Land Acquisition, Involuntary Resettlement and Indigenous Peoples Due Diligence Report

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NEP: Urban Water Supply and Sanitation (Sector)
Project – Charikot Decentralized Wastewater
Treatment System Subproject

Package No. W-19

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CURRENCY EQUIVALENTS

(as of 2 July 2018)

Currency unit - Nepalese rupee (NRe)

\$1.00 = NRs109.821 NRe1.00 = \$0.009

ABBREVIATIONS

ADB - Asian Development Bank

DEWATS - decentralized waste water treatment system

lps - liter per second

PMO - project management office

UWSSP - Urban Water Supply and Sanitation (Sector) Project

WSS - water supply and sanitation WWTP - wastewater treatment plant

WUSC - Water Users and Sanitation Committee

NOTE

In this report, "\$" refers to United States dollars.

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CONTENTS

		F	age
I.	INTRO	DDUCTION	1
	A. B.	Background Scope of this Report	1 2
II.	SUBP	ROJECT DESCRIPTION	2
	A.	Description of Subproject	4
III.	FIELD	WORK AND PUBLIC CONSULTATION	10
	A. B.	Outline of Field Work Public Consultation	10 10
IV.	LAND	AVAILABILITY, RESETTLEMENT AND INDIGENOUS PEOPLES IMPACTS	11
	A.	Findings	11
٧.	CONC	LUSIONS	15
	A. B.	Summary and Conclusions Next Steps	15 16
APPE	NDIXES	8	
1		jection Letter from Municipality and Community Forest User Committee	
2		es of Meeting and Translation	
3		graphs of Project Sites	
4	Social	Safeguards Screening Checklists	

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). The 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 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.
- 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 services.⁴ 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 municipalities.⁶ Shortage 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 Water Users Associations (WUAs). Development support for municipal WSS has been channelled through a combination of (i)

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).

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.

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.

B. Scope of this Report

6. This draft land acquisition, resettlement and indigenous peoples safeguards due diligence report is prepared for the Charikot Decentralised Waste Water Treatment System (DEWATS) subproject, which is proposed to be implemented under the UWSSP. It is based on conceptual design and will be updated during detailed design.

II. SUBPROJECT DESCRIPTION

- 7. **Location**. The Project area of Charikot DEWATS subproject lies in Bhimeshwore Municipality, Dolakha District, State no. 3 of Nepal. Bhimeshwar (formerly Charikot), today Bhimeshwar Municipality, is the headquarters of Dolkha District. The municipality has been named after the very ancient and sacred destination Dolkha Bhimeshwor Temple. The project area includes all the wards of the municipality except ward no. 11. The project area covers the localities of Purano Bazar, Satdobato, Buspark, Dolakha, Makaibari, Charighyang, and Dharampani of Bhimeshwor municipality.
- 8. The project area lies between Latitude 270 37' 58" N to 270 44' 42" N and Longitude 850 05' 12" E to 850 59' 31" E. Charikot is located at a distance of approximately 139 kilometer (km) from the capital of Nepal, Kathmandu. The municipality is in a hilly region with altitudes ranging between 950 meter (m) to 2560 m above mean sea level with average altitude of 1554 m. The municipality has subtropical to temperate climate which is heavily influenced by the monsoon (June-September) with an average annual rainfall of about 1710 millimeter (mm).

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).

- 9. The service area of the subproject comprises wards 1-10, 12 and 13 of Bhimeshwar municipality. The core bazaar area is located in ward nos. 1 and 10 where density of population is higher.
- 10. **Population and Households.** There are 3842 households (permanent residents) with 18,272 population, having an average family size of 5.7. Men and women comprise 51% and 49% respectively of the population in the service area (Table 1).

Table 1: Distribution of Population by Type of Tenure

						Total Own		Rented	Rental	Total including	НН
Ward	нн	Male	%	Female	%	House	%	house	Pop	Tenants	Size
1	937	2214	24.42	2409	26.16	4623	25.30	233	1591	6214	4.93
2	211	461	5.09	474	5.15	935	5.12	2	3	938	4.43
3	72	150	1.65	153	1.66	303	1.66	0	0	303	4.21
4	68	196	2.16	197	2.14	393	2.15	0	0	393	5.78
5	220	517	5.70	539	5.85	1056	5.78	0	0	1056	4.80
6	344	792	8.74	778	8.45	1570	8.59	0	0	1570	4.56
7	305	673	7.42	733	7.96	1406	7.69	1	2	1408	4.61
8	241	558	6.16	485	5.27	1043	5.71	0	0	1043	4.33
9	32	65	0.72	71	0.77	136	0.74	0	0	136	4.25
10	843	1999	22.05	1945	21.13	3944	21.58	219	2040	5984	4.68
12	287	802	8.85	804	8.73	1606	8.79	1	1	1607	5.60
13	282	638	7.04	619	6.72	1257	6.88	0	0	1257	4.46
Total	3842	9065	100.00	9207	100.00	18272	100.00	456	3637	21909	4.76

Source: Socioeconomic Survey 2015.

- 11. As the area of present day municipality comprises the areas of three former VDCs, the total population as per Census has been estimated by summing up the population of the three VDCs. The ward-wise population of the project town according to Census, 2001 and 2011 is presented in Table 2.
- 12. The total population of Bhimeshwore Municipality as per census of 2011 was 22,537. The population of this municipality during 2001 was 21,916. The analysis shows that the overall average annual growth rate of the municipality is only 0.28%. Many wards have recorded a decline in population growth over the last decade.
- 13. The average household size of the area has decreased from 4.46 in 2001 to 3.71 in 2011. Ward 1 of the municipality, old Charikot bazaar area, is the only comparatively densely populated ward. The overall population density of the project area increased from 3.77 (2001) to 3.87 (2011) persons per hectare.

