

Land Acquisition, Involuntary Resettlement, and Indigenous Peoples Due Diligence Report

Final Report

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NEPAL: Urban Water Supply and Sanitation (Sector) Project,
(Purnagiri Urban Water Supply and Sanitation Subproject,
Kanchanpur)

Prepared by Ministry of Water Supply, Government of Nepal as per requirement of the Asian Development Bank.

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CURRENCY EQUIVALENTS

(as of 10 June 2021)

Currency Unit	=	NPR
NPR 1.00	=	\$0.01
\$1.00	=	116.92NPR

ABBREVIATIONS

ADB	–	Asian Development Bank
BS	–	Bikram Sambat (54+AD)
BPL	–	Below Poverty Line
DDR	–	Due Diligence Report
DSMC	–	Design Supervision and Management Consultant
DWSSM	–	Department of Water Supply and Sewerage Management
EA	–	Executing Agency
EMP	–	Environmental Management Plan
GoN	–	Government of Nepal
GRC	–	Grievance Redress Committee
GRM	–	Grievance Redress Mechanism
HA	–	Hectares
IA	–	Implementing Agency
IP	–	Indigenous Peoples
IR	–	Involuntary Resettlement
LA	–	Land Acquisition
MoWS	–	Ministry of Water Supply
NA	–	Not Available
NPR	–	Nepalese Rupee
ODF	–	Open Defection Free
PMO	–	Project Management Office
PMQAC	–	Project Management Quality Assurance Consultant
RPMO	–	Regional Project Management Office
RF	–	Resettlement Framework
RDSMC	–	Regional Design and Supervision Management Consultants
SDG	–	Sustainable Development Goal
TDF	–	Town Development Board
SPS	–	Safeguard Policy Statement
UWSSSP	–	Urban Water Supply and Sanitation Sector Project
WUSC	–	Water Users and Sanitation Committee

WEIGHTS AND MEASURES

cum	– cubic meter
Km	– Kilometer
m ²	– square meter
Mm	– Millimeter
m ³	– micrograms per cubic meter

GLOSSARY OF NEPALI TERMS

Ropani	– Size of land parcel; 1 ropani= 16 anna (0.0509 ha)-508.72 sq. m
Anna	– Size of land parcel; 1 anna= 4 paisa (0.0509 ha)
Paisa	– Size of land parcel; 1 paisa= 3 dam = 31.80 sq.m
Dam	– Size of land parcel; 1 dam=1.99 sq.m
Bigha	– Size of land parcel; 1 bigha = 20 katha (0.678 ha)
Crore	– 10 million (= 100 lakh)
Dhur	– size of land parcel; 1 dhur=0.0017 ha
Katha	– size of land parcel; 1 katha = 20 Dhur (0.0339 ha)
Kuccha	– temporary structure e.g.a rural hut made of wood, bamboo or stone with mud mortar and a thatched roof
lakh, lac	– 100,000
pakki	– structure (house/building) with permanent roofing made of RCC/RBC
semi-pakki	– house or building made of stone with mud mortar and clay, timber, slate or corrugated iron roofing

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I. INTRODUCTION

A. Background

1. The Urban Water Supply and Sanitation (Sector) Project (UWSSP) will support the Government of Nepal expand access to community managed water supply and sanitation (WSS) in 20 project municipalities by drawing on experiences and lessons from three earlier projects funded by the Asian Development Bank (ADB).¹The project will fund climate-resilient and inclusive WSS infrastructure in project municipalities and strengthen institutional and community capacity, sustainable service delivery, and project development. Subprojects will be based on demand driven by Water Users Associations (WUAs) and project municipalities and selected based on transparent criteria². Including population growth, poverty index, existing WSS infrastructure, community willingness for cost sharing, and long-term operation and maintenance (O&M) contract.³
2. The project will build upon the on-going efforts of the Government of Nepal in providing water supply and sanitation (WSS) services in urban areas of Nepal. It will help the country to meet Sustainable Development Goal (SDG)-6 to ensure availability and sustainable management of water and sanitation for all by 2030 and it is aligned with sector objectives laid out by the government's Fourteenth Plan, National Urban Development Strategy, and updated 15-year Development Plan for WSS in Small Towns, which is to improve water supply and sanitation service delivery in urban areas across Nepal.
3. The project will have the following impact: quality of life for urban population, including the poor and marginalized, through provision of improved sustainable WSS services⁴. The project will have the following outcome: Inclusive and sustainable access to water supply and sanitation services in project municipalities improved. The project will have two outputs: (i) water supply and sanitation infrastructure in project municipalities improved; and (ii) institutional and community capacities strengthened.
4. The Ministry of Water Supply (MOWS) is responsible for planning, implementation, regulation, and monitoring of WSS. The Department of Water Supply and Sewerage (DWSS) under the MOWS supports the provision of WSS facilities in municipalities where large utilities do not exist, and these are operated by WUSCs⁵ or municipalities⁶. Shortage

¹ ADB. *Nepal: Small Towns Water Supply and Sanitation Sector Project (2000)*; *Nepal: Second Small Towns Water Supply and Sanitation Sector Project (2009)*; and *Nepal: Third Small Towns Water Supply and Sanitation Sector Project (2014)*.

² Subproject selection criteria are detailed in the PAM (footnote 24). Selection of future investments to be designed under the project will follow same criteria, with preference for investments located in Kathmandu Valley, provincial headquarters, and strategic border municipalities.

³ Procurement can only commence after DWSS and municipality sign management agreement with WUSC for 20 years O&M service. The municipality will own the system and the WUSC will be the operator

⁴ Government of Nepal. 2009. *Urban Water Supply and Sanitation Policy*. Kathmandu.

⁵ The WUSCs, formed under the Nepal Water Resource Act, 1992, are the elected executive bodies of the Water Users Association.

⁶ The DWSS assists in preparation of investment plans, project design, and establishing sustainable service delivery.

of investment funds, skilled personnel, and inadequate O&M budgets, hinders municipalities from providing adequate, cost-effective services. The Local Governance Operation Act, 2017, established municipalities as autonomous government institution with responsibility for WSS services. While municipalities' capacity is being built, the government and residents have been receptive to the decentralized, participatory, and cost-sharing service provision model by WUAs. Development support for municipal WSS has been channeled through a combination of (i) government grants through DWSS, (ii) loans by the Town Development Fund (TDF) ⁷ and (iii) contributions from municipalities and beneficiaries.⁸ The TDF also supports WUAs in institutional and financial management including the introduction of tariffs.

5. The project will be implemented over a five-year period (indicative implementation period is 2018 to 2023) and will be supported through ADB financing using a sector lending approach. The MOWS is the executing agency and DWSS the implementing agency. The project management office (PMO) established under ongoing Third Small Towns Water Supply and Sanitation Sector Project (footnote 1) will be responsible for the overall management, implementation and monitoring of the project. There will be regional PMOs (RPMOs) to manage day-to-day project implementation at the subproject/municipality level. After construction including a one-year O&M period by the contractor, subprojects will be operated by the WUSC or municipality.
6. The Urban Water Supply and Sanitation (Sector) Project (UWSSP) is designed with the principle of community management, making it demand responsive, and adopting participatory approach. Participatory aims for greater community participation in planning, implementation along with their operation and maintenance activities. In terms of financing, 70 percent of the cost will be contributed by Government of Nepal. The initial cash contribution of WUSC should be minimum 5 percent of the civil works contract in the form of upfront cash contribution. The remaining 25 percent to be borrowed from the TDF as a loan at an interest rate not exceeding 5 percent per annum with a maturity of 25 years including a grace period of five years. The project ensures full participation of Water Users and Sanitation Committee in the formulation, implementation and operation and maintenance of water supply and sanitation.
7. It is anticipated that the proposed UWSSP will not involve any significant resettlement impacts and is classified as Category B for involuntary resettlement safeguards. The Resettlement Framework provides guidance for the assessment of involuntary resettlement impacts and for the preparation of resettlement plans / land acquisition and involuntary resettlement due diligence reports for components that are identified or

⁷ The TDF is a government-owned entity established under the Town Development Fund Act, 1997. Loans from the government to WUAs or municipalities are generally on-lent by TDF under a subproject financing agreement.

⁸ WUAs contribute 30% of project costs for water supply subprojects (25% from TDF loan and 5% from users' upfront cash contribution) and 15% for sanitation subprojects (subsidy from municipalities).

subprojects that are assessed or any changes in design after Board approval. Any proposed future subproject involving significant impacts will not be allowed.

B. Scope of the Report

8. This land acquisition, involuntary resettlement and Indigenous Peoples Due Diligence report (DDR) is prepared for the proposed Purnagiri Water Supply and Sanitation Project. A due diligence process was conducted to examine land acquisition and resettlement issues in detail, in line with ADB Safeguard Policy Statement (SPS) 2009. This report describes the findings and provides copies of available land-related documents and photographs. This DDR was prepared based on the Resettlement Framework for UWSSP.

II. SUBPROJECT DESCRIPTION

A. Location and Accessibility

9. The proposed project area lies in ward no; 6, and 7 (partially) of Bhimdatta Municipality. Bhimdatta is the headquarters of Kanchanpur district, which covers an area of 1,610 square kilometers (620 sq mi). Geographically the project area lies in latitude 28°55'0" N and longitude 80°20'0" E and altitude 197m from mean sea level (MSL). Bhimdutta falls in Province No: 7, bordered with Kailali district in east, Dadeldhura district in north and India in south and west. Previously, Bhimdatta municipality was known as Mahendranagar in the honor of late king Mahendra of Nepal. After becoming a republic in 2008, the city name was changed to Bhimdatta. It is a gateway to India and also a gateway to Shuklaphanta Wildlife Reserve.
10. Although the town has semi-urban characteristics with largely rural setting peripheral settlements, it is emerging town with growth potentiality. The history indicates that the area is newly developed particularly after development of East-West Highway which passes through this town. It was learnt that the people from adjoining areas and other districts started to settle in this area and rapid population growth occurred onward East-West Highway development. Availability of fertile agricultural land, road access and other services are attracting the people in this area.

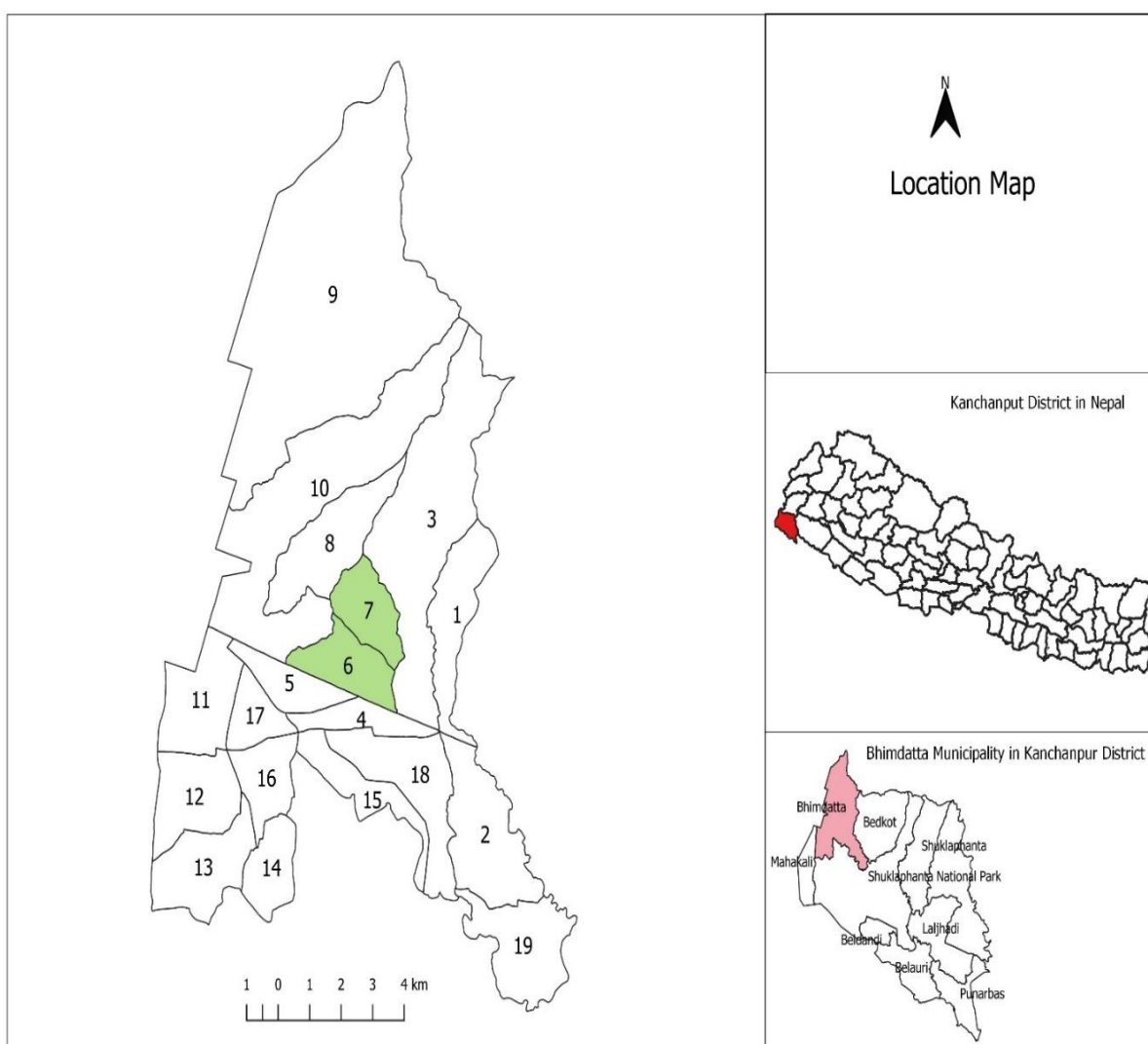


Figure II - 1: Municipality and Project Location Map

B. Socio-Economic Profile of Project Area

i) Service Area, Households and Population

11. The proposed Purnagiri Water Supply and Sanitation Project covers Ward No 6 and 7(Partial) of Bhimdatta Municipality of Kanchanpur district. Major settlements/Tole of the service area as well as ward wise household and population distribution are as shown in **Error! Reference source not found..** As the data shows the area accommodates a total population of 15698; of which 15165 are permanent population and 533 are rental population.

Table II - 1: Households and Population by Ward

Bhimdatta Municipality	Ward No.	HHs	Population			Remarks
			Permanent	Rented	Total	
Purnagiri	6	1588	9592	495	10087	
	7	1042	5573	38	5611	
	Total	2630	15165	533	15698	

Source: Socio-economic Survey, October 2020

12. There are total 2,630 households in the project service area with an average household size of 5.77, which is higher than national average (4.8 CBS census 2011). The distribution of households by ward is presented in Table II - 3, which reveals that Ward # 6 is densely populated as compared to Ward # 7. Among the total permanent population of 15165 in the service area, 7779 (51.30%) are male and 7386 (48.70%) are female. Ward wise population composition by sex and HH size are also illustrated in Table II - 2.

