- प्रत्येक आर्थिक वर्षका आय विवरण असोज मसान्तभित्र बुझाउनु पर्छ ।
- समयमा विवरण र कर रकम नबुझाएमा ब्याज, शुल्क र जरिवाना लाग्नेछ ।
- यो प्रमाणपत्र देखिने गरी कारोबार स्थल मुख्य कार्यालयमा राख्नु पर्नेछ ।
- कुनै द्विविधा भएमा कार्यालयमा सम्पर्क राख्नुहोला ।

F: Tax Payed by the Munuwa WSUC



2/12/25, 3:56 PM SuTRA: म.ले.प.फा.नं. १०१

जानकी गाउँपालिका
४ नं. वडा कार्यालय
कार्यालयको कोड : ८०७७७५०३३०४

म.ले.प.फा.नं. १०१

नगदी / प्राप्ती रसिद
सेवाग्राही प्रती

आ.व. : २०८१/८२ संकलन केन्द्र : जानकी गाउँपालिका, ४ नं. वडा कार्यालय, केलाली रसिद नं. : १५१७
मिति : २०८१/१०/३०

विद्युतीय कारोवार नं. : २९५८६४८०४३०९८६६९३-८५०३२११५६३७७ **करदाता कोड : ८७७७१००००२७४२**

श्री मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति,जानकी गाउँपालिका, केलाली, वडा नं. : १, जानकी-४,कंचनपुर बाट देहाय बमोजिम जम्मा रू १,६१०.००, (रुपैयाँ एक हजार छ सय दश मात्र)) प्राप्त भयो ।

क्र.सं.	प्राप्ती शीर्षक		बाबत / प्रयोजन	रकम	प्राप्तीको माध्यम	चेक वा अन्य वित्तीय उपकरणको हकमा
	सकेत नम्बर	विवरण				चेक नं वा अन्य नं
१	११३१८	वहाल विटौरी कर	ऐलानी जग्गा प्रति कट्ठा (परिमाण : ६.००, कट्ठा)	१५०.००	नगद	
२	११६९१	अन्य कर	घरकर : पक्की घर १ तले (परिमाण : ३.००, पटक/संख्या)	९००.००	नगद	
३	११६९१	अन्य कर	घरकर : काठको कच्ची- झुपडी घर (परिमाण : १.००, पटक/संख्या)	५०.००	नगद	
४	१४२२९	अन्य प्रशासनिक सेवा शुल्क	निवेदन दस्तुर (परिमाण : १.००, पटक/संख्या)	१०.००	नगद	
५	१४२४३	सिफारिश दस्तुर	चार किल्ला प्रमाणित एक किल्ला दस्तुर : चार किल्ला प्रमाणित दस्तुर (परिमाण १.००, किल्ला)	५००.००	नगद	
			कुल जम्मा	१,६१०.००		

कारोबारको व्यहोरा
मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति बाट चार किल्ला प्रमाणित र प्रतिऐलानी जग्गा कर बापतको आम्दानी

बुझाउनेको सही :
भ्याट/प्यान : ६२१९४६२५२ मोबाइल नं. ९८१९५८५७२९
करदाता कोड : ८७७७१००००२७४२

बुझिलिनेको सही :
नाम : बालदेव चौधरी
पद : सहायक पाँचौ

G: Tax Clearance Receipt of Fiscal year 2080/2081

नेपाल सरकार
अर्थ मन्त्रालय
आन्तरिक राजस्व विभाग
करदाता सेवा कार्यालय लम्की

(आयकर नियमावली,२०५९ को नियम २६ सँग सम्बन्धित)

यो पत्र मिति २०८१.१०.११ मा तयार भएको छ।

प्रिन्ट मिति: २०८१.१०.११

प.सं: २०८१.०८२
च.नं. २४१३
कर चुक्ता नं. ८१४८९५७३१

बिषय : कर चुक्ता प्रमाण पत्र ।

श्री मुनुवा खानेपानी उपभोक्ता तथा सरसफाई समिति
४- जानकी,
स्थायी लेखा नं : ६ ११९४६ २५२