Table 2: Population of the Project Town

			Census 20	01	С	ensus 2011		
Ward	Ward Area (Ha)	HHs	Рор	Population Densities (PPHA)	Househol ds	Рор	Pop Densities (pph)	Growth Rate
1	395.12	662	3,036	7.68	1134	4,330	10.96	3.61
2	263.23	501	2,018	7.67	476	1,615	6.14	-2.20
3	474.22	238	947	2.00	242	978	2.06	0.32
4	494.10	384	1,707	3.45	266	978	1.98	-5.42
5	461.23	250	1,190	2.58	371	1,437	3.12	1.90
6	658.00	471	2,011	3.06	510	1,866	2.84	-0.75

			Census 20	01	C	ensus 2011		
Ward	Ward Area (Ha)	HHs	Рор	Population Densities (PPHA)	Househol ds	Рор	Pop Densities (pph)	Growth Rate
7	132.00	147	671	5.08	273	1,011	7.66	4.18
8	592.00	140	721	1.22	355	1,276	2.16	5.87
9	197.00	314	1,484	7.53	275	1,056	5.36	-3.35
10	527.00	854	3,559	6.75	1,312	4,626	8.78	2.66
11	500.00	382	1,927	3.85	338	1,212	2.42	-4.53
12	204.00	259	1,209	5.93	256	1,043	5.11	(1.47)
13	921.00	307	1,436	1.56	268	1,109	1.20	(2.55)
Total	5,818.90	4909	21,916	3.77	6,076	22,537	3.87	0.28

Source: CBS 2001 and 2011.

14. **Occupation**. Detailed information has been collected during the household survey about the major occupations and economic activities of all household heads. The results of the survey as presented in Table 3 indicate that the highest proportion of population (about 36%) is engaged in agriculture, whereas 26.68% are job holders, about 24% are businesspersons about 7% are employed abroad, 3% are laborers, 1.48% in industries, 2% in other occupations and 0.10 % are unemployed / dependent on other household members.

Table 3: Distribution of Household Heads by Occupation

Occupation of Household					5	Servic	e Area	3		_			Grand	
Head	1	2	3	4	5	6	7	8	9	10	12	13	Total	%
Agriculture	301	40	11	13	126	113	166	94	12	158	179	167	1380	35.92
Business	329	54	26	17	15	26	23	27	1	241	82	80	921	23.97
Service	230	48	6	8	64	146	90	99	4	273	26	31	1025	26.68
Industry	25	0	0	0	2	1	5	0	2	18	0	4	57	1.48
Foreign Employment	32	64	27	30	7	23	12	14	2	57	0	0	268	6.98
Labor	10	5	2	0	4	32	5	6	11	35	0	0	110	2.86
Others	8	0	0	0	2	2	3	1		61	0	0	77	2.00
Unemployed	2	0	0	0	0	1	1	0	0	0	0	0	4	0.10
Grand Total	937	211	72	68	220	344	305	241	32	843	287	282	3842	100.00

Source: Socioeconomic Survey 2015.

15. The town is located in hilly area with heterogeneous ethnic composition. Sat Dobato area constitutes the heart of the municipality, which is the entry point of the main market. Most of the government and other offices are located in wards 1 and 10, which is the most densely populated part of the service area. The settlement pattern of the other wards is scattered.

A. Description of Subproject

- 16. The subproject is a proposed decentralized wastewater treatment system (DEWATS) in Charikot. The DEWATS is expected to improve the sanitation infrastructure of Charikot by providing the target communities or wards with the basic and sustainable treatment system for their generated domestic sewage and wastewater.
- 17. The proposed DEWATS subproject will partially serve ward no. 10 of Bhimeswar Municipality.
- 18. The subproject infrastructures are based on preliminary standard design for a DEWAT system, with the following components:
 - (i) Conveyance system or sewer network with length of 9.028 km that will serve about 500 households or 2,500 persons;

(ii) Two DEWATS systems to be constructed in two locations, namely: Gaunde and Ramkot.⁹

1. Conveyance System or Sewer Network

- 19. The sewer network will be constructed to convey sewage or wastewater from domestic sources to the two DEWATS plants. It is designed based on the following parameters: (i) current population and expected growth; (ii) sewage/wastewater quantity; (iii) flowrate; (iv) hydraulic pressure; (v) land contours and configuration; (vi) spatial distribution of sources such as residential and commercial establishments; and (vii) other engineering design parameters as may be determined during the final detailed design stage. These parameters were gathered from the results of review of engineering design works conducted by various agencies in the past for the Charikot and other similar towns. In addition, some other basic data were gathered to help in designing the components of the subproject as discussed below.
- 20. **Design Population**. The existing highest population densities of the municipality as per Nepal's Central Bureau of Statistics (CBS) 2011 is about 9 and 11 persons per hectare in ward no 1 and 10, respectively. As the CBS data do not reflect population and population densities in concerned area, existing maps and land use are used for the estimation of the population.
- 21. The design population for the wastewater treatment system has been calculated from the existing population density and envisaged population density based on prevailing land-use and potential land-use. Since the population projection does not show the actual spatial coverage for the design for the purpose of calculation of discharge, the population is calculated from the density of the coverage area for the respective sewer lines and junctions.
- 22. The population densities of the main core area to peripheral area have been estimated to be 160 persons per hectare in core area and 50 persons per hectare in the peripheral area of the subproject coverage area. At the end sections of the conveyance system, the population density has been estimated to be 25 persons per hectare only.
- 23. The population estimation has been estimated for different systems (i.e. Deurali Danda and Shantinagar). The Deurali Danda system comprises of two conveyance systems (i.e. Outlet-2A and Outlet 2B), whereas the Shantinagar system comprises only one outlet system (i.e. Outlet-1).
- 24. Table 4 below shows the density assumed or calculated and the area coverage of the respective density. This shows that still there will be vast open spaces and lands within the service area of the municipality and these areas have not been covered for the purpose of wastewater system.

Table 4: Sanitation Population Densities

	Shantir	nagar System	Deur	ali Danda System
Density	Gross Area	Net Density Area	Gross Area	Net Density Area
(persons per hectare)	(hectare)	(hectare)	(hectare)	(hectare)
160	16.19	12.15	6.92	5.20
100	6.91	5.19	13.07	9.81
75			2.69	2.02
50			9.03	6.78
25			10.20	7.65

⁹ Gaunde is at the locality of Deurali Danda while Ramkot is at Shantinagar.

