Environmental and Social Impact Assessment (ESIA)

Credit No. IDA-6778-NP

Nepal Urban Governance and Infrastructure Project (NUGIP)

Upgradation of Bargachhi Chowk (Koshi Highway) - Mahendra School - Taltalaiya Road Project

Itahari Sub-Metropolitan City,
Sunsari District, Koshi Province

December 2023

The World Bank

ACRONYM

BoQ	: Bill of Quantity
CBOs	: Community Based Organizations
CBS	: Central Bureau of Statistics
CESMP	: Construction Environment and Social Management Plan
CoC	: Code of Conduct
DIZ	: Direct Impact Zone
DPR	: Detailed Project Report
DSC	: Design and Supervision Consultant
DTMP	: District Transport Master Plan
DTO	: District Transport Office
DUDBC	: Department of Urban Development & Building Construction
EA	: Environmental Assessment
EHS	: Environment, Health and Safety
EPR	: Environmental Protection Rule
ESIA	: Environmental and Social Impact Assessment
ESMP	: Environmental and Social Management Plan
FGD	: Focus Group Discussion
FR	: Feasibility Report
HIV AIDS	: Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
IDA	: International Development Association
IIZ	: Indirect Impact Zone
ILO	: International Labor Organization
IP	: Indigenous People
IPF	: Investment Project Financing
ISR	: Implementation Status Review
KII	: Key Informant Interview
NGO	: Non-Governmental Organization
NUGIP	: Nepal Urban Governance and Infrastructure Project
OHS	: Occupational Health & Safety
OP	: Operational Policy
OP/BP	: Operational Policy/Bank Policy
PAP	: Project Affected Person
PCO	: Project Coordination Office
PIM	: Project Implementation Manual
PIU	: Project Implementation Unit
PPE	: Personal Protective Equipment
RAP	: Resettlement Action Plan
RoW	: Right of Way
SEA/SH	: Sexual Exploitation and Abuse//Sexual Harassment
STD	: Sexually Transmitted Disease
ToR	: Terms of Reference
ULG	: Urban Local Governments
WASH	: Water, Sanitation and Hygiene

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Introduction

This environmental and social impact assessment report covers the road upgradation project connecting Bargachhi chowk (Koshi Highway) - Mahendra School - Taltalaiya of Itahari Sub-Metropolitan City, Sunsari district. The road passes through ward number 2 of Itahari Sub-Metropolitan City. The project is intended to improve quality of life and livelihood of the local people along the settlements along and near the road alignment. The subproject is expected to contribute towards the municipal capacity for urban development planning, infrastructure development and institutional development of the sub-metropolitan city. The total length is 3.019 km.

The coordinates of the starting point is 26°41'37.64" N, 87°16'33.72" E and end co-ordinate 26°41'56.44" N, 87°17'59.92" E. Right of way of the proposed road project is 9.75 m which includes 7 m of carriage width having two lanes of 3.5 m and there is tick drain throughout the road alignment. There are 2 pipe culverts, 2 slab culverts, 3 numbers of irrigation crossings, and 1 multi-cell box culvert included in the design.

Baseline Information

The project area has a plain topography with altitudinal range of the project area varies from 90 m to 177 m from sea level. In the proposed road alignment, there is no landslide prone area. The main rivers of the project municipality are Budhi khola, Tengra khola, and Sehara khola. The municipality has warm temperate to tropical climatic conditions. The project area has an average annual temperature of 24.26°C with annual minimum temperature of 5.8°C and maximum temperature of 37.6°C. The summers here have a good portion of rainfall compared to the winter season. The average annual rainfall ranges from 1798 mm to 2039 mm.

There are water supply pipelines, and 66 electric poles along proposed road width of the road alignment. The project will require reinstatement of around 5.95 km of water supply HDPE pipelines of diameter ranging from 110 mm to 250 mm, considering both sides of the proposed alignment. The air quality index of Itahari shows that the AQI is 110, with $PM_{2.5}$ level of 39.2 µg/m^3 and (*Source: https://www.iqair.com/nepal/eastern-region/itahari, 17th August 2023*). However, the project area is relatively less urbanized, hence air quality is better. The primary source of ambient air pollution is due to dust from vehicles plying on roads. The range of average noise levels in the project area was observed to be around 68 dBA. There is no forest within project impact area and it is not a major habitat for terrestrial fauna and avifauna. There are some trees within the road width of the proposed road alignment. In total 26 trees need to be felled. This includes 15 private trees and the rest are under government ownership.

As per the municipal profile of 2079 BS, the total population of Itahari Sub-Metropolitan City is 157,457 and the household number is 35,864. The average family size of the district is 4.39, which is lower than that of the national average of 4.88. The project area is inhabited by 52.29% Brahmin/Kshatri (Hill), 35.61% Aadibasi/Janajati (Hill), 6.11% Aadibasi/Janajati (Terai), 3.93% Dalit (Hill), 0.25% Brahmin/Kshatri (Terai), 0.10 Dalit (Terai), Others (Hills) 1.25%, and 0.46% Others (Terai). The project area is inhabited by people Hindu, Buddhist, Kirat, Islam, Christian and other religions. Adibasi and janajati, of hill and terai origin, are the indigenous people of the project area. Service and business make up to 13.31% of the occupation, while 3.68% are

involved in agriculture, 6.78% are wage-based workers, 22.0% are students, 27.75% are housewives, 10.28% are unemployed while and 9.96% are involved in foreign employment while remaining 6.2% are engaged in different other activities like professional services. There are no registered cases regarding SEA/SH and GBV in the Women and Child Development Section of Itahari sub-metropolitan city office from the communities along the proposed road alignment.

There is Mahendra Secondary School, Ward number 2 office, 3 temples (Shiva Mandir, Krishna Mandir and Sundar Devi Mandir), Taltalaiya park and Yippee Land Amusement & Water Park along the proposed road alignment. Based on the consultation meetings and numeration from google earth maps, there are 1,899 households and population of 9,248 within 500 m both sides from the edges of the proposed road alignment.

Legal and Regulatory Requirements

The project doesn't require any legal environmental assessment process to be undertaken as per Environment Protection Regulation (EPR, 2022). The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. The report has included the applicable GoN plan, policies, act, regulations, guidelines, and standards. Similarly, the report has also included the environmental and social standards of the World Bank.

Screening, Scoping, Impact identification, Prediction and Management

Direct Impact area of the project is considered as road width (9.75 m) of the project. Similarly, the indirect impact area falls within 500 meters from both edges of the road. Environmental and Social Screening checklists were used for screening and summarizing the overall impacts. The site-specific impacts in construction and operation phases are included in the ESIA report. Some of the impacts include;

Physical Impacts

- *Land use change*
- *Quarry materials*
- *Stockpiling and construction campsite*
- *Ambient air pollution, Noise nuisance and Water pollution*
- *Solid waste & spoil generation*
- *Road stability & management*

Biological Impacts

- *Vegetation loss, 26 trees required to be felled (15 private trees and others under government ownership.*

Socio-economic and Cultural Impacts

- *Change in land use*
- *Damage to public and private utilities*
  This includes 66 electric poles, and 5.95 km of water supply pipeline network
- *Difficulty in access & mobility to private properties and premises*
- *Community Health & Safety*
- *Occupational Health and Safety*

- *Social disturbances/risk of GBV//AIDS*
- *Social Disturbance/Risk of SEA/SH, Human trafficking, GBV, HIV AIDS*
- *Child labour, forced labour and wage discrimination*
- *Traffic management issues, etc*

The mitigation measures corresponding to the impacts have been suggested in the report. Some of the mitigation measures are;