यस कार्यालय अन्तर्गत दर्ता रहेका तपाई ले आ.व २०८०.०८१ मा देहाय बमोजिमको आय रकमको आय विवरण मिति २०८१.१०.०८ मा यस कार्यालयमा पेश गरी सो अनुसार देहाय बमोजिमको आयकर दाखिला गरेकोले यो कर चुक्ताको प्रमाण पत्र प्रदान गरिएको छ ।

आय विवरण पेश गरेको मिति	जम्मा आय (कारोबार) रकम रू.	कर योग्य आय रू.	दाखिला गरेको कर रकम रू.
२०८१.१०.०८	१,१३९,८५९.००	०.००	०.००

२०८१।१०।१९
(कर अधिकृत)

पुनश्च:

- यो प्रमाणपत्र त्यस फर्म/ उद्योग कम्पनी / संस्थाले पेश गरेको विवरणको आधारमा जारी गरिएको छ । पेश भएको आय विवरण छानबिनमा परेमा आयकर ऐन, २०५८ को दफा १०१बमोजिम संशोधित कर निर्धारण हुन सक्ने जानकारी गराईन्छ ।
- यो कर चुक्ताको प्रमाण-पत्र विभागको वेभ साइट www.ird.gov.np मा कर चुक्ता रूजु वा Tax Clear.Search मा गएर रूजु गरी यकिन गर्न सकिने छ।