Table II - 3: Population and Household Size

Bhimdatta Municipality	Ward No	HHs	Population			Average HH Size	Remarks
			Male	Female	Total		
Purnagiri	6	1588	4896	4696	9592	6.04	
	7	1042	2883	2690	5573	5.35	
	Total	2630	7779	7386	15165	5.77	
	Percentage		51.30	48.70			

Source: Socio-economic Survey, October 2020

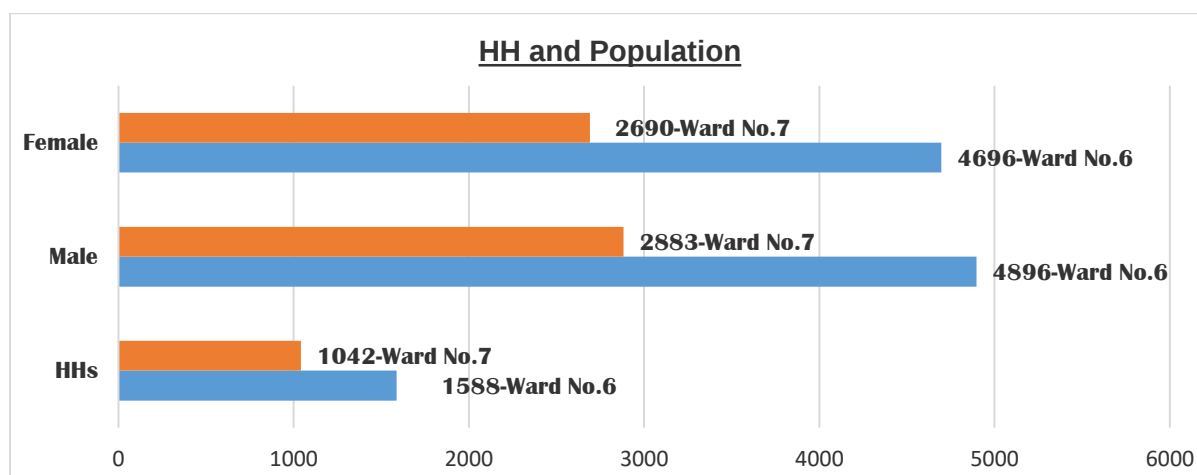


Figure II - 2: Population and Household Size

13. **Population and Growth Rate:** The trend analysis of the population growth of last 20 years (from 1991 to 2011 AD) has been done to determine the growth rate of population and consequently the population to be served by the project at the end of design period. The following Table II - 3 and Table II - 4) shows that the population of the Bhimdatta Municipality has been growing since 1991 but the growth rate has been declining till 2011. It is 10 years since when census has not been done so we do not know whether the GR has inclined or declined and at what rate, since 2011. The average GR since 1991 till 2011 is 2.66%.

Table II - 4: Trend of Population Growth Rate - Bhimdatta

Municipalities	Population			Growth Rate		
	1991	2001	2011	1991-2001	2001-2011	1991-2011
Bhimdatta	62,050	93,901	104,599	4.23%	1.08%	2.66%

Source: DEDR 2021

Table II - 5: Trend of Population Growth Rate - Kanchanpur

District	Population				Growth Rate (%)			
	1981	1991	2001	2011	1981-1991	1991-2001	2001-2011	1981-2011
Kanchanpur	168,971	257,906	377,899	451,248	4.32%	3.89%	1.79%	3.33%

Source: DEDR 2021

14. If we study the growth rate trend of Kanchanpur District, it is also declining since 1981. The GR since 1981 at an interval of 10 years is 4.32%, 3.89%, 1.79% respectively. The average growth rate since 1981 to 2011 is 3.33%. With the increase in different service level in the municipality, the GR scenario is expected to change with the availability of water after the implementation of this project. It is justified by the fact that the population of the project area is now growing faster and is expected to experience increased growth rate in future. It is because the internal migration rate is growing in the project area and there are increased facilities here. People say that present population growth rate has been above 3% per annum.

15. All of the above indicate that the GR of Bhimdatta municipality in the last 20 years (1991-2011) is in the decreasing trend and average GR is 2.66%. If we observe the same for the district, it is 3.33%. If we observe the Province 7 GR it is 2.94%. That means that the GR is increasing in the district. If we observe the GR in the Terai and Terai of province 7, it is 2.94% and 4.59% respectively. Since these values are more than average GR of the country and that of Terai region, we expect that there will be higher side GR in future. Hence a growth rate of 2.8% has been adopted for design. The population for the design period is calculated accordingly.

The population projection in different years is presented in Table: II - 5 below.

Table II - 6: Population Projection of service area for design period 2043

Ward No.	HH as per survey 2020	Pop as per Survey 2020	G. Rate in % (2020-43)	Population in Year				
				2023	2027	2032	2038	2043
6 & 7	2,630	15,165	2.8	16,475	18,399	21,123	24,930	28,621

Source: Socio-economic survey, 2020

The population of the service area is expected to be 16,475 in the base year 2023 and is expected to rise to 28,621 by the end of design period in 2043 at average weighted population growth rate of about 2.80%.

ii) Households and Population by Ethnic Composition

16. The proposed project service area comprises of multi-caste/ethnic groups. Each caste and ethnicity is characterized by its own customs, traditions, culture and nature of occupation

with which they are associated. Brahmin and Chhettri, comprising of 86.46% % of total families, are the most prevailing caste group in the service area. Dalits are the next major group with 9.09%, followed by Janajati, which constitutes about 4.07%. The ward-wise and caste-wise details of households and populations are shown in the Table II - 7 illustrates the details of population of the service area, of which male populations occupies 51.30% and that of female with 48.70%. In the meantime, Brahmin/Chhettri, comprises of 85.22% of total population followed by Dalit with 10.50%, Janajati by 3.91% and so on.

Table II - 8: Distribution of households and population by Ethnicity

Ethnicity	Bhimdatta Municipality								Remarks
	Ward#6		Ward#7		Total		Percent		
	HH	Pop	HH	Pop	HH	Pop	HH	Pop	
Brahmin/Chhettri	1345	8008	929	4916	2274	12924	86.46	85.22	
Janajati	105	583	2	10	107	593	4.07	3.91	
Dalit	132	966	107	627	239	1593	9.09	10.50	
Other	5	28	4	20	9	48	0.34	0.32	
Minority (Muslim)	1	7	0	0	1	7	0.04	0.05	
Total	1588	9592	1042	5573	2630	15165	100	100	

Source: Socio-economic Survey, October 2020

iii) Major Occupation of Households

17. The economy of the project area is gradually shifting from rural agricultural economy to service based and business. As the socio-economic data shows, nearly 33.88% of the total households have service as occupation. Agriculture is second main occupation with 26.35% households, followed by business (16.01%), foreign employment (12.59%), and daily wages (6.74%) and so on. The percent of household by occupation is illustrated in Table II - 9. **Error! Reference source not found.**

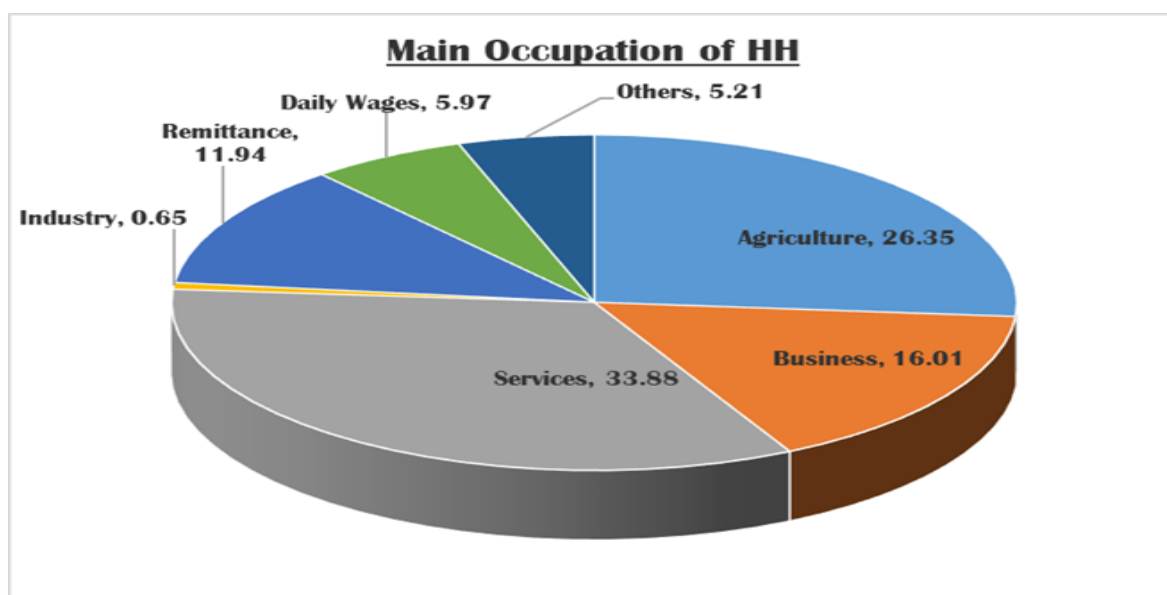


Figure II - 3: Major Occupation of Households

Table II - 10: Main Occupation of Household

S.N	Occupation	Ward No.		Total	Percent	Remarks
		6	7			
1.	Agriculture	355	338	693	26.35	
2.	Business	303	118	421	16.01	
3.	Services	555	336	891	33.88	
4.	Industry	14	3	17	0.65	
5.	Foreigh Employment	180	134	314	11.94	
6.	Wages	66	91	157	5.97	
7.	Others	115	22	137	5.21	
	Total	1588	1042	2630	100	

Source: Socio-economic Survey, October 2020

iv) Average Income Level of the Household

18. The range of income level of the households of the project area is divided into the following four categories based on the poverty thresholds for Urban Water Supply and Sanitation (Sector) Project (UWSSSP).

Table II - 11: Monthly Average Income Range and Category

S.N.	Income Range	Category	Remarks/Justification
1	<13,500	Poor	Based on result of NLSS-III 2010/2011 and calculating annual Price index of NRB 2010/11-2018/19
2	13,501 – 20,000	Average	Based on salary range and market price, adopted as average range.

3	20,001 - 35,000	Medium income	Based on salary range and market price, adopted as medium range.
4	>35,000	High Income	This is highest range category of income and adopted as highest basis of income and market price.

Source: Socio-economic Survey, October 2020

19. Economic condition of the families in service area is satisfactory in terms of their monthly income level. The distribution of households by income range is shown in Table II - 12 and Table II - 13 **Error! Reference source not found.**, which indicates that 36.24% of them have income range NRs. 13,501-20,000 per month. Likewise, 30.08% of households fall under the income range NRs. 20,001-35,000 category. As the data shows that 19.85% of households have highest income level (more than NRs. 35,000/month), whereas 13.84% of the households have lowest income level i.e. less than NRs. 13,500/month.

Table II - 14: Monthly Average Income Range

S.N.	Income Range (NRs.)	Ward No.		Total	Percent	Remarks
		6	7			
1	<13,500	125	239	364	13.84	
2	13,501-20,000	584	369	953	36.24	
3	20,001-35,000	484	307	791	30.08	
4	>35,000	395	127	522	19.85	
	Total	1588	1042	2630	100	

Source: Socio-economic Survey, October-November 2020

Finding of socio-economic census survey depicts that the household average monthly income is NRs. 26,246.50.

v) Monthly Expenditure Level of the Household

20. As the survey data shows, majority of the households (45.02%) in service area fall under monthly average expenditure range of NRs. 13,501-20,000, followed by 30.08% of households with NRs. <13,500 monthly expenditure range category. Likewise, 18.67% households have their monthly expenditure within the range of NRs 20,001-35,000. The rest of around 5.93% of the households have highest expenditure level i.e. more than NRs. 35,000 per month.

Table II - 15: Monthly Expenditure Range of Households

S.N.	Expenditure Range (NRs)	Ward No.		Total	Percent	Remarks
		6	7			
1	<13,500	341	458	799	30.38	
2	13,501-20,000	773	411	1184	45.02	
3	20,001-35,000	373	118	491	18.67	
4	>35,000	101	55	156	5.93	
	Total	1588	1042	2630	100	

Source: Socio-economic Survey, October 2020

C. Design Concept and Project Components

i) Description of Proposed Subproject Component

21. This resettlement due diligence report is prepared for Purnagiri Water Supply and Sanitation Sub-project, under the Urban Water Supply and Sanitation (Sector) Project (UWSSP). This section describes the different components of the proposed sub-project. Purnagiri Urban Water Supply and Sanitation Project have been conceptualized as a piped water supply system using ground water as source with pumping system. Based on the topography, settlement pattern and suitable location for tube well, two water supply systems based on decentralized distribution system is adopted which are described below:

a. Proposed Sources

22. The source proposed for this project is ground water source with safe yield of minimum of 20 lps from one DTW. There will be 4 Deep Tube Wells in total. These will be constructed at two locations each having two DTWs. Most of the structures like DTW, WTP, OHT, guardhouse, generator House and community building are located at Haldukhal-1 site of Ward no 7. The other location also falls on the ward 7 at Haldukhal-2. This site consists of two DTWs, office building, one guardhouse and one pump house. Both of these sites are very near within a distance of about 700 m. Water from the DTWs is transmitted to the treatment plant and to the OHT at one stage pumping. The land required for these facilities is available (7 kattha or 2370 sqm) at Haldukhal-1 and 2 kattha or 677sq.m in Haldukhal-2) sites.

b. Treatment Facility

23. In general, the water quality of the samples taken from nearby wells is good and within NDWQ. The turbidity, iron, manganese, arsenic and hardness are within the standards. However, the ground water lacks the oxygen content which is most essential in any drinking water. Similarly, though the tested samples contain very low turbidity, a PF has been proposed in view of possible high turbidity in the DTW's to be drilled. Similarly, aerator not only gives good taste but also removes Fe and Mn in water. In order to address these facts and possibilities, aerator and pressure filter have been proposed. Similarly, though the hardness is within the standards, all wells drilled in the Bhimdatta municipality area (eg Bhasi w/s wells drilled under STWSSP-1, rehab wells under third STWSSP and Siddanath Bajinath W/s project under UWSSP) contain hardness of more than 400 mg/l and has a nature of sticking on the walls of the pipes, WTP and other water bearing surfaces. Therefore, we have proposed softner plant so as to reduce the hardness and remove sticky nature. All these units and disinfection unit are collectively included in the WTP.

24. As for the process flow, water from the Deep Tube Wells will be transmitted to the WTP. The WTP consists of an aeration tower, multigrade pressure filter, softner plant and disinfection unit. There will be a total of two sets of the units with a capacity of 100 cum/hr. It can treat as much as 30 lps flow. As the flow from one DTW is 20 lps and a maximum

of 3 DTW's will operate at a time, total inflow from DTW is 60 lps. Two WTP units will thus be sufficient.