Measures for Physical Impacts

- *Conservation and reuse of the top soil*
- *Construction materials from the legally operating crusher industries*
- *Suitable selection of site for stockpiling*
- *Vehicles and equipment meeting GoN emission standard to be used*
- *Regular maintenance of vehicles and equipment*
- *Follow 3R approach of waste management*
- *Waste segregation at source, prohibition of waste burning*
- *Prohibition of spoil disposal into rivers, water bodies and public places*
- *Awareness activities* to reduce the incidences of disposal of waste into road-side drains

Measures for Biological Impacts

- *Compensatory plantation @ 1:10 for each tree cut, and Greenery Promotion*
- *Prohibition of fishing by workforce, & no disposal of any waste or waste water into water bodies*

Measures for Socio-economic & Cultural Impacts

- *Itahari Sub-Metropolitan City office will accomplish the process of transfer of deeds of the land parcels that are within road width of the road alignment*
- *Water supply pipelines, and electrical poles to be reinstated without delay*
- *Metal/wooden planks, and earthen ramps will provisioned to ease access to shops, courtyards and public passages; Traffic Management Plan will be prepared*
- *Sign boards/messages in local languages, safety barricades will be provided*
- *Provision of PPEs and first aid kits*
- *Provision of safe, clean and hygienic workplace and adequate WASH facilities at campsite*
- *The project will restrict child labor (under age of 16)*
- *Public awareness raising events (safety, environmental conservation)*
- *Employment opportunity & priority for the locals*
- *Code of Conduct to be implied for the workforce*
- *Construction works to consider elderly, women, child & differently able people (EWCD) requirements*
- *Awareness on GBV, SEA/SH, communicable diseases/CoVID, and human trafficking*

Resettlement Action Plan

The impact on private structures along the proposed road up-gradation project have been avoided to the possible extent. Since RoW of the road was already declared on 2072/06/01 BS (September, 2015), the road width is clear and there are no issues of land acquisition. The Resettlement Action Plan (RAP) aims to provide policy and procedures of land acquisition,

compensation and resettlement of affected persons if design changes. However, RAP is not required for this project.

Sexual Exploitation & Abuse, and Sexual Harassment Prevention and Response Action Plan

Based on the Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Prevention and Response Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate SEA/SH risks that the project activities might trigger. The Plan has also addressed "Table - 1: Recommended actions to address SEA/SH Risks in IPF Projects" as per the "Good Practice Note" published by the World Bank in September 2018. In general, there are issues of GBV is Nepalese society. However, during the field study, it was discussed during consultations that although there are some minor cases of family disputes reflecting gender violence, the locals generally reach to a mutual reconciliation for the sake of honor.

Environmental and Social Management Plan

Environmental and Social Management Plan (ESMP) has been proposed including potential impacts and required mitigation measures. A total cost of NPR 2,265,000 has been allocated for mitigation and management of the environmental and social impacts of the project activities. In addition, agencies responsible for executing environmental mitigation measures and monitoring have been identified in the ESMP. The project also includes a Grievance Redress Mechanism (GRM) for timely update and resolution of stakeholders' concerns and grievances.

Grievance Redress Committee (GRC)

A Grievance Redress Committee is established in the project level to allow stakeholders to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). The committee can be provided with grievances through any of the mediums like written, verbal, telephone, letter, etc. and the committee will process it following the procedures of ESMF document of the project, and if not solvable, it will be forwarded to the higher level of GRM.

Institutional arrangements

The Ministry of Urban Development (MoUD) has set up a Project Coordination Office (PCO) under the Department of Urban Development and Building Construction (DUDBC) to implement NUGIP. The PCO is responsible for overall project compliance including compliance with environmental and social measures. The PCO will be supported by a Project Management Support Team (PMST). A Project Implementation Unit (PIU) will be established in each municipality for implementation of the subproject project at the local level and will be responsible for implementation of the ESMP and other environmental and social instruments. Technical Assistance will be provided through a Design and Supervision Consultancy (DSC) which includes environmental and social safeguards specialists.

EXECUTIVE SUMMARY (NEPALI)

कार्यकारी शाराम्श

यस वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदनले सुनसरी जिल्ला, इटहरी उप-महानगरपालिकाको बगरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैया जोड्ने सडक खण्डको स्तरोन्नतीको कामलाई समेट्ने छ, । यस आयोजनाले सुनसरी जिल्ला, इटहरी उप-महानगरपालिका, वडा नं. २ को भएर जान्छ । यस आयोजनाको उरद्देश्य बाटोको वरिपरिका बस्तीका स्थानीयहरुको जीवनस्तर र जीविकोपार्जनमा सुधार ल्याउने रहेको छ । यस उपआयोजनाले नगरपालिकाको शहरी विकास योजना, पूर्वाधार विकास तथा संस्थागत विकास एवं नगरपालिकाको क्षमताको अभिवृद्धिमा योगदान पुऱ्याउने अपेक्षा गरिएको छ । यस बगरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैयासम्म सडकको कूल लम्बाई ३.०१९ कि.मि. रहेको छ ।

यस उपआयोजनाको भौगोलिक स्थितिमा शुरुवात विन्दु २६°४१'३७.६४'' उत्तर, ८७°१६'३३.७२'' पूर्व र अन्तिम विन्दु २६°४१'५६.४४'' उत्तर, ८७°१७'५९.९२'' सम्म पर्दछ । प्रस्तावित सडकको क्षेत्राधिकार (Right of Way) ९.७५ मि. रहेको छ, जसमा ७ मीटर Carriage Way रहने गरी दुई लेनको सडक (३.५ मीटर प्रति लेने), सडकको किनारामा नाली (Tick Drain) र २ वटा पाईप कल्भर्ट, २ वटा स्ल्याप कल्भर्ट, १ वटा मल्टि सेल वक्स कल्भर्ट र ३ वटा सिंचाईको कसिङ रहने छन् ।

विद्यमान अवस्थाः

यस उपआयोजना क्षेत्र समुद्री सतहबाट ९० मी. देखी १७७ मी. को उचाई समथर भूमिमा रहेको छ । प्रस्तावित सडक रहेको स्थान वा सडक क्षेत्राधिकार भूस्खलन भैरहने क्षेत्र भित्र पर्दैन । उपआयोजना क्षेत्रका प्रमुख खोलाहरुमध्ये बुढी खोला, टेङग्रा खोला तथा सेहरा खोला रहेका छन् । यस उप-महानगरपालिकामा न्यानो समशितोष्ण देखि उष्ण जलवायु रहेको पाइन्छ । यस सडक उपआयोजना क्षेत्रमा बार्षिक औषत तापक्रम २४.२६° सेल्सियस रहेको छ, बार्षिक न्यूनतम तापक्रम ५.८° सेल्सियस र अधिकतम तापक्रम ३७.६° सेल्सियस रहेको छ । यस क्षेत्रमा जाडो मौसमको तुलनामा गर्मि मौसममा राम्रो बर्षा हुन्छ । यहाँ बार्षिक औषत बर्षा १७९८ मिलिमिटर देखि २०३९ मिलिमिटर बर्षा हुने गरेको उल्लेख छ ।

सडक किनारामा विद्युत, खानेपानीका प्रसारण लाइन रहेका छन् । प्रस्तावित सडक खण्डमा झण्डै ५.९५ कि.मि. खानेपानीको एचडिपी (११० एम.एम. देखि २५० एम.एम. डायमिटरको) पाइपहरु पुनःस्थापित गर्नु पर्ने हुन्छ । आयोजना स्थलमा हावाको गुणस्तर मापन गर्न इटहरीको AQI Index आधार लिइएको छ । सो क्षेत्रको AQI Index ११० रहेको छ र पिएम् २.५ (२.५ मा.मी भन्दा कम आकारका धूलोका कण) ३९.२ मि.ग्रा. प्रति घनमिटर रहेको छ (*Source: https://www.iqair.com/nepal/eastern-region/itahari, 17th August 2023*). । त्यसै गरी औसत ध्वनीको स्तर ६५ dBA देखि ६९ dBA हाराहारी रहेको छ । आयोजना क्षेत्रमा कुनै वन वा जैविक विधितताका