Annex VI : Members of Munuwa WSUC

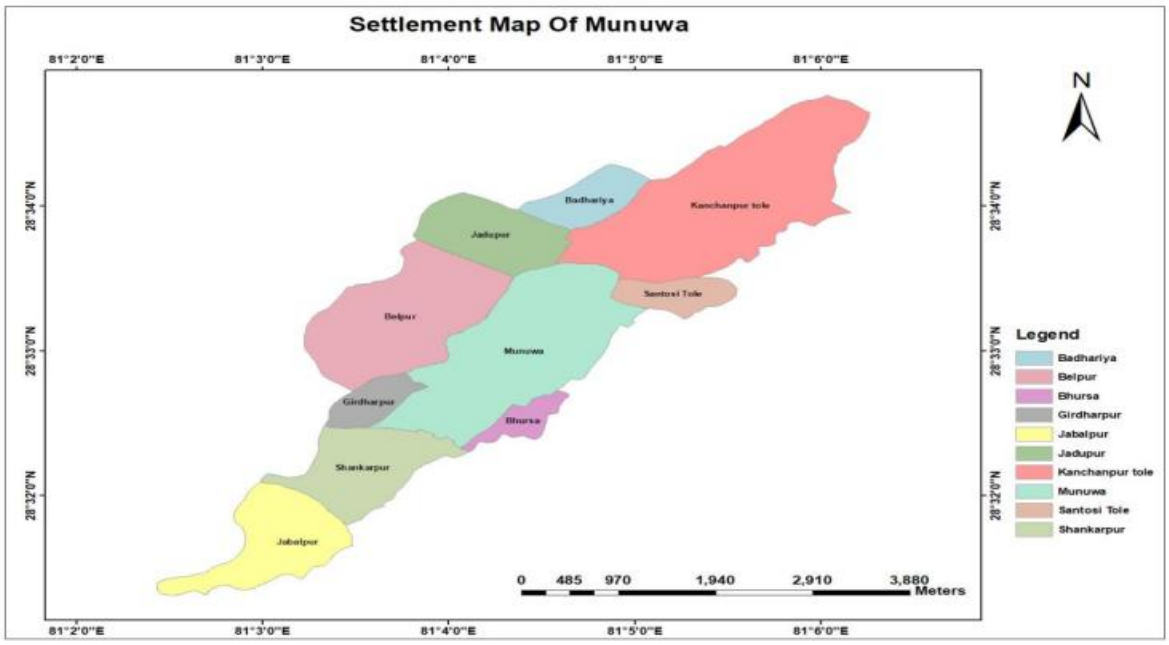
Table : Members of Munuwa WSUC

SN	Name	Designation	Contact No
1	Mr. Gagan Singh Chaudhary	Chairman	
2	Mr. Manoj Kumar Rawat	Vice-chairman	
3	Mr. Gyan Bahadur Rawat	Treasurer	
4	Mr. Rameshwor prasad Regmi	Secretary	9858424535
5	Mr. Aib Raj Bam	Member	
6	Ms. Yam Kala Devi Damai	Member	
7	Ms. Phulpati Devi Katahriya	Member	
8	Ms, Bhagmati Chaudhary Damai	Member	
9	Mr.Min Bahadur Rokaya	Member	