25. Both of the sets will be installed at Haldukhal 1 site. The raw water from the DTWs at Haldukhal 2 sites will also be transported to this site for treatment and supply. The raw water first enters the aeration tower and goes to the pressure filter unit. After the PF unit, it goes to the softner plant and water will finally go to the disinfection unit. The disinfected water will be discharged to the overhead tank.
26. The reason behind the positioning of the WTP units: The aerator increases the dissolved oxygen level of raw water and improves the test of treated water. It converts dissolved iron to un-dissolved iron floc, which can easily be trapped at downstream pressure sand filters. The filtered water will thus have no iron content. This water enters the softner and passes through the resin in the softner. The resin absorbs the hardness and gets it stucked on the resin surface. There will be no other impurities left for treatment. If the softner is placed in the beginning, the hardness removal process will be hindered by iron, manganese and other dissolved solids. As such the efficiency of the softner will be low. The PF may be removed from the design if the water from the constructed DTWs contains turbidity, Fe and Mn values within NDWQS. The decision in this regard will be taken at the time of construction.

c. Service Reservoir

27. The proposed service reservoir for the project is an OHT with a capacity of 450 cum. This will be located at Haldukhal-1 site. The system is designed for continuous flow from source to WTP to reservoir and supply from reservoir to distribution system. The capacity of the OHT is based on inflow, outflow and consumption pattern.
28. In the base year 2023, three DTW's/pumps will be used for a total of 26.3 hours a day. One of the four DTW's will be standby. For design year all four DTW's will be used for a total of 45.1 hours. Average pumping hours will be 11.28. The capacity of OHT is 23.83% and 13.9% respectively in the base year and design year respectively.
29. The Calculation of storage in the OHT has been made on the basis of supply hour and the hourly water demand of the system.
30. Some designers make provision of ground water storage reservoir (GRVT) to collect treated water after which the water will be pumped to the OHT. Generally, this provision is made when the flow rate of DTW is low. However, since the expected flow rate is high, we do not see the requirement of GRVT. This provision will increase the investment cost, O & M cost and requires additional land for its construction. Therefore, no provision is made for ground reservoir.

d. Electrical Facilities

31. Electric power required for the operation of pumps and facilities is available in the nearby area. The Electrical facilities necessary in the pumping system and other facilities in house has to be connected to the city electrical lines. This has been provisioned. Following facilities have been provisioned in the design:

- | | |
|--------------------------------|--------------------|
| 1. HT and LT electrical lines | As per requirement |
| 2. Pumps | 4 nos |
| 3. Transformers | 2 nos |
| 4. Cables | As per requirement |
| 5. Generators | 2 nos |
| 6. Voltage stabilizers | 2 nos |
| 7. Other necessary accessories | As per requirement |

e. Transmission Pipeline

32. The water from the source (DTW) to WTP to OHT is transmitted through a transmission pipeline system. Water from DTW-1 and DTW-2 are collected through a 150 mm DI pipeline and the collected water is transmitted to the WTP through a 150 mm DI pipe. Similarly, water from DTW-3 and DTW-4 are collected through a 150 mm DI pipeline and the collected water is transmitted to the WTP through a 150 mm DI pipe. When these pipes are joined together, water is transmitted to the OHT through WTP through a 200 mm DI pipe. The total length of the transmission pipeline from source to the OHT is 1,530 m including two systems. Transmission pipeline has been designed using the Darcy Weisbach formula for calculation head loss in pipeline.

There is a provision to use any of the 4 DTW at a time and use any one of the WTP or both through a bypass mechanism.

f. Distribution Main

33. Distribution system comprises a pipe network, which is designed in loop network system by using EPANET software. The entire new distribution system has been designed by using HDPE pipes. The PE-100 pipe of outer diameter 50 mm to 250 mm with PN 6, PN10, PN 12.5 and PN 16 series have been used. This had been adopted in design in consultation with the stakeholders.

34. Provision has been made to lay the pipes by the side of the road. Pipes will be laid at wider roads while single pipes will be laid at narrow roads. In comfortable areas, machine excavation could be done for excavation to lay pipes while manual excavation will be done at narrow and areas where machine cannot operate. In order to keep pipeline safe in future, the pipes will be inserted inside bigger size RCC hume pipes while crossing roads. The pipes will be joined using electro-fusion fittings. The total length of the distribution pipeline is 66,028 m.

g. Valve Chambers

35. Sluice valves have been proposed in the transmission as well as distribution system as required by the design. A total of 25 concrete valve chambers and 20 pipe valve box chambers have been provisioned at important locations.

h. House Connections

36. There are 2,630 households in the project area as per the social survey taken in 2020. The HH number will grow to 2,858 in the base year 2023. Therefore, a total of 2,858 number of connections are included in the cost estimation. The connection cost including domestic pipes and fittings, water meter bib cocks/taps have been included in the cost estimation. The pipeline starts at the nearest point of the distribution pipeline and ends at the customer premises where a domestic water meter and a tap will be installed. The meter will be installed at appropriate location at the start of the household premises.

37. The length of the house connection pipe is not same for each household. Some houses need less length and some more length. The average length of pipeline per connection is taken as 25 m. The pipe size for the connection is 20 mm and type is PE-100 PN-16. The total design household and number of connections is 4,964 in the year 2043.

i. Supervisory Control and Data Acquisition (SCADA)

38. In this project there are two Sub-system each having single DMA. The total network has been divided into 2 numbers of DMA's. The Table II - 11 shows the following DMAs have been proposed.

Table II - 16: Proposed SCADA-DMA

System	DMAs	Identification of OMS	Line Size of supply mains	HHs	Min. Pressure @ Point	PN rating	Flow ratings(lps)
Purnagiri Systems	DMA 1	OMS-1 Serving Area	250mm	1,042	15m	PN 10	53.33
	DMA 2	OMS-2 Serving Area	250mm	1,588	15m	PN 10	36.45
Total		2 umbers of DMA Management System		2,630			

Source: DEDR 2021

39. The following types of equipment have been proposed for the implementation of SCADA System in the Purnagiri water supply system.

i) Outlet Management System (OMS)

40. As for the Outlet Management System, the associated pressure and flow control valves (PFCV) must be chosen to guarantee the following functions:

- Shall allow flow modulation
- Manual operation of the system must always be available.
- Shall allow the active management of pressures in the equipped network

- Shall provide capacity to calculate the water balance and perform water audits at the cluster level.

41. In addition, the communication of all the controls units (RMSs, AMSs and OMSs) with the control center must be wireless, and independent of the availability of the power grid. The design for all valves and sensors will minimize head losses. Both valves and sensors will be selected among high-quality international brands and approved by the Project. All Air valves shall be connected to the SCADA.

ii) Air Management System (AMS):

42. The Air Management System or AMS is an essential component of any water supply network, An inefficient AMS can lead to loss of carrying capacity and can seriously affect the overall performance of the water supply system with or without RMS and OMS. The AMS shall be designed in such a way that the following issues are suitably addressed.

- Air in the system can seriously affect equitable distribution of water and must be removed in a controlled manner. At the same time, it might be desirable to allow air into the pipe line to prevent extreme negative pressure conditions and the associated damages to the pipe network. Therefore air management is the key for efficient and long term trouble free operation of water supply systems. Air can enter the distribution system from several different sources - at pump stations, at low pressures points along the pipelines. Air that enters the distribution system should be let out during subsequent water filling cycle calling for adequate as more outflow capacity can lead to air slam conditions and serious damages to pipelines. Most damages to pipe joints in water distribution systems can be traced to low pressure transients. Extreme low pressures in distribution systems can also result in pathogen intrusion and water contamination problems.
- AMS shall be capable for burst monitoring.
- AMS shall have tamperproof enclosure system provided to the air valve which will be capable to send the vandalized alert along with the pressure monitoring.
- AMS functioning shall be monitored from remote control center by wireless communication.

iii) Source management system (SMS)

43. The SMS is the most important component of any water supply network, It measures the flow and controls over/under production from the DTW's. It controls overflows.

iv) SCADA/Automation

44. A SCADA system refers to a system consisting of a number of remote terminal units (or RTUs) collecting field data connected back to a master station via a communications system. The master station displays the acquired data and also allows the operator to perform remote control tasks. The accurate and timely data (normally real-time) allows for

optimization of the operation of the plant and process. A further benefit is more efficient, reliable and most importantly, safer operations. This all results in a lower cost of operation compared to earlier non-automated systems.

45. Automation to link all the components is provided through SCADA (Hydraulically Supervised Control and Data Acquisition) and all the mentioned components which shall be capable to enable to control and monitor the parameters from at SCADA room /Master Control Center for Submersible pumps of all the three stages, Water level sensors for all RVTs, Online Chlorine Monitors, AMS, RMS and OMS. The SCADA equipment proposed in each DMA of the Purnagiri water supply system are shown in the Table: II -12 below.

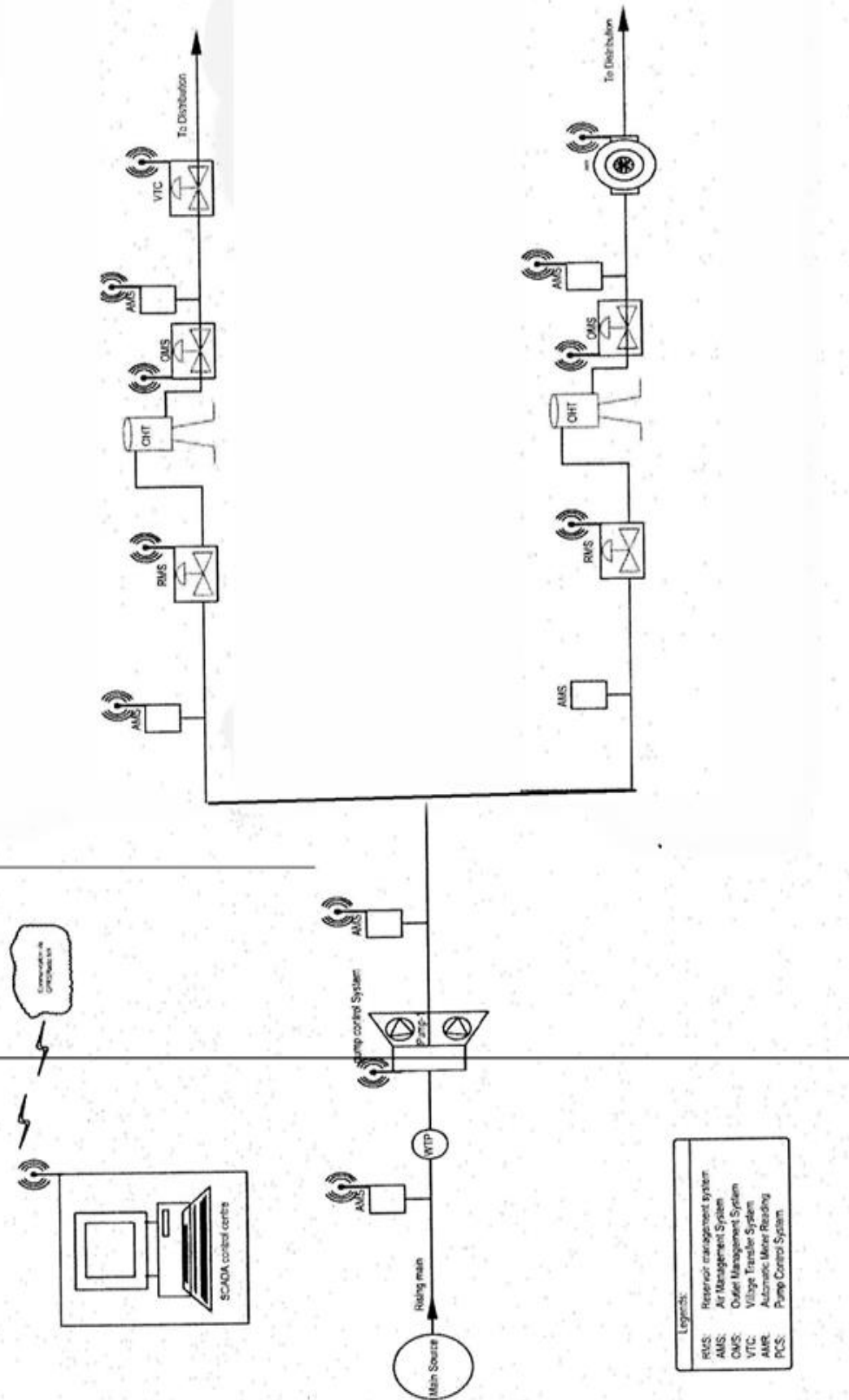
Table II - 17: SCADA Equipment

System	DMA	OMS		Source Management System	Pumping Management System	AMS
		Number	Size of mains			
Purnagiri System DMA-1	1	OMS-1	225 mm	2	1	1 numbers
Purnagiri System DMA-2	2	OMS-2	250 mm	2	1	1 numbers

SCADA supply operation and control system has been included in the cost estimation. It includes all valves, equipment's and facilities that are required for full automation. The main control systems included in the design are:

- Outlet Management System for DMA 1 & 2
- Source Management System at DMA 1 & 2 (DTW 1&2 and DTW 3 & 4)
- Pumping Management System
- SCADA Automation

System Layout- Hydraulically Supervised Control And Data Acquisition(HSCADA)



The above diagram illustrates the SCADA system in place for most of the SCADA applications.

Figure II - 4: Schematic Diagram of a SCADA System

j. Sanitation Components

a. Individual Household Toilet Improvement

46. The sanitation improvement includes the individual household toilet improvement. The proposed town project is declared as open defecation free (ODF) area. During Socioeconomic survey, it was found that there are 3 households below poverty line without toilet. Other BPL households (pit type toilets = 9, water shield/ Pour flush toilets = 352, and total below poverty = 364 households) has temporary insanitary pit type of toilets which shall have to be upgraded or improved as water sealed type. The low-income group will be encouraged to construct water-sealed toilet in their own land providing OBA grant. Therefore, land acquisition is not required for household toilet. The BPL households will be identified on the basis their economic status for OBA Grant. OBA grant will be provided to those households who are living below poverty line (NPR 13,500 per month based on the Nepal Living Standards Survey 2010/2011 updated in 2020 by UWSSP). During the project implementation period the WUSC will publish the notice in local language in local newspaper/FM radio for selection of OBA recipients among the low-income group households. The team of stakeholder (representatives of the Bhimdatta Municipality, Water User and Sanitation Committee, and Design Supervision Monitoring Consultant, GESI expert and Social Mobilizer) will verify the collected form; field observation will be made and then finalize the final nominee. The approved below poverty line calculation sheet has been attached in **Annex-4**.

III. FIELD WORK: SURVEYS AND PUBLIC CONSULTATIONS

A. Outline of Field Work

47. The design survey team visited all locations and collected basic information of deep boring/intake, OHT and reservoir location and service area. The team informed WUSC to take the ownership of government land for the construction of structures and deep boring. Informed WUSC to register the sources as per government rule and regulation.
48. Field visit to the project site and major settlements/clusters in the service area was major step of the study. Many field visits were made onward September 2020 after mobilization of WRDSMC for the consulting services. Direct observation and interaction with local people likely to be affected by project construction activities was carried out during field visits. The details of field visit and interaction are presented in Table- 14.
49. Reconnaissance surveys conducted along proposed/accessible pipeline alignments to identify the need for surveys and inventories; however, no structures were found along the alignment and it was assessed during field visits that temporary impacts could be avoided.
50. On Sep.29th and 1st October 2020, field inspection of proposed subproject facility locations and pipeline alignments that had been identified was undertaken. These included field visit to the identified sites, alignments and stakeholder consultations. Field visits to all proposed sites, OHT, Office building, deep boring location, transmission main alignments, distribution pipeline alignment and consultations with stakeholders were conducted to confirm land ownership and use, the need for surveys and further consultations. Available no objection letter or land-related documents for land use from municipality were also collected. This is attached in **Annex 1**.
51. One OHT of 450 cum, and two proposed deep boring, pressure filter, guard house and generator house site is located in ward no 7 Haldukhal-1 and two proposed deep boring, office building and generator house is located in ward no 7 Haldukhal-2.
52. DI, PE (HDPE pipe) and GI are used in the distribution of water in the service area. DI pipe has been used only for transmission line for a length of 1530 m. 200 mm, 150 mm dia sizes has been used. Two types of DI pipes, Spigot-Socket Pipes, and Double Flanged Pipes has been adopted as per ISO-2531-2009. These pipes shall be in standard working lengths with Cement Mortar Lining inside the pipes and outside bitumen coating conforming to the ISO-2531. GI pipes have not been proposed but anticipating some uses in some areas like kholsi/nala/culvert crossings etc of the distribution line, minimum quantity with rates of medium class GI pipes have been included in the day's work of the cost estimation. The distribution network consists of PE 100 pipes with pressure rating of PN6 and PN10. The sizes vary from 50 mm to 250 mm dia. The total length is 66,020 m. Extra quantities of 10% have been proposed. PE pipes shall be of Virgin Natural Resin PE 100. The Density of Pipes shall be confirming to ISO 4427 Standard. The internal diameter, wall thickness and other dimensions of pipes shall be as per relevant tables of ISO 4427. Bhimdatta Municipality has provided consent letter to WUSC for necessary construction work. Consent letter is attached in Appendix-1.