कारण संवेदाशील स्थानहरु रहेको छैन । बाटोको क्षेत्राधिकार भित्र केही रुखहरु पनि रहेकाछन् । जहाँ जम्मा २६ वटा रुखहरु काट्नु पर्ने हुन्छ ।

इटहरी उप-महानगरपालिकाले वि.सं २०७९ मा तयार पारेको प्रोफाइलमा उल्लेख भए अनुसार यस उप-महानगरपालिकाको कूल जनसंख्या १५७,४५७ र घर परिवार ३५,८६४ रहेको छ । औसत परिवार संख्या ४.३९ रहेको छ जुन राष्ट्रिय औसत (४.८८) भन्दा कम हो । यस उपआयोजना क्षेत्रमा ५२.२९% ब्राम्हण/क्षेत्री (पहाड), ३५.६१% आदिवासी/जनजाति (पहाड), ६.११% आदिवासी/जनजाति (तराई), ३.९३% दलित (पहाड), ०.२५% ब्राम्हण/क्षेत्री (तराई), ०.१०% दलित (तराई), अन्य (पहाड) १.२५% र अन्य (तराई) ०.४६% आदिको बसोबास रहेको र हिन्दु, बौद्ध, किरात, इस्लाम, क्रिश्चियन, र अन्य धार्मिक समुदायको बसोबास रहेको छ । पहाड र तराई मूलका आदिवासी/जनजाति यस आयोजना क्षेत्रका आदिवासी/जनजाति हुन् । यस उपआयोजनाको बाटोको क्षेत्राधिकार भित्र कुनै विद्यालय, मन्दिर अस्पताल लगायत अन्य सार्वजनिक भौतिक संरचानाहरु रहेका छैनन् । यस आयोजना क्षेत्रमा सेवा र व्यवसायमा १३.३१%, रहेका छन् भने ३.६८%, ज्यालमा आधारित कामदार ६.७८% र वैदेशिक रोजगारीमा ९.९६% सम्लग्न रहेका छन् ।

प्रस्तावित सडक किनार क्षेत्र नजकि महेन्द्र उच्च माध्यमिक विद्यालय, वडा नं. २ को वडा कार्यालय, ३ वटा मन्दिर, यिप्पी ल्याण्ड मनोरन्जन तथा वाटर पार्क र तालतलैया पार्क रहेको छ । त्यसै प्रस्तावित सडकको प्रभाव क्षेत्र भित्र (सडकको दाँया बाँया किनारा २०० मिटर देखि ५०० मिटरसम्मको दुरी भित्र) १,८९९ घरधुरी र ९,२४८ जनसंख्या रहेको छ ।

ऐन तथा नीति, नियमको आवश्यकता:

नेपाल सरकारले विभिन्न समयमा जारी गरेका विषयगत तथा बहुविषयगत निर्देशिका तथा मापदण्डहरु आयोजना तयार गर्न तथा कार्यान्वयन चरणहरुमा वातावरणीय एवं सामाजिक सुरक्षण आयामहरु मूल प्रवाहीकरण गर्न यथेष्ठ छन् । यस प्रतिवेदनले सम्बन्धित नेपाल सरकारका योजना, निति, ऐन, नियम, निर्देशिका एवम् मापदण्डहरु समेटेको छ । त्यसैगरी यस प्रतिवेदनले विश्व बैङ्कको वातावरणीय तथा सामाजिक मापदण्डहरु पनि समेटेको छ ।

स्कीनिङ्ग, क्षेत्र निर्धारण, प्रभाव पहिचान, पुर्वानुमान तथा व्यवस्थापन:

आयोजनाको प्रत्यक्ष प्रभावित क्षेत्र यस उपआयोजनाको सडकको चौडाइ ९.७५ मीटर मानिएको छ । प्रत्यक्ष प्रभावित क्षेत्रमा सडकको किनारको दुबै तर्फ ५००/५०० मिटरसम्मको क्षेत्रलाई लिइएको छ । प्रभावहरुको वर्गीकरण तथा संक्षेपीकरण गर्न वातावरणीय तथा सामाजिक चेकलिष्ट प्रयोग गरिएको छ । स्थान विशेषको प्रभावहरु वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कनमा समावेश गरिएका छन् । केही प्रभावहरु निम्नानुसार छन् ।

भौतिक प्रभावहरु:

- भूमि उपयोगमा परिवर्तन
- उत्खनन् सामाग्री
- भण्डारण र निर्माण शिविर स्थल
- ध्वनी, वायु र जल प्रदुषण

- गाडी तथा उपकरणहरुको नियमित मर्मतसंभार
- फोहरमैला तथा ढुङ्गा-माटो व्यवस्थापन
- जनचेतनामूलक कार्यक्रमहरु

जैविक प्रभावहरुः

- बोटविरुवाको क्षतीः २६ वटा रुख काट्नु पर्ने देखिन्छ ।
- कामदारहरुलाई खोलानालामा माछा मार्न तथा फोहर फाल्न बन्देज गरिनेछ ।

सामाजिक-आर्थिक तथा सांस्कृतिक प्रभावहरुः

- भूमि उपयोगमा परिवर्तन
- सार्वजनिक तथा नीजि संरचनाहरुमा क्षती (*जम्मा ६६ वटा बिजुलीको खम्वा, ५.९५ कि.मि. खानेपानीको पाइप लाइन तथा)*
- घर-आँगन, पसल तथा नीजि सम्पतिमा पहुँच र गतिशिलतामा कठिनाइ
- सामुदायिक स्वास्थ्य र सुरक्षा
- व्यवसायजन्य स्वास्थ्य र सुरक्षा
- सामाजिक सद्भावमा अवरोध, गुनासो व्यवस्थापन
- यौन जन्य हिंसा (यौन दुराचार, मानव बेचविखन, HIV AIDS and CoVID)
- बाल श्रम, जबरजस्ती काममा लगाउने तथा ज्यालामा असमानता जस्ता समस्या
- ट्राफिक व्यवस्थापन

यी असरहरु न्यूनीकरणका लागि विभिन्न उपायहरु यस प्रतिवेदनको वातावरण तथा सामाजिक व्यवस्थापन योजना (ESMP) मा उल्लेख गरिएका छन् । ती मध्ये केही प्रमुख उपायहरु निम्नानुसार रहेका छन् :

भौतिक प्रभावहरु न्यूनीकरण गर्ने केही उपायहरुः

- सतही मलीलो माटो (top soil) को संरक्षण
- स्वीकृत गिट्टी वालुवा प्लान्टबाट मात्रै गिट्टी वालुवा प्रयोग गर्ने
- निर्माण सामग्री भण्डारण स्थल व्यवस्थापन
- नेपाल सरकारले तोकेको मापदण्ड अनुकुल सवारी साधन तथा यन्त्रहरु प्रयोग गर्ने
- सवारी साधन तथा यन्त्रहरु को नियमित मर्मत संभार गर्ने
- फोहोर व्यवस्थापनमा 3R अवधारण अवलम्बन गर्ने
- श्रोतमा नै कुहिने र नकुहिने फोहोर वर्गीकरण, तथा प्लाष्टिक जन्य फोहोर जलाउनमा प्रतिवन्ध
- सार्वजनिक स्थल तथा खोलामा निर्माणजन्य फोहोर फाल्न प्रतिवन्ध