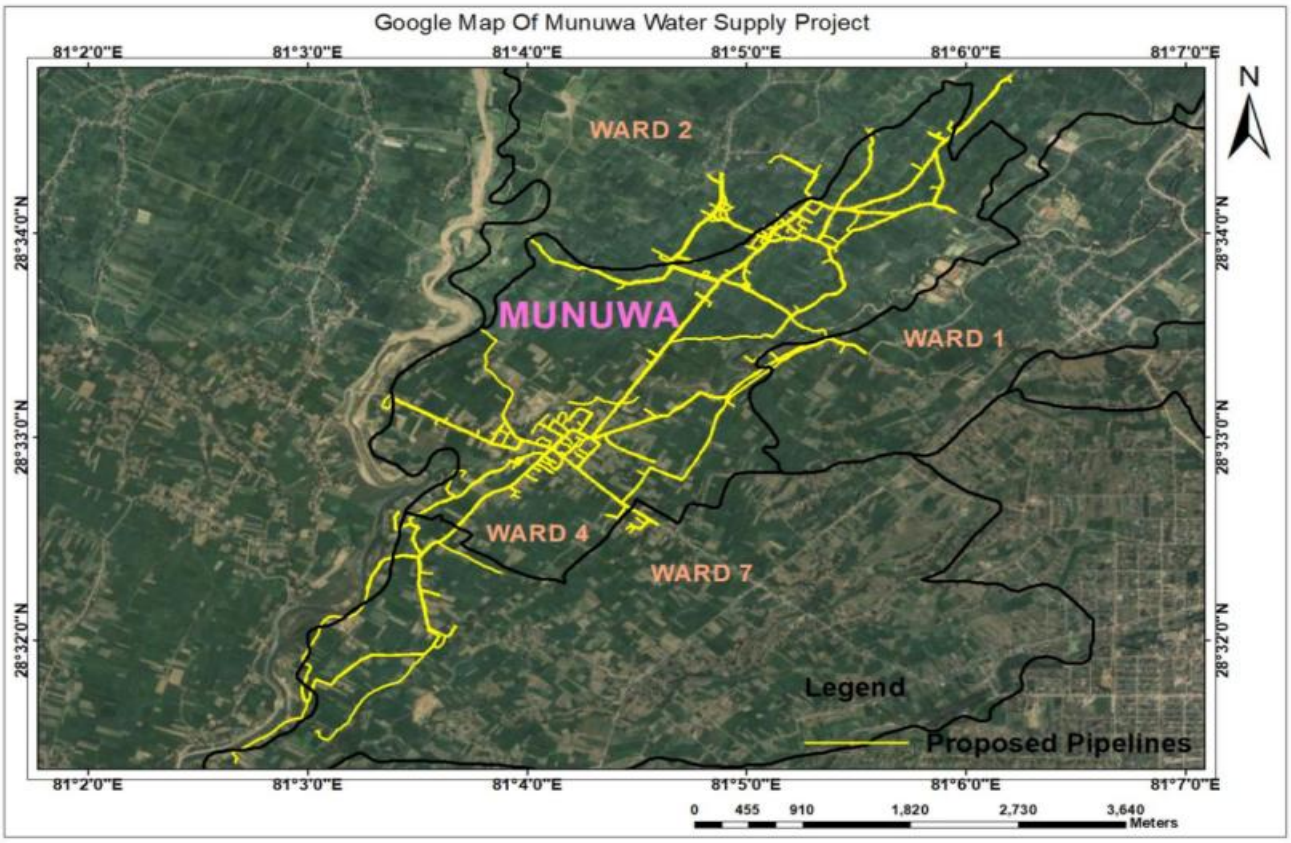
Name Staff List

SN	Name	Designation	Contact No
1	Ms. Sabitri Kathariya	Office Assistant	
2.	Mr.Dal Bahadur Darlami	Office Assistant	
3.	Mr. Khusilal Kathariya	Plumber	9825689535
4.	Mr. Pahadi Lal Kathariya	Plumber	

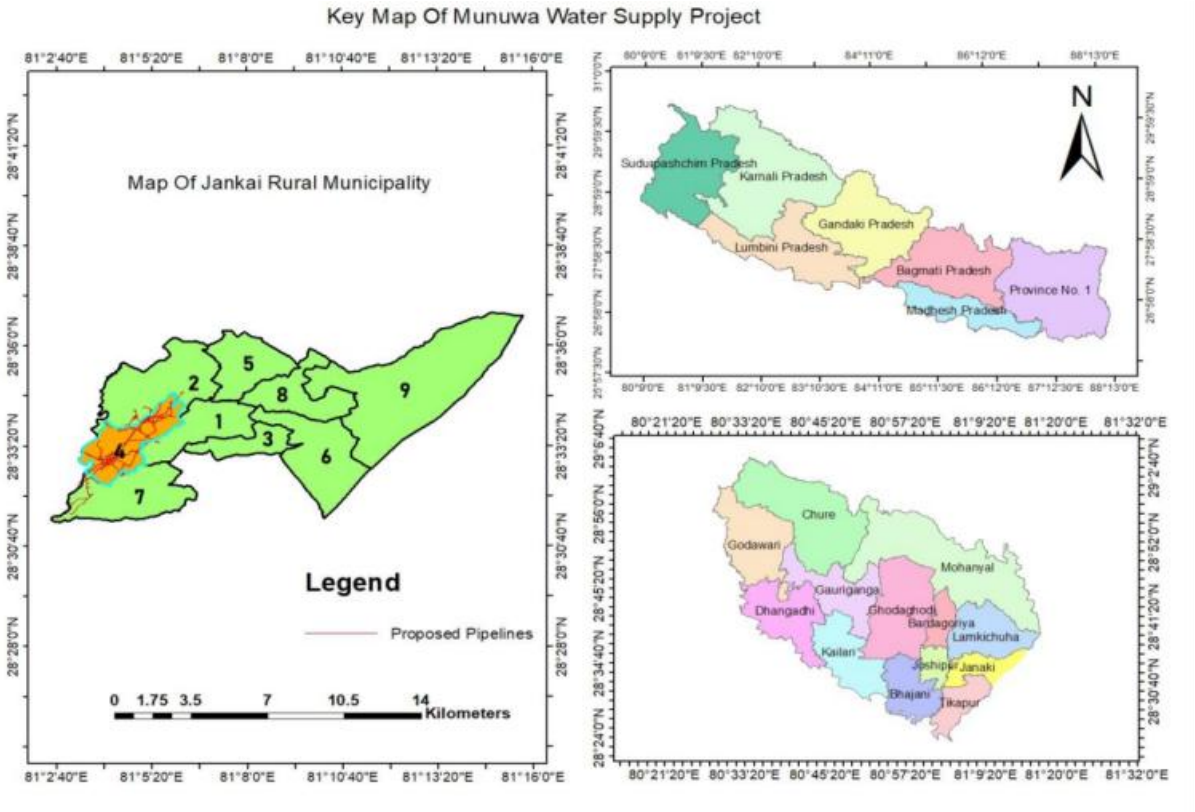
Annex VII : Settlement Map of Ward no. 04 of Janaki Rural Municipality