B. Public Consultation

53. Consultation meetings were undertaken with key stakeholders in line with ADB's requirements pertaining to the environment and social considerations during the planning phase, feasibility study phase and detailed design phase. Tools used for consultation were stakeholder meetings and interviews. During project preparation, formal stakeholder meetings were held in Bhimdatta Municipality (Mayor/Deputy Mayor, chief administrative officer of Municipality and WUSC chairman, representative of main WUSC body and women groups). Similarly, discussions, interaction and interviews of local users were held within proposed project sites of Bhimdatta municipality to understand their key concerns related to the project. Inclusion of the poor in the drinking water scheme was also discussed. Required modality, role and responsibility of stakeholders, approach and requirements of the project including land to construct various structures were disseminated and well informed for effective implementation of the program. Likewise, modality of financial arrangement (upfront cash contribution of 5% by WUSC/users, 25% loan by Town Development Fund (TDF) and 70% grant by government) for the urban town's project was disseminated.

Table III - 1: Summary of Consultations

Date	Location	No. of Participants	Participants	Topics Discussed	Issues Raised
Sep.29, 2020	Bhimdatta Ward-7 Office	Male-7 Female-0	WUSC executive members local people,	• Project information Dissemination • Regarding upfront cash (5%)collection • Regarding Area delineation • Regarding WUSC formation • Regarding socioeconomic and detail engineering design • Regarding acquisition of land • Regarding Social and environment safeguard	Willingness to connect to piped drinking water supply; collection of 5% cash upfront; subsidy to the poor; whether community taps would be provided; community participation in project implementation; Implementing agency; and better / improved service.
Oct.1, 2020	Mahakali Secondary School Ward No.7	Male-15 Female-5	WUSC members, local people, school teachers	• Project information Dissemination • Regarding upfront cash (5%)collection • Regarding Area delineation • Regarding WUSC formation • Regarding socioeconomic and detail engineering design • Regarding acquisition of land • Regarding Social and environment safeguard	All the proposed component structures are found to be located within the domain of public/government and WUSC land.

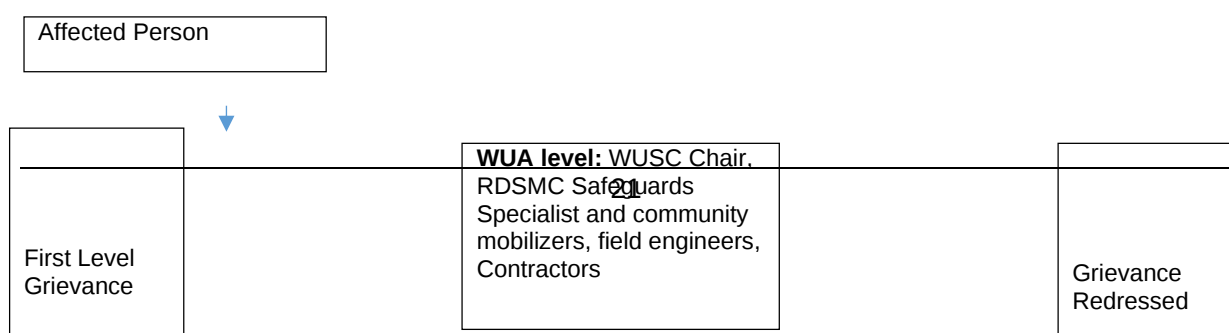
Date	Location	No. of Participants	Participants	Topics Discussed	Issues Raised
25 Nov.2020	Ward office-7	M-24,F-11	local politicians, beneficiaries	• Discussion on project's safeguards policies and potential issues • Regarding additional land required • Required land ownership document • Willingness to land for the project- OHT and other structures -1. • Aware of option of compensation for the loss of land and crops in any ADB-financed project.	All the proposed component structures are found to be located within the domain of public/government and WUSC land.

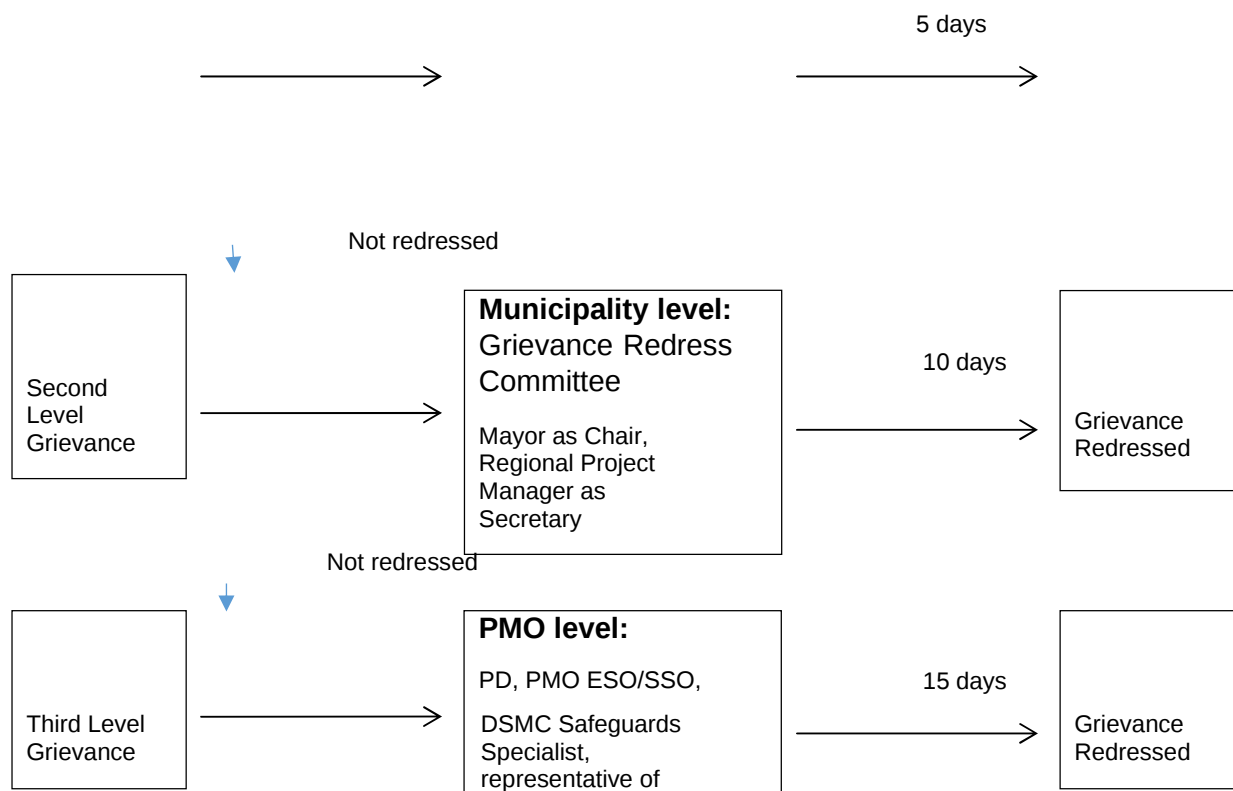
C. Grievance Redress Mechanism

54. A project-specific GRM will be established to receive, evaluate and facilitate resolution of affected persons' concerns, complaints, and grievances related to social, environmental and other concerns in the Purnagiri sub-project. The GRM will aim to provide a time bound and transparent mechanism to resolve such concerns. Grievances may be channeled through letters, emails; text messages (SMS), verbal narration, grievance boxes and registers. Suggested Format for record Keeping and suggested template for grievance redress form is attached in **Annex 5**.

55. A common GRM will be in place for social, environmental or any other grievances related to the subproject. The GRM will provide an accessible forum for receiving and facilitating resolution of affected persons' grievances related to the project. Project will publish the sample grievance registration form on its website, and publish it in local language and/or indigenous people dialect, at the hoarding board of each of the participating WUA or municipalities' office. Every grievance shall be registered with careful documentation of process adopted for each of the grievance handled, as explained below. The environmental and social safeguards officer (ESO/SSO) at the PMO will have the overall responsibility for timely grievance redress on environmental and social safeguards issues. The Social Safeguards Officer at the RPMO will be the focal person for facilitating the grievance redress at the local level.

56. The GRM will have three level system ie first level (WUA level) will be chaired by WUSC chairperson and participated by ICG, RDSMC, contractor as members. The second level GRM (Municipality level) will be chaired by Municipality Mayor and participated by RMPO chief and other representatives as members. The third level GRM (PMO level) will be coordinated by PD and other representatives from PMO/PMQAC including representative from Nepal Federation of Indigenous Nationalities (NEFIN) for final solution. The detailed for the GRM Refer to PAM Appendix-5.





DSMC = design, supervision and management consultant; ESO=environmental safeguards officer; NEFIN = Nepal Federation of Indigenous Nationalities; PD = project director; PMO = project management office; RDSMC = regional design, supervision and management consultant; SSO = social safeguards officer; WUA = water users' association; WUSC = water users' and sanitation committee.

Figure III - 1: Grievance Redress Process

IV. LAND AVAILABILITY, INVOLUNTARY RESETTLEMENT, AND INDIGENOUS PEOPLES IMPACT

A. Findings

57. The Purnagiri Water Supply and Sanitation Project is designed as a pumping system. The source proposed for this project is ground water source with safe yield of minimum of 20 lps from one DTW. There will be 4 Deep Tube Wells in total. These will be constructed at two locations each having two DTWs. Most of the structures like DTW, WTP, OHT, Office building, Guard House, Generator House, community building are located at Haldukhal-1 site of Ward no 7. The other location also falls on the ward 7 at Haldukhal-2. This site consists of two DTWs, one guard house and one pump house. Both of these sites are very near within a distance of about 700 m. Water from the DTWs is transmitted to the treatment plant and to the OHT at one stage pumping. The land required for these facilities is available (7 kattha or 2370 sqm) at Haldukhal-1 and 2 kattha or 677sq.m in Haldukhal-2 sites). Available documents regarding use of land and relevant photographs of the proposed sites for the water supply and sanitation facilities are attached to this due diligence report. Approval from the Municipality for water extraction is received. The details of land availability and ownership of proposed sites for the project are given in Table-15 and 16.
58. The subproject comprises one(1no) OHT- (Overhead Tank-450 cum), 4 tube well, two sets of treatment plants, boundary walls, 25 no. valve chambers, Pipe valve chamber-20 no.67.55 km of transmission and distribution network, two operator and guardhouses, 2 pump houses control room, one generator shed, and one office building. No private land acquisition is anticipated for proposed subproject components at Purnagiri Urban Water Supply and Sanitation Project- Bhimdatta, Mahendranagar. All water supply components is proposed on government/Municipality land. Hence, no IR impacts are anticipated for these components.
59. About 2,250 square meters of land for construction of different project components is required, which has been identified and obtained by WUSC at different sites as required. All of the sites are barren Public/Government land. For the public land use, WUSC has received consent letter from the Municipality. No settlement will be adversely affected and no need of physical displacement. The adverse impact of the project is nil and no need of compensation. The details of land requirement and Involuntary Resettlement/Indigenous Peoples impacts are discussed below under separate section- Land Availability and Resettlement Impact.
60. Table IV - 5, 16 and 19 provides land ownership status a summary of anticipated IR impacts of proposed subproject components. The Google maps showing the location of different components in Purnagiri Urban Water Supply and Sanitation Project are presented in Figure IV - 1: Map showing major components of the proposed Purnagiri water supply project (Project area, reservoirs) distribution pipeline Figure IV - 2: Map showing distribution pipeline while Schematic Layouts of Treatment Plant Figure IV - 3: Map showing while Schematic Layouts of Treatment Plant: and Figure IV - 4: Map showing while Schematic Layouts of Site Plan (Haldukhal-1) and Figure IV 5 show layout site plan of DMA-1,2 and

Figure IV - 6: Schematic flow diagram of transmission line of Haldukhal-1 schematic flow diagram of transmission line of Haldukhal -1 and 2 site are shown in respectively.

Table IV - 1: Land Availability and Ownership - Proposed Project structures at Purnagiri Town Project - Haldukhhal System-1

Component	Location	Municipality Ward No.	Service Area	Land ownership	Capacity/ Length	Minimum land reqd.	Land area available	Remarks
Deep Tube well-2	DMA System-1 Haldukhhal	7	Asmi Kedar, Baijanath, Baijanath, Udaya Tol, Bhimraj, Bhumiraj, Deule Kedar, Deulek, Deulekedar, Durga, Jyoti, kerabari, khairani, Krishna, Laxmi, Pashupati, Radhakrishna, Santoshi, Shanti, Shirjana, Shital, Shiva, Shiva Shakti, Shree Kedar, Shree Krishna, , Siddhanath	Municipality/WU SC	2x20.12=40.2 4 lps	100 sq. m.*2= 200 sq.m	2370.42 sq.m	Proposed at location Haldukhhal System-1 Treatment plant -2, Pump house control room-1, Tube well-2, Generator House-1 Guard Quarter-1, recharge ponds and a boundary wall is proposed around the facility Additional WUSC land available at Haldukhhal System-1 Haldukhhal, location will be used for future expansion as and when required.
Treatment plant -2	DMA System-1 Haldukhhal	7		Municipality/WU SC		400 sqm		
Proposed R.C.C Overhead tank-1	DMA System-1 Haldukhhal	7		Municipality/WU SC	450 cum.	400sq.m		
Pump house control room-1	DMA System-1 Haldukhhal	7		Municipality/WU SC		400 sq.m		
Generator House-1	DMA System-1 Haldukhhal -1	7		Municipality/WU SC		100 sq.m		
Guard Quarter-1	DMA System-1 Haldukhhal	7		Municipality/WU SC		100 sq.m		
Total Required Land						1600 sq.m		

Table IV - 2: Land Availability and Ownership - Proposed Project structures at Purnagiri Town Project - Haldukhhal System-2

Component	Location	Municipality Ward No.	Service Area	Land ownership	Capacity/ Length	Minimum land reqd.	Land area available	Remarks
Tube well-2	DMA System-2 Haldukhal,	7	Baijanath, Bajnath, Bhagbhati, Bhagwoti, Dhakriti, Jagadamba, Jagrati, Kherani, Kishan, Kishanmarg, Krishnasudham, Krishnasudhama, Madhuban, Navadurga, Navadurga, Madhuban, Negi,Parbati, Pashupati, Pragati,	Municipality/W USC	2x20.12=40.24 lps	100sq. m.*1=100 sq.	677.3995 sqm	Proposed at Haldukhal System-2 location- Tube well-1 Office Building-1 and Generator House-1 are proposed at the location; a boundary wall is proposed around the facility .
Generator House-1	DMA System-2 Haldukhal,	7		Municipality/W USC		150 Sq m.		
Guard House-1	DMA System-2 Haldukhal	7		Municipality/W USC		150 Sq m		
Office Building-1	DMA System-2 Haldukhal	7		Municipality/W USC		250 Sq m		
Total Required Land						650sq.m		