जैविक वातवारणमा पर्ने प्रभावहरु न्यूनीकरण गर्ने केही उपायहरुः

- प्रति रुख काटे वापत १० वटा रुख रोप्ने, तथा हरियाली प्रवर्धन गर्ने
- कामदारहले खोलामा माछा मार्न प्रतिवन्ध तथा खोलामा निर्माणजन्य फोहोर फाल्न प्रतिवन्ध

सामाजिक-आर्थिक तथा सांस्कृतिक प्रभावहरु न्यूनीकरणका उपायहरु :

- सडकको क्षेत्राधिकारमा भित्र रहेका जग्गाहरुको कित्ताकाट र स्वमित्व हस्तान्तरणको प्रकिया इटहरी उप-महानगरपालिकाले पुरा गर्नेछ ।
- खानेपानी पाईप लाईन तथा विजुलीका पोलहरु पुनःर्स्थापना तथा व्यवस्थापन गर्ने
- घर-आँगन, पसल तथा नीजि क्षेत्रमा आवागमनमा सहजताका लागि आवश्यक स्थानहरुमा काठको वा फलामको फड्के वा earthen ramp को व्यवस्था गरिदिने, साथै ट्राफिक व्यवस्थापन योजना तयार गरिनेछ
- नेपाली भाषामा *Sign board* तथा सूचनाहरु राख्ने, तथा सुरक्षाका लागि *barricade* राखिनेछ
- कामदारहरुलाई सुरक्षाका उपकरणहरु तथा प्राथमिक उपचार सामाग्री उपलब्ध गराइनेछ
- कामदारहरुलाई सुरक्षित तथा सफा आवासगृहको व्यवस्था, तथा उपयुक्त WASH सुविधाहरु उपलब्ध गराइनेछ
- परियोजनामा १६ वर्षभन्दा कम उमेरका वालवालिकालाई काम लगाउन निषेध गरिनेछ
- स्थानीयलाई रोजगारीको अवसर तथा प्राथमिकता
- कामदारहरुलाई आचार संहिता (CoC) लागू गरिनेछ
- निर्माण चरणका डाइभर्जनहरुको डिजाइनले बृद्ध-बृद्धा, महिला, वालवालिका तथा फरक क्षमताका भएका व्यक्तिहरुका लागि उपयुक्त उपायहरुको व्यवस्था गर्नु पर्दछ ।
- वातावरणीय संरक्षण र सामाजिक सुरक्षण सम्बन्धी जनचेतनामूलक कार्यक्रम संचालन गरिनेछ ।
- यौन जन्य हिंसा (यौन दुराचार), मानव बेचविखन, HIV AIDS and CoVID सम्बन्धी जनचेतनामूलक कार्यक्रमहरु संचालन गरिनेछ ।

पुनःर्वास कार्ययोजनाः

प्रस्तावित सडक स्तरोन्नति उपआयोजनाको सडकको क्षेत्राधिकार भित्रको निजी संरचनामा पर्ने असरलाई सकेसम्म जोगाइएको छ । उप-महानगरपालिकाले उपलब्ध गराएको निर्णय प्रतिलिपिमा उल्लेख भए बमोजिम बि.सं. २०७२ साल असोज ०१ गतेको निर्णयले बाटोको क्षेत्राधिकार स्पष्ट छ र जग्गा अधिग्रहणको आवश्यकता छैन । पुनर्वास कार्य योजनाले डिजाइन परिवर्तन भएमा प्रभावित व्यक्तिहरुको जग्गा अधिग्रहण, क्षतिपूर्ति र पुनर्वासको नीति र प्रकृयाहरु प्रदान गर्ने लक्ष्य राखेको छ । तर यस परियोजनको लागि पुनर्वास कार्य योजना आवश्यक छैन ।

यौन शोषण तथा दुर्वेसन एवं दुर्वव्यवहार रोकथाम तथा सम्बोधन कार्य योजनाः

विश्व बैङ्कले नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना (NUGIP) को लागि गरिएको यौनिक शोषण, दुर्वेसन एवम् यौन दुर्व्यवहार जोखिम मूल्याङ्कनका आधारमा यस आयोजनाको SEA/SH जोखिमको "न्यून" मूल्याङ्कन गरिएको छ । यस मूल्याङ्कनमा आधारित भई आयोजनाको लागि SEA/SH निरोध तथा सम्बोधन कार्ययोजना आयोजनाको लागि SEA/SH रोकथाम तथा सम्बोधन कार्ययोजना बनाइएको छ । यसमा उपआयोजनाको कार्यक्रमले सिर्जना गर्न सक्ने SEA/SH जोखिमहरु निषेध एवं रोकथाम तथा न्यूनीकरण गर्ने उद्धेश्यका निश्चित व्यवस्थाहरु समावेश गरिएका छन् । यस योजनाले तालिका- १. विश्व बैङ्कले सेप्टेम्बर २०१८ मा प्रकाशित "असल अभ्यास नोट" अनुसार IPF परियोजनाहरुमा SEA/SH जोखिमहरुलाई सम्बोधन गर्न सुझाएका कार्यहरुलाई पनि समावेश गरेको छ ।

सामान्यतया नेपाली समाजमा लैङ्गिक हिंसासम्बन्धी घटनाहरु घटिरहन्छन् । समुदाय स्तरका महिलाहरुसँग भएका छलफल अनुसार, आयोजना क्षेत्रमा केही साना-तीना घरेलु हिंसाका घटनाहरु घटे तापनि सामाजिक प्रतिस्थाका कारण आपसी मेलमिलाप गर्नेगरेको छ ।

वातावरण तथा सामाजिक व्यवस्थापन योजना :

पहिचान गरिएका सवालहरु, सम्भाव्य असर एवं प्रभावहरु, तिनीहरुको न्यूनीकरण गर्ने विधिहरु र अनुगमन विधिहरु समावेश गरी यस प्रतिवेदनले वातावरणीय तथा सामाजिक व्यवस्थापन रुपरेखा (ESMF) मा उल्लेख भए बमोजिम प्रस्ताव गरेको छ । निर्माण तथा सञ्चालन चरणमा हुने वातावरणीय तथा सामाजिक प्रभाव न्यूनीकरण गर्ने लागत खर्च वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदनमा संलग्न छ । अझ वातावरणीय प्रभाव न्यूनीकरण व्यवस्था तथा अनुगमन गर्ने जिम्मेवार निकायहरु वातावरणीय तथा सामाजिक व्यवस्थापन रुपरेखा तोकिएको छ । वातावरण तथा सामाजिक व्यवस्थापन योजना कार्यान्वयनका लागि कूल रु. २,२६५,००० को बजेट प्रस्ताव गरिएको छ । यस उपआयोजनामा सरोकारवालाहरुको जिज्ञासा एवं गुनासोहरुको बारे अद्यावधिक सूची राख्न र उपयुक्त समयमै समाधान गर्न एवं गुनासो सम्बोधन विधि (GRM) समेत समेटिएको छ ।

गुनासो व्यवस्थापन समिति (GRC) को व्यवस्थाः

उपआयोजना निर्वाध रुपमा कार्यान्वन गर्न र समयमा नै उपआयोजना सम्पन्न गर्नका लागि निर्माण चरणमा आउने गुनासाहरुको सुनुवाई गर्ने र त्यस्ता गुनासाहरुलाई तत्कालै स्थानिय स्तरमा नै समानधन गर्ने उद्देश्यले आयोजना स्तरमा एक गुनासो व्यवस्थापन समितिको गठन गरिनेछ । उक्त गुनासो समितिलाई कुनै पनि प्रकारका संचारका माध्यम, चिट्ठिपत्र वा भौतिक रुपमा उपस्थित भएर टिपाउने गुनासाहरुको सुनुवाई ESMF मा उल्लेख भए बमोजिमको नियम र परिधिमा रहि समाधन गर्ने र आफुले समाधान गर्न नसकिने गुनासाहरुलाई उपल्लो निकायमा पठाउन एक गुनासो व्यवस्थान समितिको गठन गरिनेछ ।