Annex VIII: The schematic diagram of the pipe networks of Sub Project



Annex IX: GIS Mapping of Janakinagar WSS Sub Project Settlement



Annex X: Photographs

1. Meeting with Municipal Authority, Ward Representative and Indigenous People of the Community, July 2024

2. Meeting with Mukta kamiya at Mukta Kamiya sibir Girdharpur at ward 4

3. Existing OHT of Munuwa WSP with Solar Panel

4. Proposed land site of the Munuwa WSP for the construction of new OHT

5. Celebration of Bhajahar Festival by the indigenous (tharu) people at the Proposed site of OHT of Munuwa WSP

6. One room office building of Munuwa WSP with 50 kVA transformer

Annex XIII: Monitoring format

मुनुवा 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 सूचकहरुलाई 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 सुझव निर्देशन केहि दिएको भए सो उल्लेख गर्ने)
धुवाँ धुलो उत्सर्जन	बाटो र कार्यस्थल अवलोकन गर्ने	छ	छैन	
ध्वनी प्रदुषण	बाटो र कार्यस्थल अवलोकन गर्ने	छ	छैन	
व्यक्तिगत सुरक्षा उपकरणहरु 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	बाटो अबलोकन 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
अनुगमनकर्ताको सुझाव

जाँच/रुजु गर्ने अधिकारीको नाम र सही

मुनुवा खानेपानी आयोजनाको

वातावरणीय प्रभाव अनुगमन फारम (संचालन चरण)

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

अनुगमन गरेको मिति समय

अनुगमनको स्थान

अनुगमन गर्ने व्यक्तिको नाम

अनुगमन गर्ने व्यक्तिको पद

तलको तालिकामा उल्लेख गरिएका सूचकहरुलाई 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 रुपमा 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 अबलोकन 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

मुनुवा 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**
प्रस्तावित विकासलाई समावेश गरी सामूदायिक वनको कार्ययोजाना स्वीकृतिको पत्र	कार्ययोजाना 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)**
थोत्रा सवारीसाधनको प्रयोग	छ	छैन	
बाटो र कार्यस्थलमा पानी छर्केको	छ	छैन	
निर्माण सामग्री ढुवानीको क्रममा छोपेको	छ	छैन	
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List *of Reference*

✧ *https://bymountainpeople.com/about-nepal/climate*

✧ *Environment Protection Act, Government of Nepal, 2019*

✧ *Environment Protection Regulations, Government of Nepal, 2020 (and amendments)*

✧ *https://censusnepal.cbs.gov.np*

✧ *Environmental and Social Management Framework, 2017 the World Bank*

✧ *Nepal Water Governance and Infrastructure Project,Indigenous Peoples Planning Framework (IPPF),January 26, 2021*

✧ *Water Sector Governance and Infrastructure Project (P176589), ENVIRONMENTAL AND SOCIAL COMMITMENT PLAN (ESCP), January 31, 2022*

✧ *Nepal Water Governance and Infrastructure Project LABOUR MANAGEMENT PROCEDURES (LMP) January 25, 2021*

✧ *Water Sector Governance and Infrastructure Projects (WaGISP) Stakeholder Engagement Plan, January,2022.*

✧ *Janaki Rural Municipality Profile, 2077 B.S.*

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

✧ *DHM, 2017. Observed Climate Trend Analysis in the Districts and Physiographic Regions of Nepal (1971-2014). Department of Hydrology and Meteorology, Kathmandu.*

✧ *Ministry of Nepal (2010), Climate Change Vulnerability Mapping for Nepal,Kathmandu, Nepal.*

✧ Ministry of Health and Population (MoHP) [Nepal], New ERA, and ICF International Inc. 2012. *Nepal Demographic and Health Survey 2022*. Kathmandu, Nepal: Ministry of Health and Population, New ERA, and ICF International, Calverton, Maryland.

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 shortand 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 (H2 O), carbon dioxide (CO2), methane (CH4), nitrous oxide (N2 O), and ozone (O3). 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.