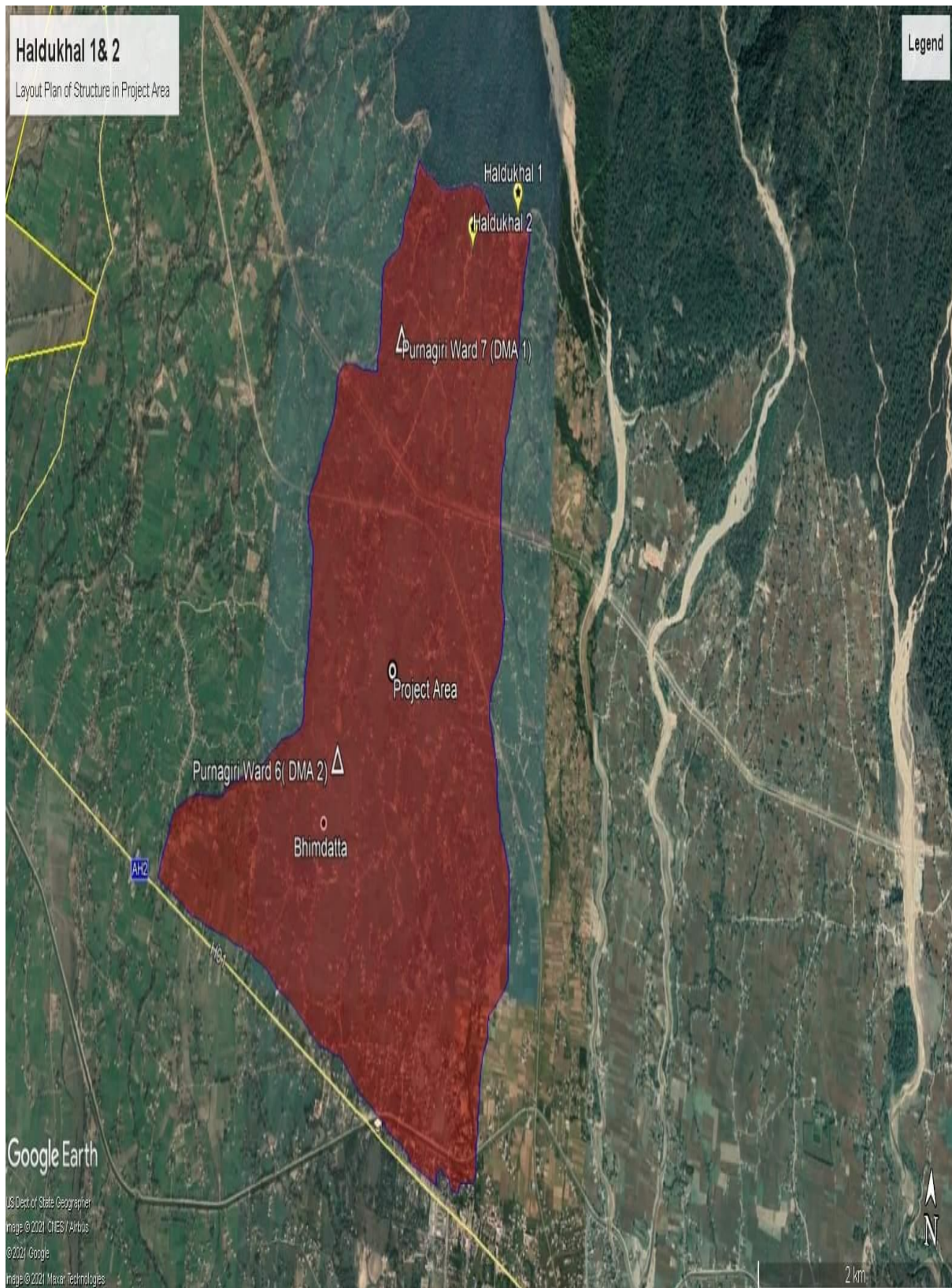


Figure IV - 1: Map showing major components of the proposed Purnagiri water supply project (Project area, reservoirs)

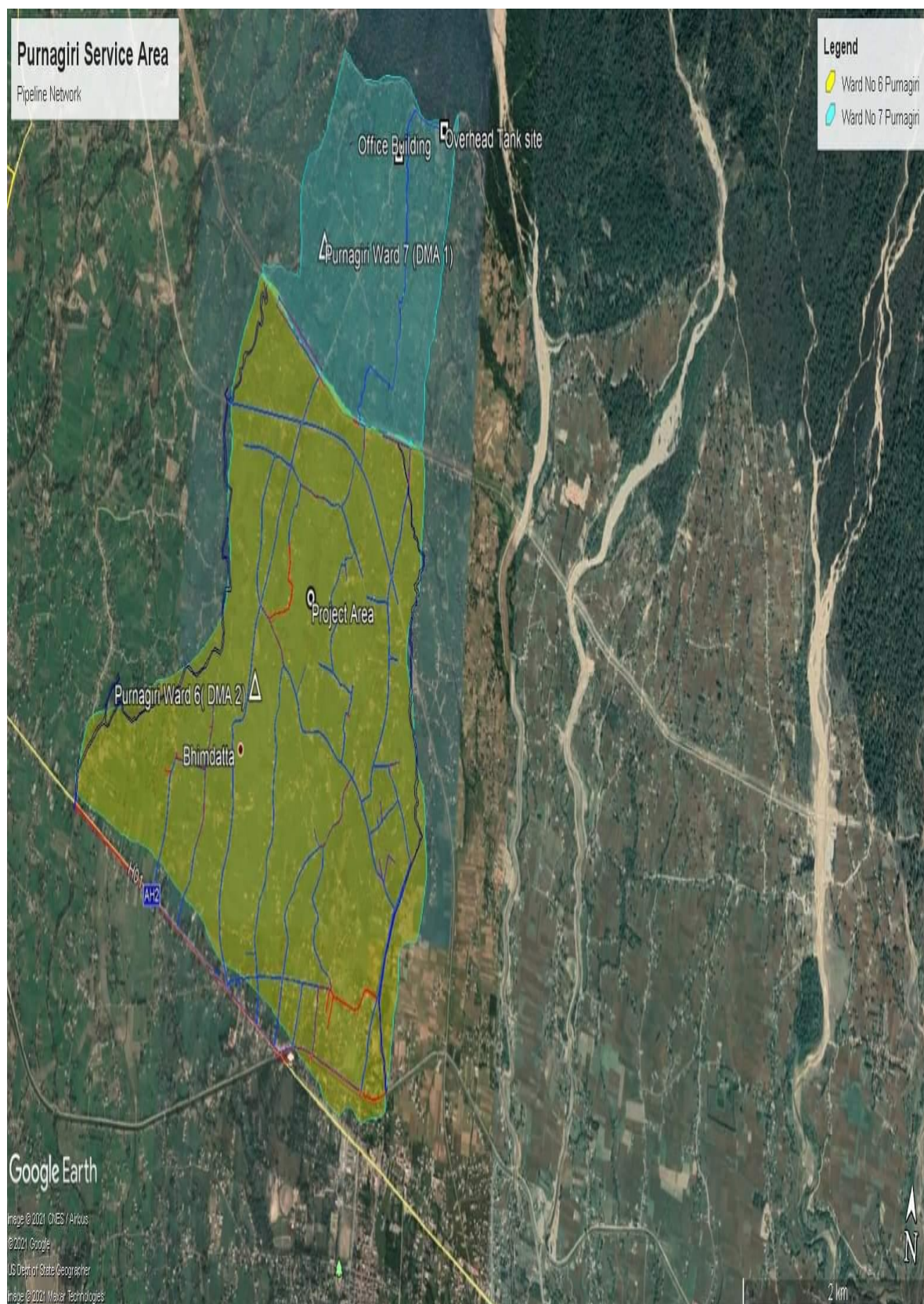


Figure IV - 2: Map showing distribution pipeline

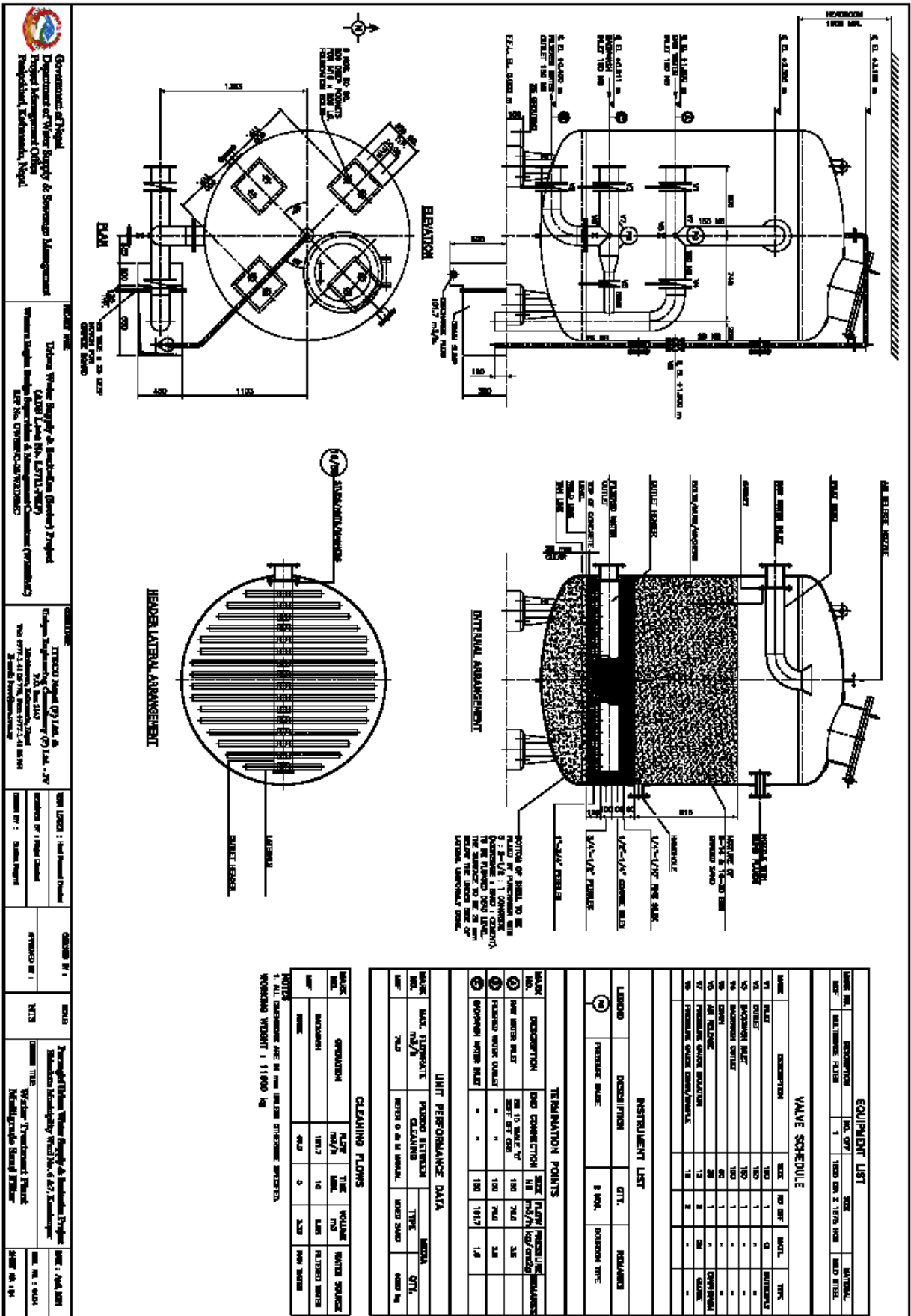


Figure IV - 3: Map showing while Schematic Layouts of Treatment Plant



Figure IV - 4: Map showing while Schematic Layouts of Site Plan (Haldukhal-1)



Figure IV - 5: Map showing while Schematic Layouts of Site Plan (Haldukhal-2)