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	Shantir	nagar System	Deurali Danda System			
Density	Gross Area	Net Density Area	Gross Area	Net Density Area		
(persons per hectare)	(hectare)	(hectare)	(hectare)	(hectare)		
Total	23.1	17.34	41.91	31.46		

- 25. **Average Per Capita Water Consumption.** For the purpose of the design, the per capita water consumption was estimated to be 100 liter per capita per day (lpcd), which was taken from the calculation and design of the Proposed Charikot Water Supply System under the Third Small Town Water Supply and Sanitation Sector Project (footnote 3).
- 26. **Return Factor.** This defines the percentage of total water consumption that will be discharged as wastewater. It is often assumed to be 80% or 85%, although there are indications that lower return factors may be appropriate in some areas. The wastewater flow from an area will be equal to the water consumption in the area multiplied by the return factor. The return factor for the proposed wastewater system has been taken as 80%.
- 27. **Peak Wastewater Flow Factor.** This is required to allow for the fact that the wastewater flow varies through the daytime, reaching a peak when people get up in the morning and falling to almost nothing during the night. The peak flow in any wastewater line can be taken as the average flow in that wastewater line multiplied by the peak factor. Peak factors tend to decrease as the population contributing to the flow increases. The peak factor of 2.5 has been taken for the design of the proposed wastewater system.
- 28. **Allowance for Stormwater.** As the most of the roads have roadside drain in the municipality and numerous natural river, stream and rivulets (Nalas) are readily found in the municipality, storm water drainage problem would not be that significant as wastewater. In addition to that, the cross gradient of land is steep enough to minimize storm water problem. Therefore, any allowance for storm water has not been included or considered in the design.
- 29. **System Layouts and Bottlenecks.** The design of the sewer network has been planned in order to cover most of the densely occupied bazaar areas of the municipality so as to keep the length of the major lines to a minimum and utilize least cost for such purpose. There are three major sewer lines namely #SN-1, #DD-1, and #DD-2. Sewer line #SN-1 is directed to the Shantinagar DEWAT plant, and Sewer lines #DD-1 and #DD-2 are directed to the Deurali Danda DEWAT plant. The Shatinagar (Ramkot) DEWAT and Deurali Danda (Gaunde Danda) DEWAT plants are the two plants to be constructed under the subproject (see Part C in this section for the discussions).
- 30. **Groundwater infiltration.** The groundwater table in the proposed area is more than 10 meters below the ground due to hilly terrain. With this depth, no direct groundwater infiltration is expected as all sewer lines will be laid far above the groundwater table. Standard quality of sewer pipes and fittings will be used for the sewer network to ensure stability and no leakages will occur in the future.
- 31. **Quantity of Wastewater.** The consumption of water has been taken, as per the discussion made above as 100 lpcd and 80% of it has been estimated as return factor. The layout plan of wastewater coverage area has been separated into different zones in terms of density and connection with the wastewater lines, and the contribution of all the zones have been collected by the major trunk wastewater lines. Using the parameters mentioned above to sum up the sewage quantity, the design flow for the various lines have been as follows:
 - (i) Shantinagr # SN -1 = 5.70 liters per second (lps);

- (ii) Deurali Danda # DD-1 = 3.22 lps;
- (iii) Deurali Danda # DD-2 = 1.87 lps.
- 32. As the wastewater line DD-1 and DD-2 finally discharges into treatment plant, the combined flow to the treatment plant has been estimated as 5.09 lps.

2. Decentralized Wastewater Treatment System

33. The DEWAT system is designed based on the information used in the design of the conveyance system or sewer network as discussed in part 1 of this section. The treatment of wastewater will employ the conventional treatment processes for organic wastes. It will have the following components: (i) bar screens, (ii) grit chamber, (iii) grease/oil separation chamber, (iv) settling tank, (v) anaerobic baffle reactor, (vi) sludge drying bed, and (vii) reed bed treatment system. Indicative process flow diagram is shown in Figure 1 below.

BYPASS

BYPASS

BYPASS

BAR
SCREEN

BYPASS

BAR
SCREEN

BYPASS

BAR
SCREEN

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Figure 1: DEWAT Process Flow Diagram

- 34. However, the subproject will refer to international best practice in determining its final detailed design, such as the "Decentralized Wastewater Treatment Systems (DEWATS) and Sanitation in Developing Countries: A Practical Guide", designed and produced by Bremen Overseas Research and Development Association (BORDA). Based on this document, the subproject will select the appropriate technical configuration in view of the following factors:
 - (i) Volume of wastewater;
 - (ii) Quality of wastewater;
 - (iii) Local temperature:
 - (iv) Underground conditions;
 - (v) Land availability;
 - (vi) Costs;
 - (vii) Legal effluent requirements;
 - (viii) Cultural acceptance and social conditions; and
 - (ix) Final handling of the effluent (discharge or reuse.

¹⁰ B. Gutterer, et. al. 2009. <u>Decentralised Wastewater Treatment Systems (DEWATS) and Sanitation in Developing Countries</u>. Germany.

- 35. **Gaunde Danda DEWATS Facility**. The DEWATS plant in Gaunde Danda will be constructed in a government-owned land with an area of 1,500 m². The actual footprint of the plant will be 750 square meters which will be located within this land.
- 36. **Ramkot DEWATS Facility**. The DEWATS plant in Ramkot will be constructed in a government-owned land with an area of 1,000 m². The actual footprint of the plant will be 650 square meters which will be located within this land.
- 37. The Reed Bed System or Constructed Wetlands. Constructed wetland is a biological wastewater treatment technology designed to mimic processes found in natural wetland ecosystems. The system has great potential as a clean-up technology for a variety of wastewaters. It is an innovative and inexpensive treatment approach with the potential to treat organic and inorganic compounds in wastewater from a range of sources, including domestic wastewater. For the subproject, the reed bed component of the DEWATS plants will be designed based on the following factors:
 - (i) characteristics of partially treated wastewater entering the system;
 - (ii) organic matter loading rate;
 - (iii) hydraulic loading rate;
 - (iv) hydraulic retention time;
 - (v) climatic conditions;
 - (vi) type of reed;
 - (vii) land and space availability;
 - (viii) potential breeding grounds for pests; and
 - (ix) other factors as may be determined in the course of finalizing the detailed design.