संस्थागत व्यवस्था :

आयोजना कार्यान्वयन गर्न शहरी विकास मन्त्रालयले शहरी विकास तथा भवन निर्माण विभाग अन्तर्गत नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना (NUGIP) को कार्यालय स्थापना गरेको छ । वातावरणीय तथा सामाजिक विधिको साथै सम्पूर्ण विधिहरु पालना सम्बन्धी जिम्मेवारीको जवाफदेहिता आयोजना समन्वय कार्यालय (PCO) मा रहने छ । आयोजना समन्वय कार्यालयलाई एउटा आयोजना व्यवस्थापन सहयोग टोलीले (PMST) सहयोग गर्नेछ । उपआयोजनाहरुको वातावरणीय तथा सामाजिक व्यवस्थापन योजना कार्यान्वयन स्थानीय तहमा गर्न र अन्य वातावरणीय एवं सामाजिक संयन्त्रहरुको कार्यान्वयनमा जिम्मेवार हुने गरी नगरपालिकामा एक आयोजना कार्यान्वयन इकाइ (PIU) स्थापना गरिएकोछ । सुरक्षण विशेषज्ञ सहितको डिजाइन तथा सुपरिवेक्षक परामर्शदाता (DSC) मार्फत प्राविधिक साहायाता पुऱ्याइनेछ ।

1. INTRODUCTION

1.1. Project Background

Department of Urban Development and Building Construction (DUDBC) under Ministry of Urban Development (MoUD) of Government of Nepal has been executing 'Nepal Urban Governance and Infrastructure Project (NUGIP) within the strategic framework for urban development as envisaged in National Urban Development Strategy since the fiscal year 2077/78 B.S. As a continued effort of this program, UGIIP was largely focused on improving the urban infrastructure of various municipalities under different cluster through the preparation of Detailed Project Report (DPR) of some various infrastructures needed to improve the infrastructure services within the project municipality in conjugation with the development opportunity and resource sharing prospects between it and adjacent/nearby municipalities under the designated cluster.

DPR of Bargachhi Chowk (Koshi Highway) - Mahendra School - Taltalaiya Road, Itahari Sub-Metropolitan City has been prepared as per the Contract between Municipal Executive, Itahari, Nepal Urban Governance and Infrastructure Project (NUGIP) (Client) and BN Consultancy Pvt. Ltd (BN) - Plush Engineers and Architects (P) Ltd (PEA) which have entered into the agreement, for performing work REF No: NP-DUDBC-216346-CS-QCBS, into effect from 9th November 2022 to provide services on Detailed Engineering Design and Construction Supervision (DSC) covering the upgradation project connecting Bargachhi at Koshi Highway to Taltalaiya, and is 3.019 km. The project is expected to contribute towards the municipal capacity for urban development planning, infrastructure development and institutional development of the municipality together with the improvement of livelihood of the local people along the settlement.

This Environmental and Social Impact Assessment (ESIA) document considering as a part of the DPR, contains the project details of this urban road upgradation works, baseline of the project area, potential environmental & social concerns with respect to the project activities, mitigation measures and a plan to implement these measures along with the roles & responsibilities as well as the required budget for the associated activities.

1.2. Project Area Description

The proposed study area is located in Itahari Sub-Metropolitan City of Sunsari District, Koshi Province. Total length of Proposed Road Upgradation Project is 3.019 km with the geographical location of that starting point is 26°41'37.64" N, 87°16'33.72" E and end co-ordinate 26°41'56.44" N, 87°17'59.92" E.

Salient features of Bargachhi (Koshi Highway) - Mahendra School - Taltalaiya road is provided in table below;

Table 1.1: Details of Bargachhi (Koshi Highway) - Mahendra School - Taltalaiya Road Upgradation Project

SN	Road Features	Description
1	Road Type	Urban/ Collector Road
2	Proposed road length	3.019 Km
	Starting Point (Location)	Bargachhi chowk (Koshi Highway)
	End Point (Location)	Taltalaiya (Tengra khola)
3	Number of Lane	Double Lane
4	Right of Way	9.75m wide throughout the road project (Existing road width is also 9.75 m)
5	Carriageway Width	7 m throughout the road project
6	Pavement Surfacing	Asphalt concrete (Flexible pavement)
7	Terrain Type	Plain
8	Wards & Major settlements	Itahari Sub-Metropolitan City - ward 2; *Bargachhi Chowk, Prabhat Chowk, Milijuli Tol, Tribhuvan Chowk, and Mahendra Chowk, Taltalaiya*
	Design Parameters	
9	Design speed of Road	30 km/hr
10	Minimum Radius of Vertical Curve	15 m
11	Minimum Radius of Horizontal Curve	20 m
12	Maximum gradient	4%
13	Minimum Gradient	0.3%
14	Total cost of EMP	NPR. 2,265,000
15	Total Project cost	NPR. 319,632,740.74 (including Vat and contingency)
15	Cost per km	NPR. 105,873,713.40 (including Vat and contingency)

1.3. Overview of project Town Area

Itahari Sub-Metropolitan City falls in Koshi Province. The municipality was established in 1997 and became a sub-metro in 2014 after merging the VDCs of Khanar, Ekamba, Pakali and Hansposa. Situated at a distance of 25 kilometres north of the provincial capital of Biratnagar, 16 kilometres south of Dharan and 92 kilometres west of Kakarbhitta, Itahari serves as a junction point of the East-West Mahendra Highway and the North-South Koshi Highway.