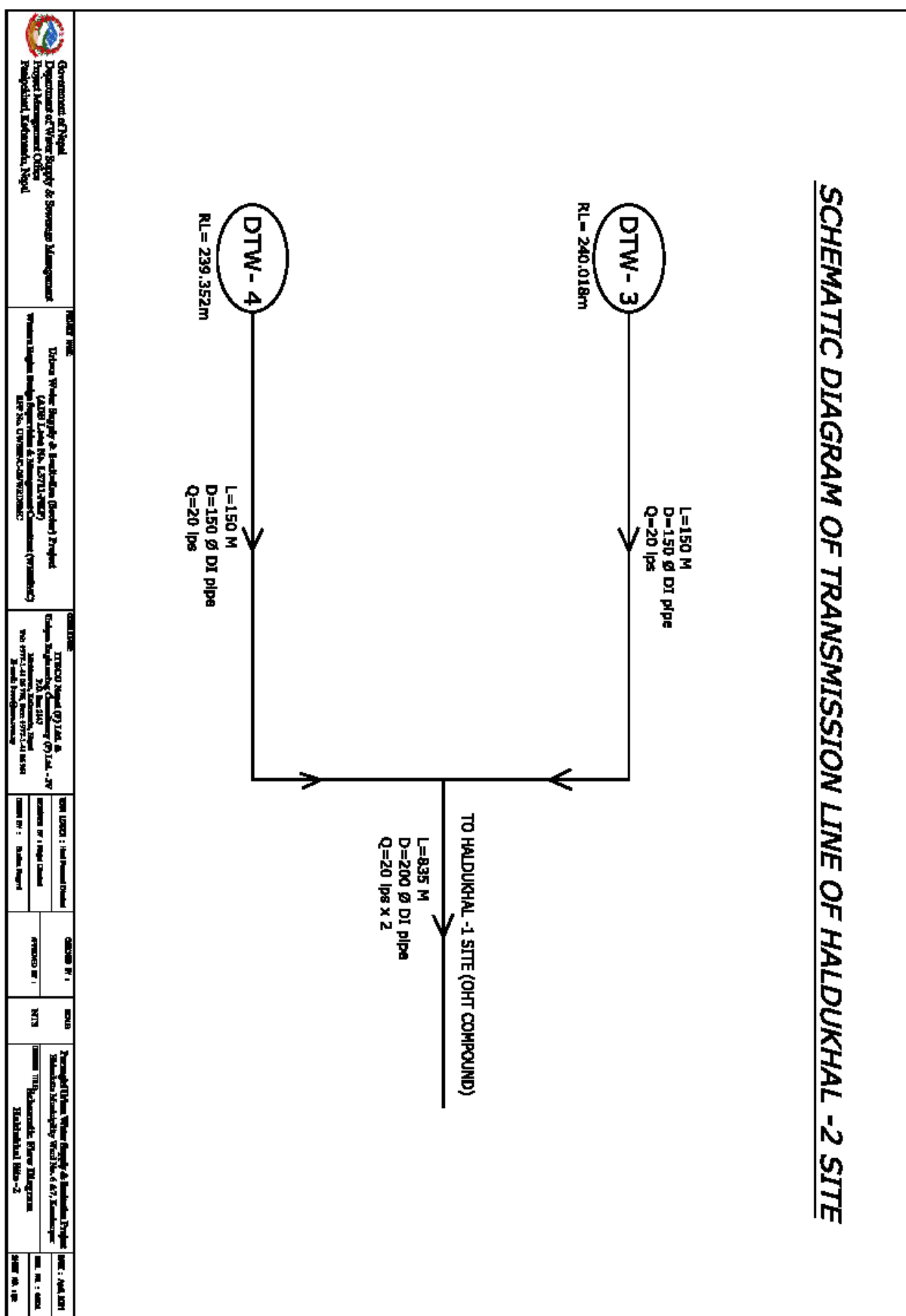


Figure IV - 6: Schematic flow diagram of transmission line of Haldukhal-1

SCHEMATIC DIAGRAM OF TRANSMISSION LINE OF HALDUKHAL -1 SITE

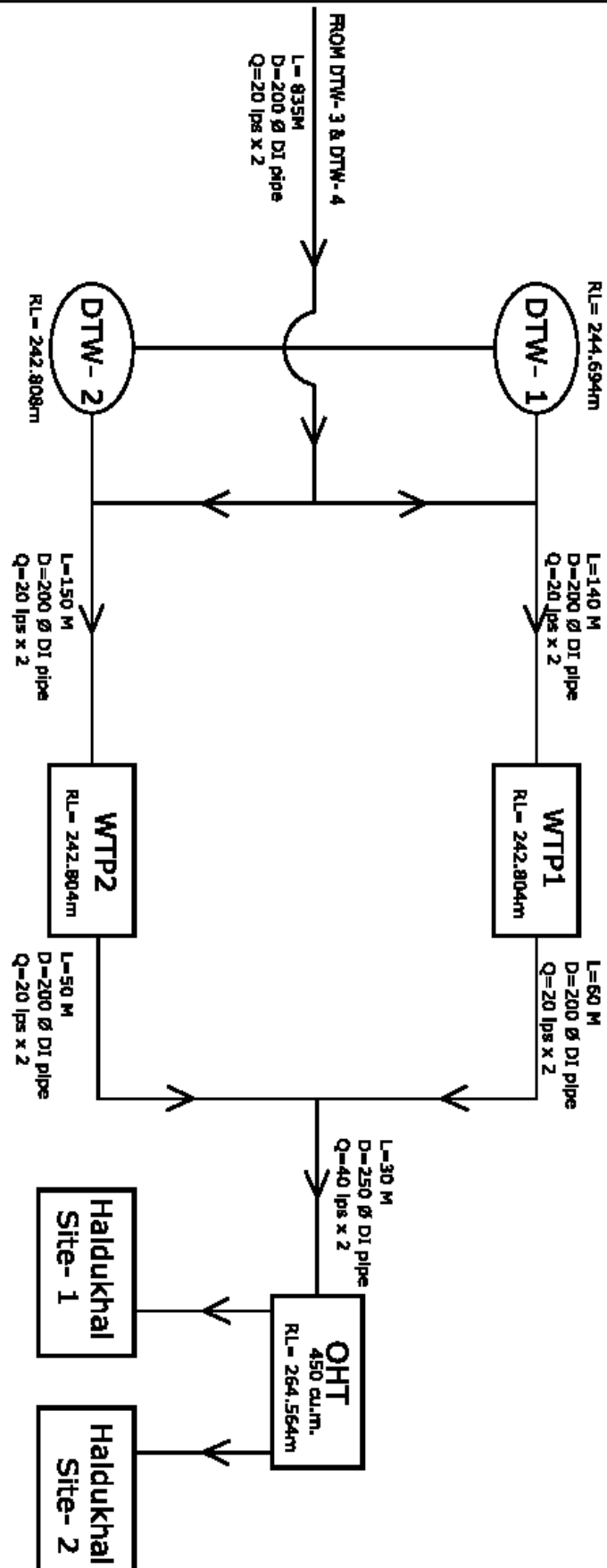


Figure IV - 7: Schematic flow diagram of transmission line of Haldukhal-2

61. The proposed **transmission (1.53 km) and distribution pipelines (66.02 km)** pass through existing public roads is shown in Figure 6. Pipe diameters will range from 50 mm to 250 mm. Distribution lines are proposed on both sides of the main road. No necessity for full closure of roads is identified. Temporary impacts on traffic/access to shops and residences are possible during construction; however, these will be mitigated through provision of adequate signage, careful traffic management, and by ensuring access to properties through simple measures such as provision of pedestrian planks, night works for congested stretches etc. No income loss is anticipated.
62. Proposed 25 valve chambers and 20-pipe valve chamber will be within the excavation trenches for the distribution network (public roads and public foot trail). The foot trail has been constructed by Municipality. The public road and public foot trail will be restored after laying of pipeline and access ensured as before, hence no permanent IR impacts are anticipated. Six fire hydrants are proposed, and their exact locations are not known yet; temporary impacts on traffic/access to properties during construction, similar to those for distribution network are possible and will be mitigated as discussed above. Provision of house connections may cause temporary disruptions in access to residences during construction. The contractor will be required to maintain access for the community and households.
63. One number of toilets has been proposed; on public land at near the ward office-7. The proposed lands are vacant, without any squatters, encroachers or users (persons or institutions); hence, no IR impacts are anticipated. Table IV - 3 provides details of land availability and ownership of proposed sanitation components.

Table IV - 3: Land Availability and Ownership – Proposed Sanitation Interventions

S.N.	Component	Land ownership	Minimum Area Required	Area Available
1	Public Toilet-1 (Near Ward Office-7)	Mahakali Jansewa Ma. Bi. School	100 sqm	169.3sqm

B. Involuntary Resettlement

64. As mentioned in ADB's Safeguard Policy, the involuntary resettlement safeguards basically covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.
65. About 1,800 square meter of land for construction of different project components is required, which has been identified and obtained by WUSC at different sites as required. All of the sites are barren Public/Government land. For the public land use, WUSC has received consent letter from the Municipality. No settlement will be adversely affected and no need of physical displacement. The adverse impact of the project is nil and no need of

compensation. The details of land requirement and Involuntary Resettlement/Indigenous Peoples impacts are discussed below under separate section- Land Availability and Resettlement Impact.

C. Indigenous Peoples

66. According to the ADB's Safeguard policy, the Indigenous Peoples safeguards are activated if a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of Indigenous Peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use, occupy, or claim as an ancestral domain or asset. The term Indigenous Peoples is used in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing the characteristics such as self-identification as members of a distinct indigenous cultural group; geographically distinct habitats or ancestral territories; distinct customary cultural, economic, social, or political institutions; and a distinct language.

67. The field observation reveals that all the settlements/clusters in the service area are heterogeneous in terms of caste/ethnicity and no specific territory of indigenous people has been observed. The service area is densely populated by Brahmin/Chettry community which is 86.46%, 9.09% are Dalits. 4.07% of population in the service area belongs to the indigenous group. In the context of service area, belonging to the indigenous group does not necessarily mean that they are underprivileged. The WUSC policy and rules reflect that all are treated equally and there is no discrimination on receiving water supply service based on ethnicity and caste. Universal coverage (100%) is applied for distribution within the service area. Most of the indigenous people are highly benefited by the project rather than adverse impact. It is the basic norms of the UWSSP. This will be ensured by the project's framework for inclusion of poor and vulnerable. No physical displacement and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) of indigenous people is anticipated as a result of land acquisition. Therefore, Indigenous People Plan is not required for this subproject.

D. Mitigation Measures

68. Impacts on structure are not anticipated at any of the identified sites or alignments for water supply proposed in Purnagiri subproject. Temporary impacts of distribution network along the public road within rights of way of government road and 2,858 house connections are limited to potential access disruptions for shops and residences during construction, which will be avoided through good engineering practice.

69. The contractor will undertake construction on one side of the road first and upon completion of the same, start work on the other side to minimize the impact on traffic. The contractor will have to ensure access to shops and residences using simple wooden walkways where necessary and limit the excavation to a length of 500 m at a time. Hence, loss of livelihood due to temporary loss of access is not envisaged.

70. To minimize disruption where deep trenches and valve chambers are to be constructed, Contractor will ensure use of barricade and signage indication caution of ongoing construction work to avoid potential accidental risks. The contractor will be accountable to provide signage at appropriate locations indicating road closure or available alternate access routes to minimize traffic disruptions. Contractors are responsible for providing Personal Protective Equipment (PPE) to workers and monitor the proper use of it in the site. The detail mitigation measure of the proposed sub project components are given below.

Table IV - 4: Socio-economic Environment and Mitigation Measures

Socio-economic Environment	Mitigation Measures
Public Health and Safety	- Debris generated should be disposed of properly in designated disposal site/s - Monitoring of air, water, noise and soil should be conducted to crosscheck environmental condition and to take necessary mitigation measures if required
Threat of Accidents	The Contractor will provide, erect and maintain barricades, including signs marking flats, lights and flagmen as required in the project during construction phase
Temporary Loss of Access	The construction works should not interfere with or cause inconvenience to public or restrict the access to use of properties whether public or private.
Road Safety and Construction Safety	
Traffic Control and Safety	- Detailed Traffic Control Plans should be prepared. The traffic control plans should contain details of arrangements for construction under traffic and details of traffic arrangement after cessation of work each day. - The Contractor shall take all necessary measures for the safety of traffic during construction and provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as may be required for the information and protection of traffic approaching or passing through the section of the road under improvement.
Risk from Construction Work	- The Contractor is required to comply with all the precautions as required for the safety of the workers as per the International Labour Organization (ILO). - The Contractor shall supply all necessary safety appliances such as safety goggles, helmets, masks, etc., to the workers and staff.

Socio-economic Environment	Mitigation Measures
	• The Contractor has to comply with all regulation regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress. • No child labour shall be utilized in the project
Risk from Electrical Equipment	• Adequate precautions should be be taken to prevent danger from electrical equipment. • All necessary fencing and lights will be provided to protect the public.
Risk at Hazardous Activity	• All workers employed on mixing asphaltic material, cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles. • Workers, who are engaged in welding works, would be provided with welder's protective eye-shields. Stonebreakers will be provided with protective goggles and clothing and will be seated at sufficiently safe intervals. • The use of any toxic chemical shall be strictly in accordance with the manufacturer's instructions.
Risk caused by 'Force' Majure	• All reasonable precaution will be taken to prevent danger of the workers and the public from fire, flood, drowning, etc. All necessary steps will be taken for prompt first aid treatment of all injuries likely to be sustained during the course of work.
First Aid	• At every workplace, a readily available first aid unit including an adequate supply of sterilized dressing material and appliances will be provided. • Suitable transport should be provided to bring injured or ill person(s) to the nearest applicable hospital.
Health and Hygiene	• Latrines in construction/labor camp should be provided with septic tank. • The septic tank should be cleaned periodically. • The effluents can be diverted for horticulture inside the camps. • Workers must have access to potable water. • Garbage bins must be provided in the camps and regularly disposed off in a hygienic manner. • Adequate health care facility should be provided for the work force. Unless otherwise arranged for by the local sanitary authority, the local medical health or municipal authorities.

Socio-economic Environment	Mitigation Measures
	On completion of the works, all such temporary structures shall be cleared away, septic tank and other disposal pits should be filled in environmentally acceptable manner

Table IV - 5: Proposed sub-project components in Purnagiri Water Supply and Sanitation Project, Kanchanpur District and their involuntary resettlement impact status

S.N	Components	Capacity	Unit (No.)	Length	Land ownership	IR Impact	IP Impact	Document Detail
1	Tube well-4	4x20.12=80.36 lps	4		WUSC/ Municipality land	Municipality /Government land. Vacant barren land. No objection letter received from Municipality. No nontitle users and squatters. No involuntary resettlement and indigenous people's impacts anticipated.	None	Approval letter received from Municipality Ward No.7 Annex:1 a
2.	Treatment plant		2		WUSC/Municipality land	Vacant, WUSC/Municipality land without any settlement/ squatter/ cultivation or other use	None	
3.	Proposed R.C.C Overhead tank	450 cum.	1		WUSC/Municipality land	Vacant, WUSC land without any settlement/ squatter/ cultivation or other use	None	
4.	Pump house control room-1		1		WUSC land	Vacant, WUSC land without any settlement/ squatter/ cultivation or other use	None	
5.	Generator House-1		1		WUSC land	Vacant, WUSC land without any settlement/ squatter/ cultivation or other use	None	
6.	Guard Quarter-1		1		WUSC land	Vacant, WUSC land without any settlement/ squatter/ cultivation or other use	None	
7.	Office Building-1		1		Municipality/WUSC land	Vacant, WUSC land without any settlement/ squatter/ cultivation or other use	None	
8.	Transmission main	150 mm DI Pipe-566.50 m	1	1.53km	Road RoW (public land)	Transmission main passes through unused/vacant/barren public lands.	None	Approval letter received from Municipality Ward No.7 Annex:1 a
		150 mm DI Pipe-968 m.	1					
L 9.	Distribution Pipeline		1	66.028 km	Road RoW (public land)	Pipelines pass through existing road RoWs (government roads). Temporary impacts on traffic/access to shops and residences anticipated in some places. Contractor to provide signage indicating available alternate access route to minimize traffic disruptions. Contractor will have to ensure access to shops and residences as per EMP provisions.	No additional impacts on IPs other than temporary access disruptions identified as IR impacts for all people in	Approval letter received from Municipality Ward No.7 Annex:1 a
		75 mm PE-100 PN-6	1	12335.70				
		90 mm PE-100 PN-6	1	4670.24				
		110 mm PE-100 PN-6	1	6223.01				
		125 mm PE-100 PN-6	1	3362.74				
		140 mm PE-100 PN-6	1	2409.95				

S.N	Components	Capacity	Unit (No.)	Length	Land ownership	IR Impact	IP Impact	Document Detail
		160 mm PE-100 PN-6	1	3161.18.			coverage area. None	
		180 mm PE-100 PN-6	1	1869.11				
		200 mm PE-100 PN-6	1	2210.52				
		225 mm PE-100 PN-6	1	637.51				
		250 mm PE-100 PN-6	1	8040.05				
		50 mm PE-100 PN-6	1	14607.81				
		63 mm PE-100 PN-6	1	6499.81				
10	Fire hydrant		6		Road RoW (public land)	Same as above	Same as above	
11.	Valve chambers of Type-II (900x900x1000)		25		Road RoW (public land)	Same as above	Same as above	
12.	Pipe Valve Chamber		20		Road RoW (public land)	Same as above	Same as above	
13	Household connections HDPE Pipe Size-20 mm		2,858		-	During construction period, access to residences and shops likely to be temporarily affected. Contractor will have to ensure access as per EMP provisions.	Same as above	
Sanitation								
14.	Public toilet 1		1		School/Municipality land	The proposed land is located in Bhimdutta Municipality; ward no 7 near the ward office. Adequate (169 sqm) land is available. Vacant, unused land; no IR impact anticipated (Consent letter of ward committee attached)	None	Annex-1

V. CONCLUSIONS

A. Summary and Conclusions

71. Deep Tubwell, Overhead Tank (OHT), pressure filter plant site, office building and Generator house construction sites are identified. The water supply components are proposed to be constructed in the land owned by Municipality/GoN land. The distribution network will be on government land (RoW of government roads). The proposed water supply project of the municipality is not assessed to have any significant impact on private or institutional land. It is not likely to have any impacts on private or public structures. The subproject is assessed not to have any impact on land and livelihood of poor and vulnerable people. It is clear that all identified sites are within clear boundary line.
72. The impacts of project construction activities will be minimal and no need of physical displacement (relocation, loss of residential land, or loss of shelter) and no economic displacement (loss of assets, access to assets, income sources, or means of livelihoods). About 1800 square meters land is required at two different locations for construction of project structures such as OHT, Treatment plants, Guard house, Generator house, and Office building.
73. For the use of public/government land, WUSC has received consent letter from Municipality which is appended to this report (Annex-1). There is no permanent involuntary resettlement and indigenous people's impact due to construction works. Any unanticipated involuntary resettlement impacts found during project implementation shall be addressed as per the agreed entitlement matrix in the Resettlement Framework.
74. The composition of community by caste/ethnicity is heterogeneous in nature. Diversity of culture, custom, tradition, norms and values are existing in the project area. The household survey of the sub project area reflects the cross section of major ethnic groups of the country. Brahmin and Chhettri, comprising of 86.46% % of total families, are the most prevailing caste group in the service area. Dalits are the next major group with 9.09%, followed by Janajati, which constitutes about 4.07%.
75. The WUSC policy and rules reflect that all are treated equally and there is no discrimination on receiving water supply service based on ethnicity and caste. The project's framework for inclusion of poor and vulnerable households in project benefits will ensure that all indigenous people's households are included in project benefits. The project ensures 100% household water connections (including to indigenous peoples' households). Furthermore, there is a provision of Output Based Aid program which include poor Indigenous people's households for tap connection and toilet construction for those who do not have household toilets.
76. There will be no adverse Involuntary Resettlement and Indigenous People impact from the construction activities such as Guardhouse, Generator house, 4 deep boring at two different location in two different sites (Haldookhal-1 and Haldookhal-2), distribution lines,

valve chambers and treatment facilities. All the proposed location and alignments are located in public places or along the right of way of roads.