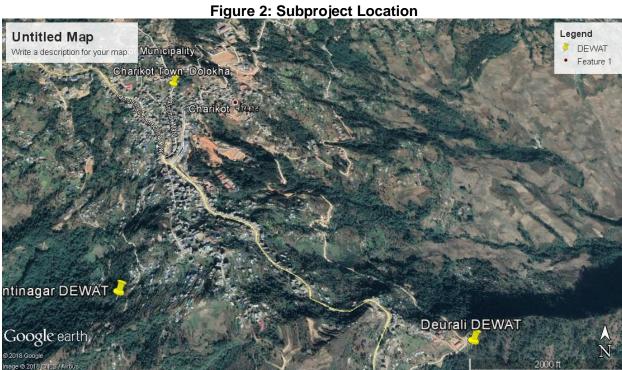


Figure 3: Location Map of Deurali Danda (Gaunde) DEWATS Facility

Untitled Map
Write a description for your map.

Deurali DEWAT

Deurali DEWAT

Deurali DEWAT

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Deurali DEWAT

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Figure 4: Location Map of Shantinagar (Ramkot) DEWATS Facility

Source: Google Earth.

The technical components will be designed with close coordination with safeguard team and WUSC executive members to avoid involuntary resettlement impacts.

III. FIELD WORK AND PUBLIC CONSULTATION

A. **Outline of Field Work**

- Relevant reports and documents available at PMO/Department of Water Supply and Sewerage (DWSS), regional project management office (RPMO), WUSC office and reports prepared by regional design supervision and management consultant (RDSMC) were reviewed to assess the land requirements and level of likely impact. Detailed design report of the DEWATS is yet to be prepared however, the following documents are reviewed for the study in the light of ADB Safeguard Policy Statement (SPS) 2009 and government policy.
 - (i) Draft 'Master Plan of Sanitation Component'; and
 - (ii) Socioeconomic profile prepared by RPMO.
- 40. Field visit to the project sites and major settlements/ clusters in the service area was another step for the study. Various field visits were made from June 2017 onwards to all proposed sites including wastewater treatment plant (WWTP) locations and drainage alignments. Consultations with stakeholders were conducted to confirm land ownership and use, the need for surveys and further consultations.

Public Consultation B.

41. Consultation has been undertaken with key stakeholders in line with ADB's requirements pertaining to environment and social considerations. The consultation was conducted integrating discussions for water supply and sanitation (DEWATS) components of UWSSP. Key concerns of the people related to the project, implementation of the safeguard policy framework in field level, sharing the safeguard knowledge to local level, inclusion of poor in the project activities, people's participation in project implementation were discussed. Further meaningful consultations with the community forest users at the two locations and the school committee, parents, teachers, students and community members/ users of the school are proposed and will be documented in the updated due diligence report. Views and concerns of all stakeholders will be recorded and taken into account by design engineers.

Table 5: Summary of Public Consultations Carried Out by Consultants Team

S.	Meeting	Facilitator	Venue and	Topic of Dissemination /Discussion
No.	Date		Participation	
1.	2018	Design engineer, Social safeguard Specialist, Executive Officer of Bhimeshwore Municipality, WUSC members and local	Hall	Discussion regarding DEWATS including land requirement for the treatment systems, site visit. Discussions regarding the likely impacts on the environmental & social aspects from the land used for DEWATS and
		people		other project activities.

42. This DDR will be translated in local i.e. Nepali language and will be made available in WUSC and project regional/district office.

IV. LAND AVAILABILITY, RESETTLEMENT AND INDIGENOUS PEOPLES IMPACTS

A. Findings

- 43. Charikot DEWATS subproject has been conceptualized as an integrated and decentralised wastewater treatment system. Considering the topography, land use, settlement pattern and use of existing facilities; one WWTP is proposed on land under community forest (Gaunde Prakritik Community Forest) and another is proposed on public land at Ramkot, ward no. 5 of Bhimeshwor municipality. No relocation impacts or impacts on structures are anticipated at any of the identified sites or alignments for drainage proposed in Charikot DEWATS. Potential temporary access disruptions for shops and residences will be avoided.
- 44. The following components have been proposed for the entire Charikot DEWATS project. For the construction of different components/structures of the town project land is required at two different sites. Details of location and proposed components are as shown in the table below, which also summarizes the resettlement impacts.

Table 6: Details of Land Availability and Summary of Involuntary Resettlement impacts

S.N.	DEWATS Component	Land Area Required	Involuntary Resettlement Impact	Mitigation Measures
1.	Wastewater Treatment Plant (WWTP) at Gaunde Prakritik Community Forest	4 Ropani (approx 2038 sqm)	The proposed decentralized waste water treatment system (DEWAT) plant land is located in Gaunde Prakritik Community Forest area at Jilu, Safe Swanra. There are no permanent or temporary structures, cultivation or non-titled	The Community Forest Committee has granted written permission to build the WWTP at that place. Care will be taken to avoid/minimize disruptions to a school located en route to the site during construction. Facility siting will take into account the location of the school and the concerns of forest user communities if any. There is no village and settlements near the