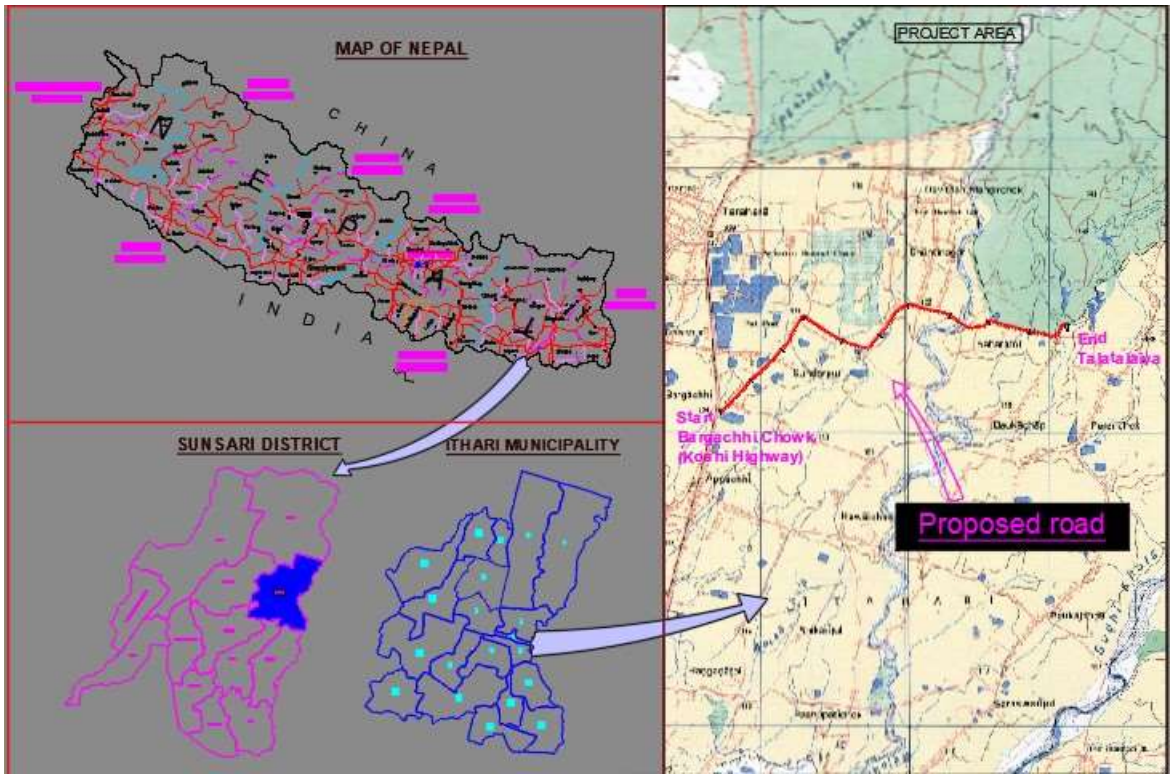

Figure 1.1: Index Map of the Project

1.4. Road Network and Transportation

Itahari Sub-Metropolitan City 564.15 km road length in total. This includes 67.86 km of earthen road, 313.87 km of gravel road, 32.48 km of highway and 148.13 km of black-topped roads.;

Table 1.2: Road Infrastructure

Road Type	Total Length (km)	Remarks
Brick-soling Road	1.81	
Earthen Road	67.86	
Gravel Road	313.87	
Lokmarga (Highway)	32.48	
Other Black topped Road	148.13	
Total	564.15	

(Source: Municipal Profil, 2079 BS)

The intra-city transportation is primarily focused within core areas. The main origin points of buses and public transportation are Aanpgachhi chowk, Bargachhi chowk, Jute Bikash chowk, Kalanki chowk, BP chowk Paschim, Khanar, Pakali chowk and Tarahara.

1.5. Need for the project

The proposed project connects the settlement area of Bargachhi Chowk, Prabhat Chowk, Milijuli Tol, Tribhuvan Chowk, and Mahendra Chowk, Taltalaiya, etc. The project area is one of the core areas of the Itahari Sub-Metropolitan City. The road provides a link between Koshi Highway to Taltalaiya and enhance the mobility of people of nearby settlements. Currently, the existing road width is 9.75 m including drain. The main principle objective of this road project is to improve the traffic movement along the road and to provide better road facility between two

major areas of the sub-metropolitan city. The improvement of the road also provides better livelihood for the people living by the road side.

The proposed project involves rehabilitation of Bargachhi (Koshi Highway) - Mahendra School - Taltalaiya Road in Itahari Sub-Metropolitan City of Sunsari District of Koshi Province. The road starts from Bargachhi chowk at Koshi Highway and ends at Taltalaiya (Tengra khola). The road passes through flat lands with almost plain terrain and passes through settlements, and agricultural lands. The project road currently has intermediate operational carriageway and does not segregate slow-moving vehicles and pedestrians. The road section requires pavement reconstruction to maintain acceptable levels of service. There are no alternative routes to the project road that serve the same function as that of the stated road.

1.6. Key Project Objective and its Components

The objective of the project is to provide better and enhanced services to the road user along with better quality of road and improving the aesthetics of the street. As such, the proposed road subproject serves the purpose to provide basic service to the people and connect the settlements to the local and national strategic road network (SRN). The project comprises of the following components;

a) Upgradation of existing single lane carriageway into two lane Carriageway with Side Drain
b) Rehabilitation and Construction of Cross Drainage Structures; Retaining Wall
c) Footpath; Street light; Zebra crossing
d) Major and minor intersection improvements; Signage and pavements marking; Shifting of utilities

1.7. ESIA Methodology

The study is undertaken following an overarching approach for Environmental and Social Impact Assessment (ESIA) and subsequently developing an Environmental and Social Management Plan (ESMP), following guidance provided by the Environmental and Social Management Framework (ESMF). A consultative and participatory process was adopted to conduct the ESIA and prepare the ESMP for the sub-project of Bargachhi (Koshi Highway) - Mahendra School - Taltalaiya road. The strategies to undertake the ESIA and preparing the ESMP required both qualitative and quantitative information gathering at both primary and secondary levels. The project team at Project Coordination Office (PCO) of Department of Urban Development and Building Construction (DUDBC), the World Bank, different national and local level stakeholders involved in NUGIP and the interaction with the community and related stakeholders on technical, environmental and social issues and consultants' observation of the intervention sites were undertaken. The ESIA/ESMP is in compliance with the GoN and the World Bank's policies and builds on the recent approaches and incorporates learning and previous experiences. The stepwise process in the preparation of ESIA/ESMP includes the following activities;

- Reviewed scope of works in the Terms of Reference (ToR) for the ESIA/ESMP, Project Implementation Manual (PIM), feasibility reports of the sub-project
- Reviewed applicable laws of the GoN and the WB policies.
- Consulted project team, PCO, stakeholders, WB and experts.
- Reviewed the DPR of the proposed project, consulted PCO and DPR consultants.
- Followed checklist for environmental and social data of DPR.
- Prepared safeguard (including resettlement) checklists prior to the field visit.
- Visited sub-project site and consulted municipality office, district level.

- Conducted consultations, Focus Group Discussions (FGDs), Key Informant Interviews (KII), with beneficiary as well as project affected HHs, and other stakeholders

Baseline information for physical, biological, and socio-economic status of the project area has been collected. Secondary sources and file observations were carried out for ambient air quality. Water quality data of recent ground water quality test report was used as reference, and noise levels were measured using an android application. The representation of the methodologies of the project is shown in figure below;

1.7.1 Baseline study

Baseline information was collected for both environmental (physical and biological environment) and social aspects in conducting the ESIA and was used in developing the ESMP, based on the ESMF.