B. Next Steps

77. Any unanticipated IR impacts found during project implementation shall be addressed as per the agreed entitlement matrix in the Resettlement Framework.

APPENDIXES

Appendix-1: Recommendation and Approval Letter from Municipality

Appendix-2: Minutes of Meeting (Precise Translations with attendance sheet)

Appendix-3: Social Safeguards Screening Checklist

Appendix- 4: Approved Below Poverty Line Calculation Sheet

Appendix -5: Suggested Format for Record Keeping of Grievances

Appendix-6: Photographs

**Appendix – 1 a: Approval Letter from Municipality for Water Supply
Construction Work**

"सन्तुलित वातावरण मुशामन सहितको समाजवाद उन्मुख समृद्ध नगर, कृषि, पर्यटन तथा प्रविधिमा आधारित अर्थतन्त्र विकासको आधार"



भीमदत्त नगरपालिका नगर कार्यपालिकाको कार्यालय

कञ्चनपुर
सुदूरपश्चिम प्रदेश, नेपाल



सम्पर्क नं. ०९९-५२११६७
टोल फ्री नं. १६६०९९५२१११

मिति:- २०७८/०१/१३

प.सं.: २०७७/०७८

च.नं.: ६८८८

श्री शहरी खानेपानी तथा सरसफाई (क्षेत्रगत) आयोजना
क्षेत्रीय आयोजना व्यवस्थापन कार्यालय,
नेपालगञ्ज बाँके।

बिषय:- निर्माण अनुमती दिएको सम्बन्धमा।

प्रस्तुत बिषय सम्बन्धमा तंहा कार्यालयले यस भीमदत्त नगरपालिका अन्तर्गत वडा नं. ६ र ७ मा प्रस्ताव गरिएको पूर्णांगिरी शहरी खानेपानी आयोजनाको लागि पाईप साईड खन्ने र बिच्छयाउनुका साथै ओभरहेट ट्यांकी, गार्ड हाउस, अफिस भवन, फिल्टर प्लान्ट, जेनरेटर हाउस, डिप ट्युबेल होल आदी संरचना निर्माणको लागि यस भीमदत्त नगरपालिका वडा नं. ७ हल्दुखाल स्थित जग्गामा निर्माण गर्न अनुमती प्रदान गरिएको व्यहोरा अनुरोध छ।

१३/०१/८८

पुस्कर प्रसाद भट्ट
प्रमुख प्रशासकीय अधिकृत

b. Approval Letter from Municipality for Water Supply Construction Work

Bhimdatta Municipality
Municipal Executive office
Kanchanpur, Sudur Paschim Province, Nepal

Date: 26 April 2021

To,
The Project Management Office,
Urban Water Supply and Sanitation (Sector) Project
Regional Project Management Office
Nepalgunj, Banke

Subject: Regarding the permission for the construction of Purnagiri W/S Project

Regarding the above mentioned subject, we hereby give permission to construct various structures like pipeline laying, Overhead Tank, Guard House, office Building, Filter Plant, Generator House and Deep Tube-well under the proposed Purnagiri Urban Water Supply and Sanitation Project Bhimdatta Municipality ward no.6 and 7.

Puskar Prasad Bhatta
Chief administrative officer



भीमदत्त नगरपालिका ७ नं. वडा कार्यालय

हल्दुखाल, कैलाली जिल्ला, नेपाल
सुदूरपश्चिम प्रदेश, नेपाल



पत्र सं.ख्या : ०७७०७८

मिती : २०७८।०९।२६

चलानी नं : १५८३

विषय : निर्णय गरि पठाएको वारे ।

श्री आयोजना व्यवस्थापन कार्यालय
पानीपोखरी , काठमाण्डौ

प्रस्तुत विषय सम्बन्धमा मिती २०७८।०९।२६ गते का दिन यस वडा कार्य समितीको बैठकको निर्णय अनुसार पुर्णागिरी खानेपानी उपभोक्ता समितीलाई आवश्यक टयाङ्की, कुरुवा घर, अफिस भवन ,डिप वोरिङ्गहरु , पम्प हाउस , प्रिसेर फिल्टर, जेनेरेटर घर , सार्वजनिक शौचालय निर्माण गर्न तपशिल बमोजिमको क्षेत्रफल भएको यस भीमदत्त नगरपालिका वडा नं.०७ भित्र पर्ने सार्वजनिक जग्गाहरु उपलब्ध गराउने निर्णय भए अनुसार सिफारिस गरिएको व्यहोरा अनुरोध छ ।

तपशिल

१. साविक नेपाल सरकार वैजनाथ टोलमामा रहेको क्षेत्रफल ७ कट्टा सरकारी प्रति जग्गामा ओभरहेड टयाङ्की, डिप वोरिङ्ग, कुरुवा घर, जेनेरेटर घर , पम्प हाउस, प्रिसेर फिल्टरको लागि प्रयोग गर्न सकिने ।
२. साविक नेपाल सरकार वैजनाथ टोलमामा रहेको क्षेत्रफल २ कट्टा सरकारी प्रति जग्गामा २ वटा डिप वोरिङ्ग र कार्यालय भवनको लागि प्रयोग गर्न सकिने ।
३. यस वडा को मध्यविन्दुमा रहेको महाकाली जनसेवा माध्यमिक विद्यालयको १० धुर जग्गामा सार्वजनिक शौचालय बनाउन को लागि जग्गा प्रयोग गर्न सकिने ।

२०७८/०९/२६

शंकर कुँवर
वडा अध्यक्ष

सम्पर्क नं. ०९९५२३२८१

Email: bheemdatt.ward7@gmail.com
Website: <https://bheemdattamun.gov.np/ne>

Bhimdatta Municipality
Municipal Executive office
Kanchanpur, Sudur Paschim Province, Nepal

Date: 09 May 2021

Subject: Decision

To,
The Project Management Office,
Panipokhari, Kathmandu

This is to inform you that the municipality ward no.7 recommends to provide the following Government/public land at ward no 7 to Purnagiri Water Users Sanitation Committee for the construction of water tank, guard house, generator house, Office building, pressure filter etc. by the decision of executive committee of this Ward Committee office on 09 May, 2021,

Detail

S.N.	Location	Area	Land Ownership	Purpose
1	Haldukhali-7	7 Kattha	<u>GoN/Municipality</u>	Overhead Tank, Pressure Filter, Guard House Generator House, Deep Tubewell
<u>2</u>	Haldukhali-7	7 Kattha	<u>GoN/Municipality</u>	Office Building, Deep Tubewell, Generator house
3.	Haldukhali-7	10 Dhur	<u>Mahakali Jansewa Ma. Bi.</u>	Public Toilet

Shankar Kuwar

Ward Chairman
Bhimdatta Municipality-7

c. Committee Registration certificate

**भीमदत्त नगरपालिका**
नगर कार्यपालिकाको कार्यालय



दि २०७०/०८/२८

खानेपानी उपभोक्ता संस्था दर्ता प्रमाण पत्र ७०८९९

खानेपानी तथा सरसफाई उपभोक्ता समिति व्यवस्थापन कार्यविधि २०७० को दफा ८ बमोजिम श्री पुष्पांजलि शर्मा
र खानेपानी उपभोक्ता तथा सरसफाई समिति अ. नं. ६ लाई सुचिकित्सित दर्ता गरिन्छ ।


तयार गर्ने

प्रमाणित गर्ने
दस्तावेज
नाम: 
पद: प्रमुख प्रशासकीय अधिकृत

Appendix – 2: Minutes of Meeting (Precise Translations with attendance sheet)

Meeting Minute Date: 2077-06-13 (Sept. 29, 2020)

DATE: _____

आज मिति २०७७ साल जेठ १३ गतेका दिन यसकोचिपरी
पुनर्गठन तथा सदस्यकार्ड उपमेला समितिको ~~सम्मेलन~~
सँग भएर उपलब्धता कार्य क्रममा निम्न सहभागिता ला
रहेको थियो।

उपस्थिति

१. देवेन्द्र राजा ठुङ्गा (अध्यक्ष/संगीत/सोपाना) *Signature*
२. शैका प्रिय कुँवर (वाडा अध्यक्ष/वार्ड नं. ६) *Signature*
३. अमर सिंह धामी *Signature*
४. गीरी प्रसाद शर्मा - SSE - ITILO/UNEC *Signature*
५. राजेन्द्र श्रेष्ठ - SD/GESI Specialist - *Signature*
६. उत्तम नरसु (वाडा) *Signature*
७. गरिष्ठ व. अधिकारी *Signature*

दलफलका विषयवस्तु र निष्कर्ष

१. सामाजिक तथा सुनिश्चित सेवाको र जीविकोपार्जन सफा
उपमेला समिति र वार्ड समितिको आवश्यक सहयोग
गर्ने निर्णय गरियो।
२. जम्मा उपलब्धताको सम्बन्धमा दलफल गर्दा जम्मा
समितिको तर्फबाट उपलब्ध गराउने प्रतिबद्धता
थियो।
३. २-१. यसमा जम्मा गर्ने समिति ^{वाडा} प्रतिबद्धता
थियो।
४. सामाजिक तथा आर्थिक सुव्यवस्था लाई वार्ड
समितिको आवश्यक सहयोग गर्ने प्रतिबद्धता
थियो।

Signature

English Translation for the Minutes of Meeting

Today dated September 29 2020, the following mentioned participants are present in the meeting organized of Purnagiri Urban Water Supply and Sanitation Committee.

Meeting Minute Date: 2077-06-13 (Sept.29, 2020)

Attendance Sheet:

S.N.	Name	Designation	Remarks
1.	Devendra Raj Dhungana	WUSC Chairman	
2.	Shankar Singh Kuwar	Ward Chairman-7	
3.	Amar Singh Dhami	Surveyors	
4.	Uttam Bahadur Bohara	Water Users	
5.	Gauri Prasad Sharma	Social Safeguard Specialist	
6.	Rajendra Shrestha	Social Development Specialist	
7.	Narendra Bahadur Adhikari	Water Users	

Discussion Agenda and Decision

- Regarding socioeconomic and detail engineering design survey
- Regarding acquisition of land
- Regarding upfront cash (5%)collection
- Cooperate and coordination during socio -eco survey period

3

आज मिति २०७८ साल कुम्भिवन १२ गते वृत्तमन्त्रिणाहरू हुन
यस प्रयोगी रगतनानी तथा सरस्वती आयोगहरूको
अन्तर्गत कार्यक्रममा निम्न उपस्थिति रहेको थियो।
स्थान:- श्री मेराली जनसेवा माफि वार्ड नं. ८ भित्र।

उपस्थिति

- | | |
|--------------------------------------|--------|
| १. देवेन्द्र कुमार् प्रयोगी रगतनानी | सहभागी |
| २. शंकर कुमार् मिश्रा ०६ वडा अध्यक्ष | सहभागी |
| ३. उनाम क. बोहरा | सहभागी |
| ४. हरि सिंह धामी | सहभागी |
| ५. विपश बोहरा | सहभागी |
| ६. रेवाना धामी | सहभागी |
| ७. सुविता चन्द | सहभागी |
| ८. हरीश कुमार् | सहभागी |
| ९. लोकेन्द्र चन्द | सहभागी |
| १०. विनोद धामी | सहभागी |
| ११. दिपेश सिंह | सहभागी |
| १२. गौरी पन्त | सहभागी |
| १३. श्याम धामी | सहभागी |
| १४. विष्णु राज जोशी | सहभागी |
| १५. दिपक व. विष्ट | सहभागी |
| १६. गरिष्ठ व. अधिकारी | सहभागी |
| १७. सरस्वती देवी नेपाली | सहभागी |
| १८. लोका बोहरा | सहभागी |
| १९. समर ज्ञान वहाडा | सहभागी |

हस्तक्षेप विषयहरू

१. शहरी रगतनानी आयोगहरूको वृत्तमन्त्रि र कार्य प्रक्रिया बारे
STECO/UNEC परामर्शदाताहरूले तर्फबाट सामाजिक विकास
विज्ञ श्री राजेन्द्र प्रसाद सामाजिक सुरक्षा विज्ञ
श्री मोदी प्रसाद शर्माले आयोजनाको अवगति प्राप्त
सम्बन्धमा जानकारी गराउनु भयो।

૨. રાષ્ટ્રીય સ્તરે આયોજવાશે કાર્યાલયના પદ્ધતિ અંતર્ગત સામગ્રીનું તથા ઉપરોક્ત સર્વેક્ષણ ૨ પ્રતિબંધિત સર્વેક્ષણ માં ઉપસ્થિતિ હોવાપસ સ્થિતિપત્ર દ્વારા નિર્ધારિત પદ્ધતિ પ્રતિબંધિત વોર્ડ વોર્ડ ~~સર્વેક્ષણ~~ ઉદ્યોગ - વોર્ડ નં - ૯ સી ડુઅલ મુવરેલ ખાતે ગરબુ થશે.
૩. આયોજનાને સરપંચ નિમંત્રણ આપી ઉપસ્થિતિ હોવા પ્રતિબંધિત થકા ગણીશે.
૪. આયોજનાના લક્ષ્યો અંગે મુદ્દા જમા ગણીશે અને મુદ્દા રકમ જમા ગણી પ્રતિબંધિત થકા ગણીશે.

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English Translation for the Minutes of Meeting

Today dated October 1 2020, the following mentioned participants are present in the meeting organized of Purnagiri Urban Water Supply and Sanitation Committee.

Meeting Minute Date:2077-06-15 (Oct.1,2020)

Attendance Sheet:

S.N.	Name	Designation	Remarks
1.	Devendra Raj Dhungana	WUSC Chairman	
2.	Shankar Singh Kuwar	Ward Chairman-7	
3.	Uttam Bahadur Bohara	Water Users	
4.	Har Singh Dhami	Ward Chairman-6	
5.	Deepesh Bohara	Water Users	
6.	Rewati Dhami	Water Users	
7.	Narendra Bahadur Adhikari	Water Users	
8.	Sunita Chand	Water Users	
9.	Harish Kuwar	Water Users	
10.	Lokendra Chand	Water Users	
11.	Binod Dhami	Water Users	
12.	Deepesh Singh	Water Users	
13.	Gauri Panta	Water Users	
14.	Roopa Dhami	Water Users	
15.	Bibek Raj Joshi	Water Users	
16.	Deepak Bahadur Bista	Water Users	
17.	Narendra Bahadur Adhakri	Water Users	
18.	Sarswati Deve Nepali	Water Users	
19.	Laxmi Bohara	Water Users	
20.	Samar Jung Bahadur Chand	Water Users	

Discussion Agenda and Decision

1. Project information Dissemination
2. Cooperation with socioeconomic and detail engineering design survey period
3. Land Availability for the Construction of Structure
4. Regarding upfront cash (5%)collection

- 13 -

22	इंद्र काशी	मि
28	मोहनी	मोहनी
22	कलसा देवि बड	कलसा
26	नारु सिद्ध	नारु
26	दिक वं विष्ट	दिक
22	पावति नट	पावति
29	अमर काशी	अमर
30	राजेश शुभ	राजेश
39	राजराज जोरवेर	राजराज
39	अमर वं चामी	अमर
39	निरजल ठकाल	निरजल
38	राधिका मिष्टकाकी	राधिका
34	विनाश श्रु	विनाश

दलपालका विषयवस्तु र निर्णय

१) यस पूर्णगिरी स्वतन्त्रता तथा सुरक्षार उद्योगको समितिकाल प्रस्तावित भएको तथ्यांकगत तथ्यांक पालिका पार्स नं- 6 तहसुलमा रचनाको संरचना निर्माण गर्दा कुनै पनि किसिमको सामाजिक तथा वातावरणीय रूपमा कुनै प्रतिकूल असर नपरेको व्यहोरा सर्वसम्मति ले निर्णय गरियो।