S.N.	DEWATS Component	Land Area Required	Involuntary Resettlement Impact	Mitigation Measures
			users. Adequate land will remain with the community forest users who will be able to continue to access the same. No involuntary resettlement impacts are anticipated.	proposed site. The land required for theDEWAT plant is only four Ropani (approx. 2038 sqm) which is less than 1% of the total community forest land as indicated by Water Users and Sanitation Committee (WUSC) chairperson. The treated water will be used for irrigation purposes for the nearby cultivated land of local farmers. People of 340 families of Dharam Ghar village are expected to be able to use the treated water for irrigation. The WUSC has reached consensus with communities regarding the use of treated water for irrigation purpose.
2.	WWTP at Ramkot	3 Ropani (approx 1528 sqm)	The proposed DEWAT plant land is located in Ramkot Community Forest area. There are no permanent or temporary structures, cultivation or non-tiled users. Adequate land will remain with the community forest users who will be able to continue to access the same. No involuntary resettlement impacts are anticipated	The Municipality ward chair from ward office provided a letter of consent to build the structures on the public land of Ramkot, Ward-6, Bhimeswor municipality. There are no villages or settlements near the proposed WWTP. No involuntary resettlement impacts are anticipated.
3.	Small bore sewer pipes		Limited to temporary impacts during drainage and pipe laying; temporary disturbance in mobility of local people and potential access disruption to shops and residences No permanent impacts to the people are envisioned	Pipes will be laid along road alignment within width of the roads; no private property and structures will be affected by the pipelines Contractor will provide signs at appropriate locations indicating available alternate access routes for movement, in case of temporary disturbance to vehicle or pedestrian movement No road closures are anticipated during construction; contractor to ensure access to shops and residences using wooden or metal walkways where required; will limit excavation to 50 m at a time to minimize disruption; contractor to undertake construction on one side of the road first and only upon completion will work start on the other side to minimize impact on traffic Construction contracts will include the above provisions

45. The proposed DEWAT plant land for Deurali Danda is located in Gaunde Prakritik Community Forest area at Jilu, Safe Swanra. There are no permanent or temporary structures, agricultural cultivation or non-titled use at the site. The Community Forest Committee has granted written permission to build the DEWAT treatment plant at Gaunde. A school for deaf children is located at a distance of about 200 m from and on the approach road to the proposed site. Since

the area under the community forest is large, care will be taken to ensure that the DEWAT plant is located where odour and other potential impacts to the school during and post-construction are minimised. There is no settlement near the proposed DEWAT plant. The treated water will be used for irrigation to the nearby cultivated land of local farmers. People of 340 families of Dharam Ghar village are expected to be able to use the treated water for irrigation. The WUSC has reached consensus with communities regarding the use of treated water for irrigation purpose.

- 46. The second proposed DEWAT treatment plant land is public land located in Ramkot. There are no structures, cultivation or use by non-titleholders at the site. No involuntary resettlement impacts are anticipated. The Municipality Ward Office of Ward no. 6 has granted written permission to build the WWTP at the proposed location. There is no settlement near the proposed DEWAT treatment plant.
- 47. Temporary impacts of pipe laying will be limited to temporary disturbance in mobility of local people and potential access disruptions to shops and residences. No permanent negative impacts to the people are envisioned. The drains will be constructed within the ROW of existing roads. No private property and structures are likely to be affected by the drains or pipeline. The contractor will be required to provide signage at appropriate locations indicating available alternate access routes for movement in case of temporary disturbance to vehicular or pedestrian movement.
- 48. The contractor will have to ensure access to shops and residences using wooden or metal walkways where required and limit the excavation to 50 m at a time to minimize disruption. No road closures are anticipated during construction; the contractor will undertake construction on one side of the road first and on completion of the works on one side, start the same on the other side to minimize impact on traffic and access disruptions. For the Gaunde site, the contractor will ensure that all material transportation to the site and heavy vehicular movement is undertaken in such a way that daily school start hour and ending hour and holidays are avoided, to minimise disruptions for school children. Construction contracts will include the above provisions.
- 49. Available documents regarding land permissions or no objection letters and photographs of the proposed sites for DEWAT plants are appended to this due diligence report (Appendixes 2 and 3).
- 50. **Indigenous Peoples**. According to ADB SPS, 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 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.
- 51. The Charikot DEWATS area is a mosaic of multi-caste/ ethnic groups. It is the district headquarters of Dolakha and was also a gateway to Mount Everest for many years when trekkers used to trek up the mountain before motorable roads were built up to Jiri via Charikot. It is also a main market center of the Dolakha and other adjoining villages. The availability of district level government offices, educational, financial and health institutions and other services as well as business opportunity are attracting the people of different caste and ethnicity in this area.

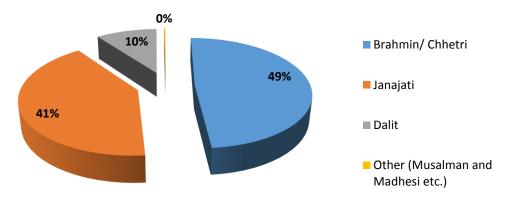
- 52. Each caste and ethnicity are characterized by its own customs, traditions, culture and nature of occupation with which they are associated. Brahmin and Chhettri, comprising about 49% (1867 households) of total families, are the most prevailing caste group in the service area. Janjati (indigenous people) are the next major group with 41% (1585 households) and Dalit and other caste groups (Muslims and Madhesis etc.) are about 10% (390 households) as shown in table below.
- 53. The field observation reveals that most of the settlements in the service area are heterogeneous in terms of caste/ethnicity and there is no traditional territory of indigenous peoples. However, as explained above, people belonging to janajati communities form a significant proportion of the population and tend to live in clusters or enclaves (even though these are not ancestral lands as explained above). In the context of service area, belonging to an indigenous peoples 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 sanitation service based on ethnicity and caste. The impacts on indigenous people is anticipated to be positive, with enhanced access to sanitation facilities rather than adverse impacts. People from janajati communities will benefit equally under the project. 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.

Table 7: Distribution of Households and Population by Caste/ Ethnic Groups

Caste/Ethnic Group	Total Households	Percentage (%)
Brahmin/ Chhetri	1867	48.59
Janajati	1585	41.25
Dalit	382	9.94
Other (Musalman and Madhesi etc.)	8	0.21
Grand Total	3842	100.00

Source: Socio-economic Survey, 2016.

Figure 5: Composition of Caste/Ethnic Groups in Charikot



Source: Socio-economic Survey, 2016.