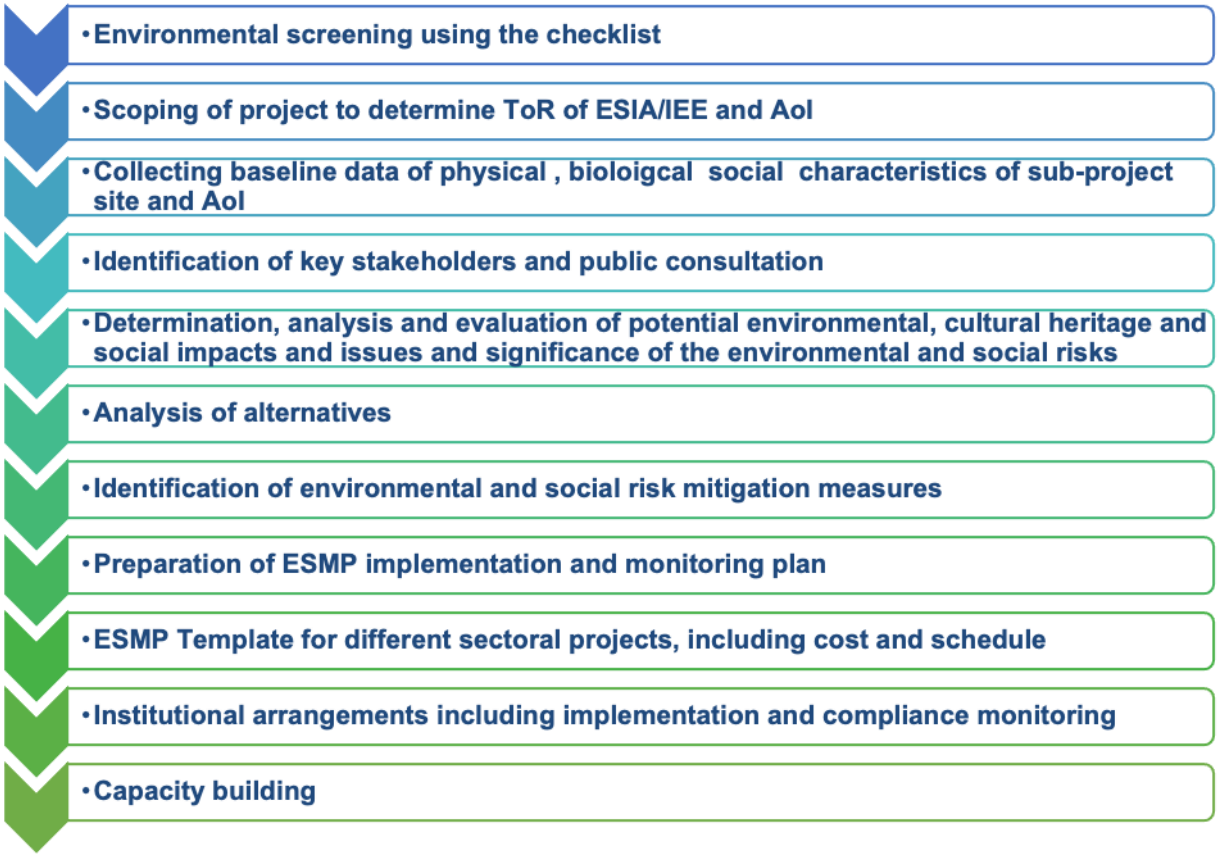

Figure 1.2: ESIA Process for all sub-projects

1.7.2 Stakeholder Analysis

A stakeholder analysis was carried out during the ESIA stage. The following activities were carried out during the analysis:

- Stakeholder identification
  - The potential stakeholders were listed, and they were grouped based on their interest & influence, and finally the stakeholders were prioritized through interaction with the Itahari Sub-Metropolitan City representatives
- Stakeholder consultation
  - The stakeholders were listed as the road users, ward committee members, municipality representatives, water supply users, factory owners & shop owners along road alignment, etc
  - The consultation was conducted through walk through survey, individual consultations, community consultations, and indoor meetings (Itahari Sub-Metropolitan City office)

- Incorporated feedback from the stakeholders into project design and ESMP document
- Incorporated recommendations and mitigation measures during construction and operation

1.7.3 Gender assessment and GBV status analysis

The following activities were undertaken for gender assessment;

- Review of the legal policy framework of GoN
- Review of the set-up, capacity, and constrains within relevant institutions
- Gender assessment and GBV analysis
- Analyze the culture amongst women of different cultural groups
- Analyze potential positive and negative impacts on women
- Analyze barriers, challenges, and constrains for the participation of women
- Identify potential entry points and interventions to enhance gender sensitivity
- Recommend project planning and implementation teams in addressing gender context

1.7.4 Assessment of potential environmental and social impacts

- Likely Beneficial Impacts
- Likely Adverse Impacts

1.7.5 Environmental and social screening

Environmental & Social screening was carried out during Feasibility Study as per ESMF guidance of NUGIP, and project category was finalized as Category B Project. It concluded on the need of ESIA study for the sub-project. The fundamental environmental and social issues to be identified were determined by the type, location, sensitivity and scale of the municipal investment and sub-grant intervention. The proposed project is an upgradation of existing road, and the project area doesn't have major social or environmental concerns. Hence, it has been concluded that the project's social and environmental impacts can be minimized and in some cases avoided through implementation of an Environmental and Social Management Plan (ESMP) as per ESIA document of this project as per Appendix C-B of ESMF document of NUGIP.

1.7.6 World Bank Safeguard Policies

The World Bank classifies projects into one of the four categories, depending upon the type of project or specific components which have inherent environmental risks, location proximity to environmentally, socially and culturally important areas, sensitivity, potential impacts which may be irreversible or environment sensitive to changes, the scale and extent of environmental and social issues of the project, and the nature and magnitude of its potential environmental impacts.

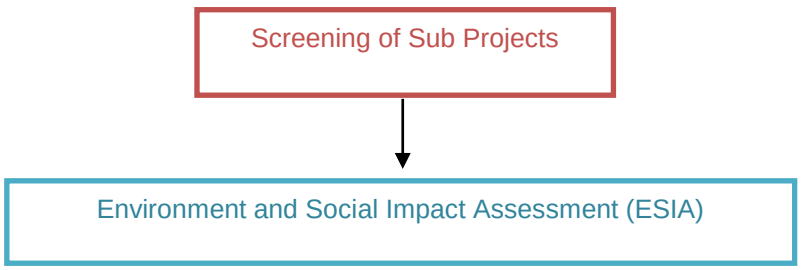

Figure 1.3: Flow of preparation of safeguard instruments for the project

1.7.7 Revision and modification of ESMP

The ESIA and ESMP is an 'up-to-date' document that will be publicly disclosed and disseminated. Unexpected situations in the sub-project or component design would therefore be assessed and appropriate management measures will be incorporated by updating the ESMP. Such revisions will also cover any modifications introduced in the design of sub-project at any stage of the project. Also, based on the experience of application and implementation of such a framework, provisions and procedures would be updated as applicable and when required with due process.

2. ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE

2.1 Physical Environment

2.1.1 Topography & Geology

The municipality is located at a distance of 25 kilometres north of the provincial capital of Biratnagar, 16 kilometres south of Dharan and 92 kilometres west of Kakarbhitta. Itahari serves as a junction point of the east-west Mahendra highway and the north–south Koshi highway, and has an area of 93.78 sq. kilometers. It lies between the latitudes 26°36'37.77" to 26°44'14.49" North and longitudes 87°12'9.06"E to 87°17'0.70"E. The altitude varies from 90 m to 177 m from sea level. (*Source: Municipal Profile of Itahari Sub-Metropolitan City, 2076*)

The municipality lies within Terai belt of the indo-gangetic plains, and Chure starts around 5.5 km North. The project area has very gentle slope, generally below 4° Centigrade, towards South. The project area has a mixture of aggregates and fine clayey soil. The project area falls within Budhi khola watershed. The project area has wetland area also. However, the road alignments are along the plain terrain. Hence, topography is homogeneous without undulations.

2.1.2 Climate

The municipality has warm temperate to tropical climatic conditions. The project area has an average annual temperature of 24.26°C with annual minimum temperature of 5.8°C and maximum temperature of 37.6°C. The summers here have a good portion of rainfall compared to the winter season. The average annual rainfall ranges from 1798 mm to 2039 mm. The Northern belt of the municipality receives relatively higher amount of rainfall than the Southern belt. November- December, and January-March are the driest months with average monthly precipitation of 56 mm, and most precipitation falls during June-September with average monthly precipitation of 370 mm (table below);

Table 2.1: Weather data of the municipality

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Temp. (°C)	15.7	18.5	23.0	26.3	26.8	26.9	26.6	26.7	26.0	23.9	20.5	17.1
Min. Temp. (°C)	9.6	12.0	15.3	19.5	22.4	24.2	24.5	24.5	23.3	19.4	14.8	11.0
Max. Temp. (°C)	21.2	23.9	29.1	31.9	31.0	29.9	29.1	29.4	28.9	28.0	25.5	22.5
Rainfall (in.)	0	0	0	25.4	127	330.2	482.6	381	254	76.2	0	0

(*Source: en.climate-data.org/asia/nepal/eastern-development-region/itahari-29979*)

2.1.3 Water Bodies

The main river systems of the municipality are Budhi khola and Tengra khola. Bauka, Sehara and Panipiya are smaller streams of the project area. During monsoon season, there are frequent incidents of urban flooding. One of the major reasons is due to the overflow of Seuti river from upstream that mixes with Sehara khola and Tengra khola that flow amidst the urban centers of the municipality. The proposed road alignment crosses Sehara khola and there is an existing bridge at good condition. Taltalaiya area is a wetland area and has significance in terms of biodiversity and tourism.