२) आयोजना निर्माण गर्दा संरचना निर्माण स्थल तथ्यांक रूको सिद्ध सामुदायिक बतल चर्चको दोषहरू र बतलले कुनै पनि किसिमको असर नपरेको व्यहोरा जानकारी गराइयो।

३) आयोजना संरचना निर्माण गर्ने समयमा एक OHA (ONH) ले तथ्यांक निर्माणको लागि जग्गामा आवश्यक पर्ने दुनोले प्रमाणित पत्र प्राप्त गरी परामर्शदाता तह जानकारी गराइने निर्णय गरियो।

४) आयोजना निर्माण क्रममा संरचनाको लागि प्राप्त गर्नु पर्ने जग्गा र जग्गा सम्बन्धी सम्पूर्ण कानूनी कानूनको परामर्शदाता तह उपलब्ध गराइने निर्णय गरियो।

- ② अधीनता को हटाने प्रस्तावित गोरख को सार्वजनिक स्टाचालक निर्माता
 स्वयं वार्ड नं 6 (पूर्व मार्गट मंडलिक) में संस्था कागज पर
 उपलब्ध गराइनु पने निर्णय गरीयो।

हेम राज मंड

English Translation for the Minutes of Meeting

Today dated November 25 2020, the following mentioned participants are present in the meeting organized of Purnagiri Urban Water Supply and Sanitation Committee.
Meeting Minute Date:2077-08-10 (Nov.25,2020)

S.N.	Name	Designation	Remarks
1.	Devendra Raj Dhungana	WUSC Chairman	
2.	Shankar Singh Kuwar	Ward Chairman-7	
3.	Samar Jung Chand	WUSC Vice Chairman	
4.	Narendra Adhikari	WUSC Secretary	
5.	Ganesh Dutta Bhatta	Water Member	
6.	Gauri Prasad Sharma	SSS-Consultant	
7.	Prem Raj Bhatta	Water Users	
8.	Jayanand Badu	Water Users	
9.	Dhauri Dhami	Water Users	
10.	Ram Bahadur Dhami	Water Users	
11.	Sunil Bhatta	Water Users	
12.	Paras Chand	Water Users	
13.	Nirmal Chand	Water Users	
14.	Deepa Badu	Water Users	
15.	Sumeetra Chand	Water Users	
16.	Sita Chand	Water Users	
17.	Rukmani Chand	Water Users	
18.	Sita Bhatta	Water Users	
19.	Jay Raj Bhatta	Water Users	
20.	Nar Bahadur Dhanuk	Water Users	
21.	Laxmi Khatri	Water Users	
22.	Binod Bhatta	Water Users	
23.	Indra Karki	Water Users	
24.	Mohini	Water Users	
25.	Kalasa Deve Badu	Water Users	
26.	Naroo Singh	Water Users	
27.	Deepak Bahadur Bista	Water Users	
28.	Parbati Bhatta	Water Users	
29.	Bhim Karki	Water Users	
30.	Rajendra Shrestha	GESI Specialist	
31.	Nabraj Pokharel	Environment Specialist	
32.	Amar Bahadur Dhami	Surveyar	
33.	Nirjal Dhakal	Water Supply Engineer	
34.	Radhika Bista Karki	Water Users	

35.	Bikas Bhatta	Water Users	
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Attendance Sheet

Discussion Agenda and Decision

1. Regarding environment and social Impact
2. Regarding no negative Impact near community forest in the proposed land
3. Necessary arrangement of required land
4. Land related document should be provided to the consultant team as soon as possible
5. Public Toilet document should be provided to the consultant team as soon as possible

Appendix – 3: Involuntary Resettlement Screening Checklist

SOCIAL SAFEGUARDS SCREENING CHECKLIST

Country

Nepal

Subproject Name

Purnagiri Urban Water Supply and Sanitation Project

Date

November 12, 2020

(Note: Involuntary Land Acquisition is not required for the Purnagiri UWSSP)

Probable Involuntary Resettlement Effects	Yes	No	Not Known	Remarks
Involuntary Acquisition of Land				
1. Will there be land acquisition?		√		About 1850 square meters of land is required for different project components such as boring, treatment units, OHTs, office building, generator house and guard house. No involuntary acquisition of private land is anticipated
2. Is the site for land acquisition known?				N/A
3. Is the ownership status and current usage of land to be acquired known?				N/A
4. Will easement be utilized within an existing Right of Way (ROW)?	√			The pipe laying will be carried out along the right of way as far as possible in order to avoid the private land loss and to minimize the other possible adverse impacts.
5. Will there be loss of shelter and residential land due to land acquisition?		√		All the Identified sites are within existing public/government land. There is no any structures on the lands except existing water supply structures. There will be no loss of shelter and residential land. All public barren land will be used for construction works.
6. Will there be loss of agricultural and other productive assets due to land acquisition?				Barren public/Municipality land will be used for the project.
7. Will there be losses of crops, trees, and fixed assets due to land acquisition?		√		The land is barren/nonagricultural public land; hence losses of crops, trees and fixed assets are not anticipated. No trees will be cut except clearing of bushes.
8. Will there be loss of businesses or enterprises due to land acquisition?		√		Since there is no need of private or residential land acquisition, there will be no loss of business or enterprises.
9. Will there be loss of income sources and means of livelihoods due to land acquisition?		√		Loss of income source and means of livelihoods are not anticipated due to vacant public/government land use.

Probable Involuntary Resettlement Effects	Yes	No	Not Known	Remarks
acquisition?				
Involuntary restrictions on land use or on access to legally designated parks and protected areas				
10. Will people lose access to natural resources, communal facilities and services?			√	There is no any designated park and protected area in or near to the project.
11. If land use is changed, will it have an adverse impact on social and economic activities?			√	
12. Will access to land and resources owned communally or by the state be restricted?			√	
Information on Displaced Persons:				
Any estimate of the likely number of persons that will be displaced by the Subproject? [√] No []				
Yes If yes, approximately how many? _____				
Are any of them poor, female-heads of households, or vulnerable to poverty risks? [√] No [] Yes				
Are any displaced persons from indigenous or ethnic minority groups? [√] No [] Yes				

2. Indigenous Peoples Impact Screening Checklist

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
A. Indigenous Peoples Identification				
1. Are there socio-cultural groups present in or use the subproject area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), minorities" (ethnic or national minorities), or "indigenous communities" in the subproject area?		√		The service area of the subproject is heterogeneous in terms of ethnicity/caste & culture, and no specific territory of indigenous people or socio-cultural groups has been observed. Most indigenous people in subproject areas are economically and politically integrated into the mainstream society, and considering the nature and scale of the subproject, impacts on indigenous peoples

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
				are insignificant.
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the subproject area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?		√		
3. Do such groups self-identify as being part of a distinct social and cultural group?		√		
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		√		
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?		√		
6. Do such groups speak a distinct language or dialect?	√			The ethnic groups in the service area speak their own distinct language among their members, but Nepali is spoken as common language.
7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?	√			NA
8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?	√			

B. Identification of Potential Impacts

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
9. Will the subproject directly or indirectly benefit or target Indigenous Peoples?	√			The subproject directly benefits the Indigenous /Janajati because all the beneficiaries will get water supply service irrespective of their ethnicity/caste and economic status.
10. Will the subproject directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		√		
11. Will the subproject affect the livelihood systems of Indigenous Peoples? (e.g., food		√		

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
production system, natural resource management, crafts and trade, employment status)				
12. Will the subproject be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?		√		
C. Identification of Special Requirements <i>Will the subproject activities include</i>				
13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?		√		
14. Physical displacement from traditional or customary lands?		√		
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?		√		
16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples ?		√		
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples ?		√		

D. Anticipated subproject impacts on Indigenous Peoples

Subproject component/ activity/ output	Anticipated positive effect	Anticipated negative effect
1. Civil Works (Deep Tube Wells at two sites, Pressure filter, Chlorination Unit with Lab and Chlorination unit, Chlorination room etc.)	Regular water supply through efficient water supply system	None
2. Pipeline Works (Pipe Trench Excavation, pipe laying and backfilling)	Regular water supply through improved distribution network.	None

Appendix – 4: Approved Below Poverty Line Calculation Sheet

Proposed Poverty Threshold for Identification of Poor Household in UWSSP

The proposed threshold has been revised as per the data received from Nepal Living Standard Survey-III (NLSS-III-2010/2011) conducted by National Planning Commission, Nepal. Based on the results of the survey, the poverty line for Nepal, in average 2010-11 prices, has been estimated at Rs. 19,261; the food poverty line is Rs. 11,929 (per capita consumption 2,220 Kcal per day) and the non food poverty line Rs. 7,332.

Poverty indicator has been refined based on the annual data of Consumer Price Index which has been published by Nepal Rastra Bank. Calculating the increased annual ratio of index against the estimated poverty line of Rs 19261 adopted from NLSS-2010/2011, poverty line has been revised and proposed for UWSSP.

The revised poverty line will be utilized as major indicator of poverty. It shall be used in selection of poor household within the community for delivering DBA service and free subsidized tap connection. Similarly, upfront cash shall be reimbursed after verification of poor household within the urban project. The data shows that average 4.2 to 9.9% of increment has been observed annually. Hence, annually increment since the base year of 2010-11 has been adopted and poverty threshold has been proposed.

Hence, poverty line is estimated NRs.13500 (round figure) monthly for a household and average household size is 4.8 which have been adopted from census survey results of CBS -2011.

The below table has presented incremental trend of price index in each year.

Table No: 1 Consumer Price Index and Annual Increment (Nepal Rastra Bank, Nepal) :

S.N.	Year	Amount as per Consumer Price Index (Annual Per Person)	Price Index (Annual Increment Ratio)	Total Amount as per index(Food & Non Food Items) of a Household (Annual)	Total Amount of a Household (Monthly)	Amount Per Person (Monthly)	Remark
1	2010/11	19261	0	92451.80	7704.40	1605.08	Adopted from NLSS-III, 2010/11
2	2011-12	20859	8.3	100123.20	8343.60	1738.25	
3	2012-13	22925	9.9	110040.00	9170.00	1910.42	
4	2013-14	25010.92	9.1	120052.43	10004.37	2084.74	

संस्थापक
महोदय, नेपाल राष्ट्र बैंक
काठमाडौं

म.प्र. अधिकारी

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S.N.	Year	Amount as per Consumer Price Index (Annual Per Person)	Price Index (Annual Increment Ratio)	Total Amount as per Index (Food & Non Food Items) of a Household (Annual)	Total Amount of a Household (Monthly)	Amount Per Person (Monthly)	Remark
5	2014-15	26811.71	7.2	128696.21	10724.68	2234.31	
6	2015-16	29166.07	9.9	141437.13	11786.43	2455.51	
7	2016-17	30792.04	4.5	147801.80	12316.82	2566.00	
8	2017-18	32085.31	4.2	154009.48	12834.12	2673.78	
9	2018-19	33432.89	4.2	160477.88	13373.16	2786.07	

Table No: 2 Threshold Amount for Poor Household

S.N.	Information	Amount NRs.
1	Base Year(Adopted from Nepal Living Standards Survey-NLSS-III, 2010-11)	19261
2	Increment of Consumer Price Index from 2011-12 to 2018-19)	33432.89
3	Household Size 4.8	160477.88
4	Monthly Income Level (Poor HH)	13373.16
5	Per Capita Income (Monthly)	2786.07

Proposed range of income level for OBA grant.

Table No: 3 Range of Income Level in Four Categories:

S.N	Income Range	Category	Remarks/ Justification
1	<13500	Poor	Based on result of NLSS-III 2010/ 2011 and calculating annual Price Index of NRs 2010/11-2018/19
2	13501-20000	Average	Based on salary range and market price, adopted as average range.
3	20001-35000	Medium Income	Based on salary range and market price, adopted as medium range.
4	>35000	High Income	This is highest range category of income and adopted as highest basis of income and market price.



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Major Changes in OBA Guideline of UWSSP

S. N.	Particular	Provision in TSTWSSSP	UWSSP	Remark
1.	Threshold of the Poor	<Rs. 7,500 Monthly Income of a Household	<Rs. 13,500 Monthly Income of a Household	Data of National Living Standard Survey (NLSS), 2011 is adopted as baseline and annual consumer Index of Nepal Rastra Bank is used for analysis.
2.	Verification Team for Recommendation to WUSC (For Reimbursement)	Independent Verification Agent	Verification Team	The team members remain same. Only term has changed. Project staffs cannot be independent agent.
3.	Verification for 20% Reimbursement to WUSC	Verification After 3 Months	Verification after 1.5 Month	
4.	Cross-check, Validations of Final List of OBA/Subsidized Tap Connection	WUSC, RDSMC, RM/M WASH CC	WUSC, RDSMC, RM/M WASH CC and PMQAC (Social Development-GESI Specialist)	After preparation of final list by team, it will be validated by PMQAC.
5.	Chapter of Design and Cost Estimate of Household Latrine	12 types of pit latrine design and cost estimate was provided in Annex	Basic information and framework for safety tanks and Household water seal Latrine pit design has been provided in Annex.	For development of innovative idea and types RDSMCs are requested for development of site specific type/model.
6.	Construction of Household Latrine and Compost Pit by OBA	Construction of Both (Household Latrine and Compost Pit)	Construction of Household Latrine only	Now compost pit is optional
7.	Subsidized Tap Connection to Poor/Vulnerable	-	During the First stage of the contract (Before entering the Second stage)	The service should be provided during first stage of the contract.



Signature

Signature

Appendix -5: Suggested Format for Record Keeping of Grievances

a. Suggested Format for Record Keeping of Grievances:

S.N.	Date of receipt of grievance	Name and Contact details of complainant	Description of complaint	Nature of complaint	Decisions taken	Response given to complainant and date	Whether closed

b. Sample grievance redress form

(To be available in Nepali and English)

The _____ Project welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback. Should you choose to include your personal details but want that information remain confidential, please inform us by writing/typing* (CONFIDENTIAL)* above your name. Thank you.

Date		Place of registration	
Contact Information/personal details			
Name	Gender	*Male *Female	Age
Home Address			
Place			
Phone No.			
E-mail			
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below:			
If includes as attachment/note/letter, please tick here:			
How do you want us to reach you for feedback or update on your comment/grievance?			

FOR OFFICIAL USE ONLY

Registered by: (Names of official registering grievance)	
Mode of communication: Note/Letter E-mail Verbal/Telephonic	
Reviewed by: (Names/positions of official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	Yes/no
Means of Disclosure:	

Appendix – 6: Photographs



Photo No.:1 Proposed Location Haldukhal-7 System-I Land for OHT



Photo No.:2 Proposed Location Haldukhal-7 System-I Land for Office Building



Photo No.:3 Proposed Location Haldukhal-7 System-I Land for Guard House



Photo No.:4 Consultation Meeting with community members-Ward Office



Photo No.:5 Consultation Meeting with community members-School



Photo No.:6 DEDR Presentation-Bhimdatta Municipality



Photo No.:7 Ward chairman-7 during technical survey



Photo No.:8 Conducted socio-eco Survey



Photo No.:9 Conducted socio-eco Survey



Photo No.:10 Proposed Location Haldukhal-7 System-II Land for Guard House



Photo No.:10 Proposed Location Haldukhal-7 System-II Land for Guard House



Photo No.:12 DRSMC Team visited Proposed Location Haldukhal-7 System-II Land



Photo No.:12 Team Leader and TDF Member Discussion with Community Members



Photo:13 Bhimdatta Municipality Mayor during DEDR Presentation



Photo:14 DRSMC Presented DEDR in PMO



Photo:15 Team Leader presented Presentation DEDR Bhimdatta Municipality



Photo:16 Team Leader presented Presentation DEDR Bhimdatta Municipality