V. CONCLUSIONS

A. Summary and Conclusions

- 54. This draft due diligence report is based on conceptual design and preliminary field assessment. The status of resettlement due diligence activities and findings are summarized as follows:
 - (i) The impacts of project construction activities will be minimal and no physical displacement (relocation, loss of residential land, or loss of shelter) or economic displacement (loss of assets, access to assets, income sources, or means of livelihoods) is identified. Nearly 3566 m2 land is required at two different sites for construction of project structures such as DEWAT treatment plant and guard house. However, private land acquisition is not required as available land sites are municipal and community forest land. For the use of public/government or community forest land which falls within the municipal area, the concerned ward office and Community Forest Users Group have provided written consent which are appended to this report. As private land acquisition is not required for the subproject, and there are no structures at the sites, and only small part of community forest sites are proposed to be used and the remaining parts will remain accessible to the community forest users, no involuntary resettlement and Indigenous Peoples impacts are anticipated.
 - (ii) The Gaunde DEWAT plant site is located near a school for deaf children, hence care will be taken to ensure minimal disturbance to the school during construction. Facility siting will be planned to ensure minimal disturbance to the community forest users, ensure their continued access to the remaining forest area and minimize odour and other post-construction impacts to the school. Extensive consultations with stakeholders around the Gaunde site and users of the site will be undertaken to ensure that their concerns are addressed and factored into project design. Similar consultations with stakeholders / forest users at Ramkot site will also be held and recorded in the updated DDR.
 - (iii) The service area is fairly heterogeneous in terms of caste/ethnicity, and no traditional territory of indigenous people has been reported. Charikot has a fairly large janajati population, who live in separate clusters / enclaves. The project's framework for inclusion of poor and vulnerable will ensure that janjati households benefit equally from the project. Therefore, the impact on janajati population is expected to be positive, by increasing the access to sanitation facilities. No adverse impact to such populations is anticipated.
 - (iv) Temporary impacts during construction period can be anticipated in terms of disturbance to the people for a very short duration. Access disruptions will be avoided and all other potential impacts locally dealt with and mitigated. While the pipe laying works are ongoing, access will be ensured by providing temporary walkways or access planks as necessary. The length of excavation will not be more than 50 meters for a time and the excavated trench will be back-filled within a day. Grievance Redress Mechanism will be in place and emphasis shall be placed on information dissemination and frequent interaction with local people and dealing local issues using a participatory approach.
- 55. This draft DDR will be updated based on detailed design. The DDR includes the consent letters of Municipality Ward Chair from the office of Ward no. 6 for the use of public land at Ramkot site. Similarly, use of land at Jilu, Safe Swanra (Gaunde) is also granted by the consent letter of

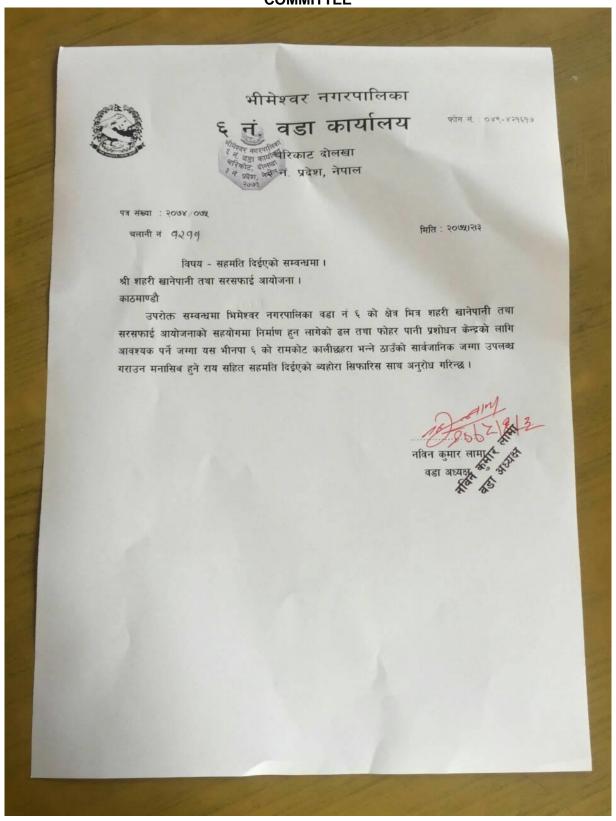
Gaunde Prakritik Community Forest Users Group. The meeting minutes of stakeholder consultation and decisions made in consultation with the community is also attached in this DDR

56. Upon project implementation, the Social Safeguards Officer at PMO/project management and quality assurance consultant (PMQAC) will be required to undertake a review of this due diligence, prepare a confirmation letter or report documenting any modifications for the subprojects in Charikot and submit to ADB; and receive a 'no objection' confirmation from ADB prior to start of construction.

B. Next Steps

57. Records of land ownership and photographs for government lands and road ROWs (particularly roads in congested market areas) to be utilized for the subproject will be included in the updated DDR prior to implementation and ADB approval obtained. This DDR will be updated before contract award.

NO OBJECTION LETTER FROM MUNICIPALITY AND COMMUNITY FOREST USER COMMITTEE



Translation

Bhimeshwar Municipality Ward No. 6 Office Charikot, Dolakha Province No. 3

Date: 17 May 2018

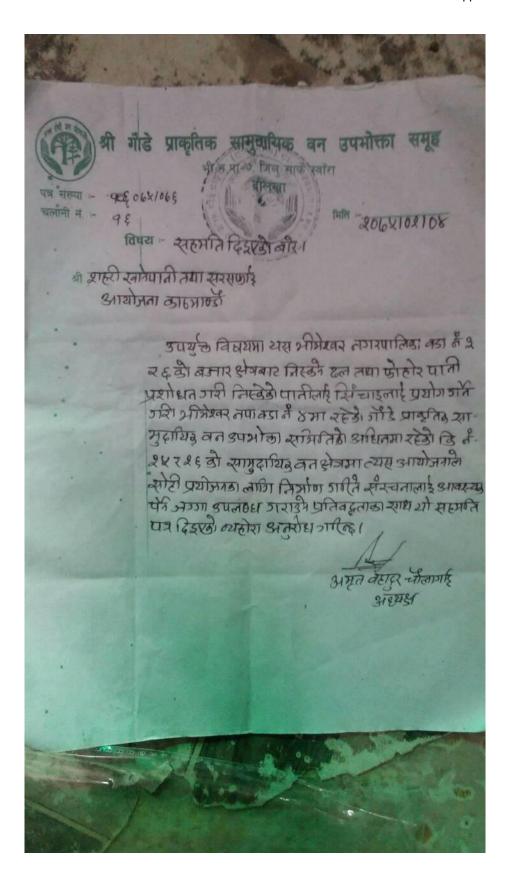
Subject: Consent

To:

Urban Water Supply and Sanittaion Project Kathmandu

On the subject matter, it is requested with recommendation that the public land at Ramkot, Kalichhahara is appropriate and available for construction of Waste Water Treatment Plant required for Urban water Supply and Sanitation Project, Dolakha. Hereby this ward office providing consent for the land at said place for the project purpose.

Navin Kumar Lama Chairperson, Ward no. 6



Translation

Shree Gaunde Prakritik Community Forest Users Group Bhimeshwor Municipality Ward No. 7, Jilu, Safe Swanra Dolakha

Date: 18 May 2018

Subject: Consent provided

Urban Water Supply and Sanittaion Project Kathmandu

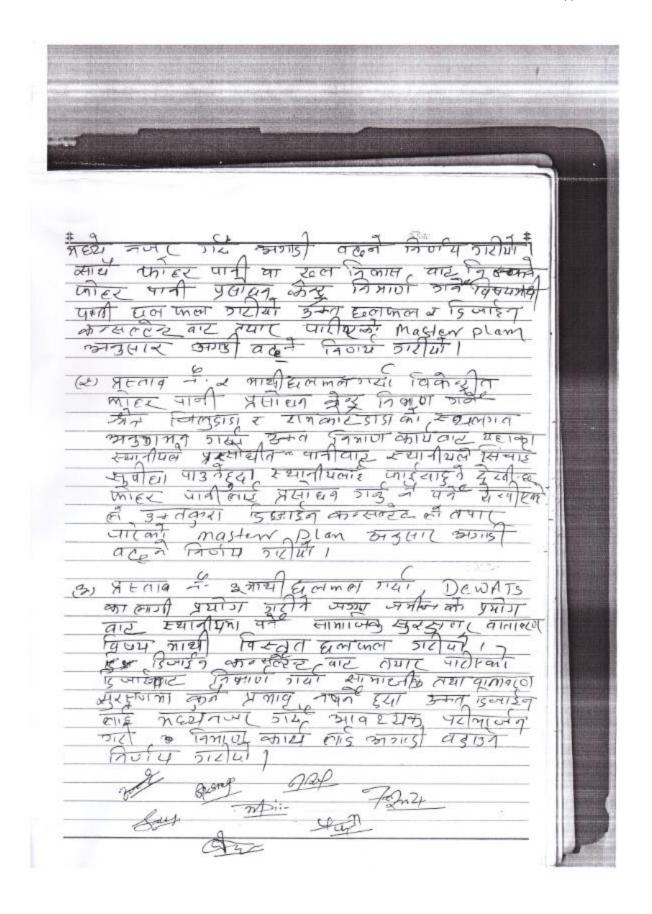
On the subject matter mentioned above, Gaunde Prakritik Community Forest Users Group hereby providing consent with commitment of granting required land for structures from parcel no. 25 and 26 at Bhimeswor Municiaplity ward no. 4 owned by this Users Group for construction of Waste Water Treatment Plant of Urban water Supply and Sanitation Project Dolakha. The treated water from waste water treatment plant will be used for irrigation purpose.

Amrit Bahadur Chaulagai Chairperson

MINUTES OF MEETING AND TRANSLATION

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English Translation of Minutes of Meeting

Today dated 27 April 2018, a public meeting with the beneficiaries of the service area of the proposed project and the concerned WUSC including the consultant team has been organized in the premises of Bhimeshwore Municipality. The following mentioned decisions have been made for the proposals suggested in the presence of the following mentioned participants:

Participants:

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1	Madhav Prasad Subedi	
2	Moti Prasad Choulagain	
3	Krishna Bdr. Khadka	
4	Ram Das Shrestha	Bhimeshwore Municipality-3
5	Narayan Bhakta Shrestha	Bhimeshwore Municipality-3
6	Ram Krishna K.C.	
7	Heman Kumar Shrestha	
8	Susma Karki	
9	Padam Bdr. Karki	
10	Bindu Karki	
11	Narayan Bdr. Thapa	Bhimeshwore Municipality-6
12	Navaraj Sapkota	Bhimeshwore Municipality-6
13	Dhurva Sapkota	Bhimeshwore Municipality-4
14	Sahadev Khadka	Bhimeshwore Municipality-5
15	Parbati Shrestha	Bhimeshwore Municipality-2
16	Nirmala Shrestha	Bhimeshwore Municipality-2
17	Bal Kumari Shrestha	Bhimeshwore Municipality-2
18	Laxmi Devi Shrestha	Bhimeshwore Municipality-2
19	Anita Shrestha	Bhimeshwore Municipality-3
20	Radhika Dahal	Bhimeshwore Municipality-3
21	Rana Bdr. Basnet	Bhimeshwore Municipality-4
22	Sobha	Bhimeshwore Municipality-4
23	Arjun Bdr. Budhathoki	Bhimeshwore Municipality-4
24	Lal Bdr. Khadka	Bhimeshwore Municipality-6
25	Tej Bdr. Khati	Bhimeshwore Municipality-6
26	Deepak Prasad Neaupane	
27	Gokul Prasad Neaupane	
28	Charitra Krishna Joshi	Bhimeshwore Municipality-2
29	Binod Chandra Devkota	TAEC-ICON JV
30	Shiva Adhikari	TAEC-ICON JV

Proposals and Decisions:

Proposal 1: Final Report Presentation on the proposed water supply project

Decision: Regarding the proposal 1, final report presentation was carried out by the consultant team followed by brief discussion. It has been decided to proceed the proposed water supply project under the consent of beneficiaries and other stakeholders present in the meeting.

Proposal 2: Discussion regarding DEWATS including land requirement for the treatment systems, site visit and its effectiveness.

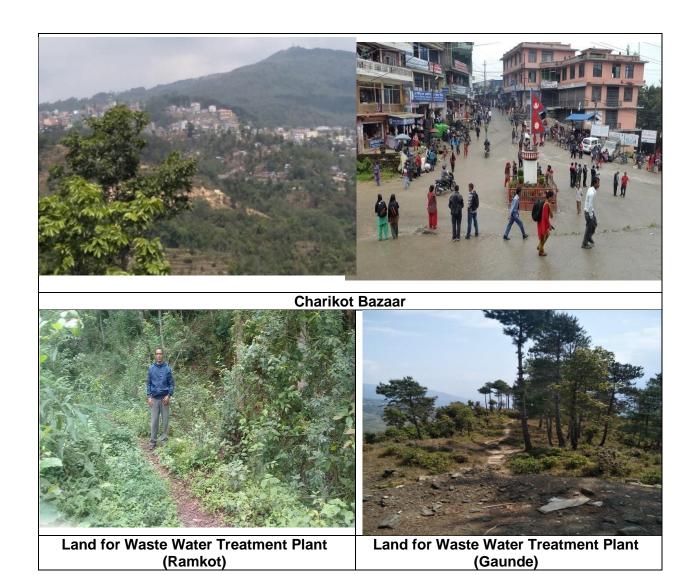
Decision: Regarding brief discussion on the proposal 2, information on the usefulness of the effluent from the waste water treatment system in irrigation purposes has been shared due to which the participants gave positive feedback for this. As there is only master plan prepared for

DEWATS for this project area, it has been decided to proceed considering the conditions of the project.

Proposal 3: Discussions regarding the likely impacts on the environmental & social aspects from the land used for DEWATS and other project activities.

Decision: Regarding the discussion made for the proposal 3, it has been decided to proceed this DEWATS project under the suitable conditions as the findings of the consultant team from the field visit and the master plan shows that there will be no such significant impacts on the environmental as well as social aspects of the project area.

PHOTOGRAPHS OF PROJECT SITES



SOCIAL SAFEGUARDS SCREENING CHECKLISTS

Country	Nepal	
Subproject Name	Charikot DEWATS	
Date	May 2018	

Involuntary Resettlement Impact Checklist

Probable Resettlement Effects	Yes	No	Not Known	Remarks
Acquisition of Land			KHOWH	<u> </u>
Will there be land acquisition?		\checkmark		Only government land and road ROW will be utilized for the project
Is the site for land acquisition known?				NA
Is the ownership status and current usage of land to be acquired known?				NA
Will easement be utilized within an existing Right of Way (ROW)?	V			Pipelines will be laid within ROW of existing roads.
Will there be loss of shelter and residential land due to land acquisition?				NA
Will there be loss of agricultural and other productive assets due to land acquisition?				NA
Will there be losses of crops, trees, and fixed assets due to land acquisition?				NA
Will there be loss of businesses or enterprises due to land acquisition?				NA
Will there be loss of income sources and means of livelihoods due to land acquisition?				NA I
Involuntary restrictions on land us protected areas	se or on a	ccess t	o legally d	esignated parks and
Will people lose access to natural resources, communal facilities and services?		\checkmark		

Probable Resettlement Effects	Yes	No	Not		Rer	nark	S
			Known				
If land use is changed, will it have an adverse impact on social and economic activities?		V					
Will access to land and resources owned communally or by the state be restricted?		V					
Information on Displaced Persons: Any estimate of the likely number the Subproject? If yes, approximately how many? Applicable_ Are any of them poor, female-hea poverty risks? Not Applicable_	Not		·	·	[]		[] Yes
Are any displaced persons from in	ndigenou	s or eth	nnic		[]	No	[] Yes Not Applicable_

Indigenous Peoples Impact Screening Checklist

KEY CONCERNS (Please provide elaboration son the Remarks column)	YES	NO	NOT KNOWN	Remarks
Indigenous Peoples Identification				
Are there socio-cultural groups present in or use the subproject area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), z" minorities" (ethnic or national minorities), or" indigenous communities" in the subproject area?	1			Janajati communities form a large proportion of town population. No traditional lands of indigenous people has been observed. No adverse impacts to janajati communities is anticipated. Such communities will be benefited under the project through its framework for inclusion of the poor and vulnerable.
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?	1			
Do such groups self-identify as being part of a distinct social and cultural group?	V			
Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		√		
Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?	V			

KEY CONCERNS (Please provide elaboration son the Remarks column)	YES	NO	NOT KNOWN	Remarks
Do such groups speak a distinct language or dialect?	√			Some janajati communities like Newar, Sherpa and Gurung that are generally better off economically, are well integrated in mainstream society and continue to speak their own languages. Other janajati groups speak the mainstream language, Nepali.
Have such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?	√			
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?	V			

B. Identification of Potential Impacts

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
Will the subproject directly or indirectly benefit or target Indigenous Peoples?	√			The subproject directly benefits the indigenous peoples because all the beneficiaries will receiver service irrespective of their ethnicity/caste and economic status. Therefore, the impact on janajatis will be positive. The project's policy for inclusion of poor and vulnerable will ensure that janajati households are included in project benefits
Will the subproject directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. childrearing, health, education, arts, and governance)		√		
Will the subproject affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		V		
Will the subproject be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?		V		
C. Identification of Special Requirements Will the subproject activities include				

Commercial development of the cultural resources and knowledge of Indigenous Peoples?	V	
Physical displacement from traditional or customary lands?	√	
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?	√	
Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?	√	
Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?	V	

Anticipated subproject impacts on Indigenous Peoples

Subproject component/ activity/ output	Anticipated positive effect	Anticipated effect	negative
Sanitation services	Receive the same benefits as the public in having storm water being effectively drained	None	