2.1.4 Land use pattern

The municipality has 60.36% agricultural land, 16.44% settlement area, 13.13% forest area, 2.96% water bodies and 0.54% wetland are. The rest are barren land, grassland, river bank area, and others (*Source: Municipality profile, 2079 BS*). Built-up area, agricultural land, barren land and mixed land use pattern is found along proposed road alignment.

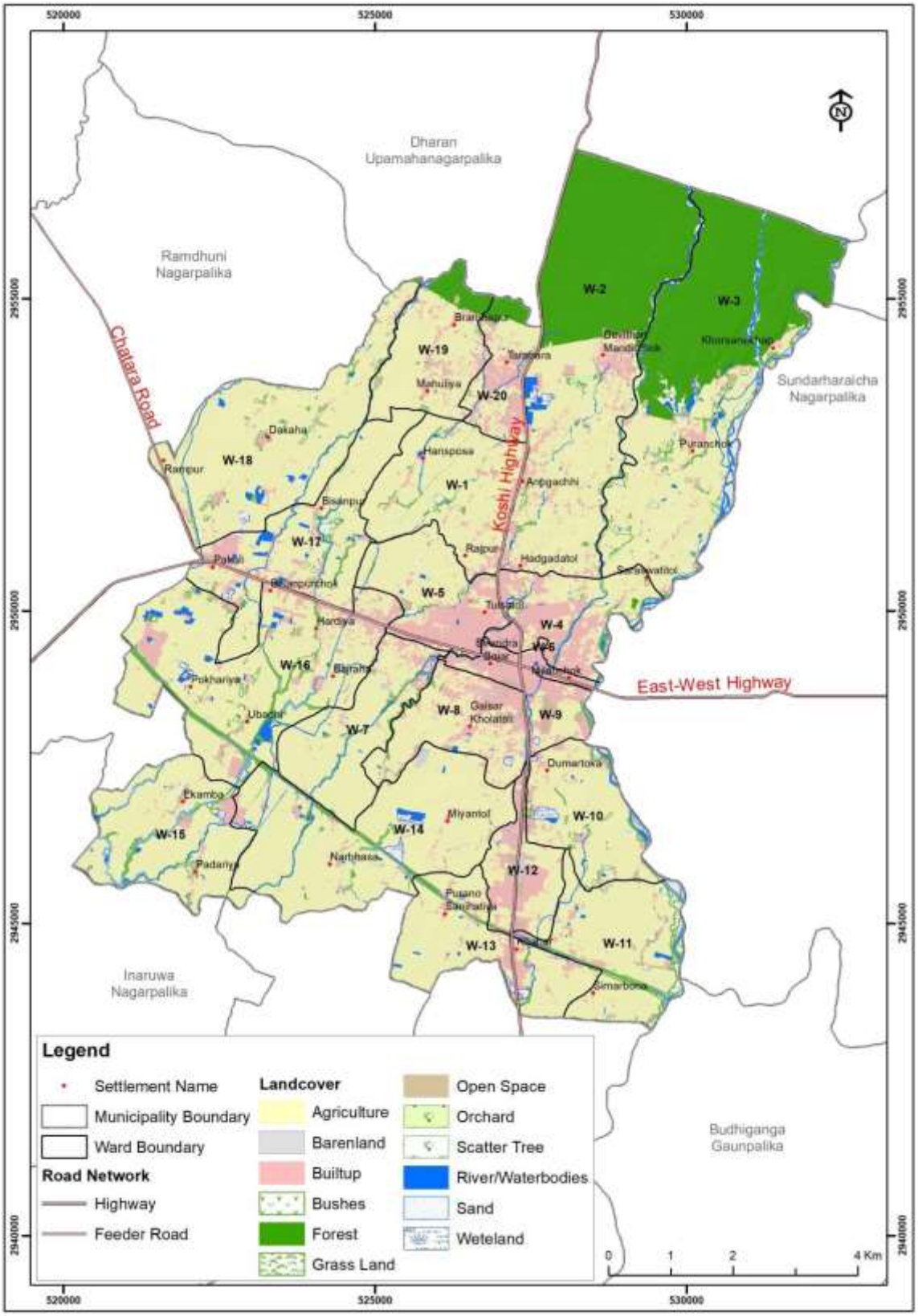

Figure 2.1: Landuse map of the project municipality

Photo 1: Mixed land use patter along the proposed road alignment

Photo 2: Existing bridge over Sehara khola

2.1.5 Ambient Air Quality, Noise level, and Water Quality

The ambient air quality of the project area doesn't show critical state. The air quality index of Itahari shows that the AQI is 110, with $PM_{2.5}$ level of 39.2 µg/m^3 and (*Source: https://www.iqair.com/nepal/eastern-region/itahari, 17th August 2023*). However, the project area is relatively less urbanized, hence air quality is better. The primary source of ambient air pollution is due to dust from vehicles plying on earthen roads. Noise levels were measured using an android application, and a continuous measurement was conducted along the road alignment at intervals of around 30 minutes over two days of field observation works. Following table presents the data;

Table 2.2: Noise levels along the road alignment (dBA)

SN	Time, hrs 6th June 2023	Average Noise levels, dBA	Time 7th June 2023	Average Noise levels, dBA
1	7:30	62 (Min. 51, Max. 88)	8:15	63 (Min. 40, Max. 89)
2	7:55	64 (Min. 46, Max. 81)	8:40	62 (Min. 41, Max. 87)
3	8:30	68 (Min. 49, Max. 86)	9:10	71 (Min. 53, Max. 102)
4	9:05	71 (Min. 51, Max. 89)	9:45	70 (Min. 48, Max. 94)
5	9:35	74 (Min. 57, Max. 104)	10:25	68 (Min. 51, Max. 92)
6	10:02	72 (Min. 52, Max. 93)	10:55	69 (Min. 58, Max. 99)
7	10:30	70 (Min. 48, Max. 100)	13:15	73 (Min. 55, Max. 107)
8	10:59	69 (Min. 50, Max. 97)	13:50	71 (Min. 49, Max. 104)
9	11:45	64 (Min. 48, Max. 93)	14:30	68 (Min. 47, Max. 95)
10	12:15	68 (Min. 47, Max. 89)		
	Average	**68.2**		**68.9**

Source: Field study, July 2023

The drinking water source of the project area is primarily tubewell/underground water. Although 30.11 % of the HHs have access to the piped water supply system, 67.58% of the HHs use water from tubewells/handpumps. The water quality of the ground water used for drinking purpose is satisfactory and the parameters are within the threshold limits of NDWQS 2022 (*Annex 4*). The report shows that although turbidity is slightly high, there is no foul taste and odour. Turbidity value was 2 NTU; pH range was 7.69; TDS 205 mg/L; EC 400 µS/cm; and

Calcium value of 72 mg/L in the drinking water sample of distribution system sampled and tested by Itahari Khanepani Upabhokta Sanstha on 19th July 2023. The source of this water is deep tubewell. The laboratory report of Total Coliform tested for the same source in Water Quality Testing Laboratory of Federal Water Supply & Sewerage Management Project - Biratnagar, shows Nil *E. Coli* count as tested on 6th August 2023.

2.1.6 Sanitation and Waste Management

According to Municipal Profile, 2075 BS, 55% of the households have septic tanks. The municipality lacks any kind of systematic sewerage system or any Fecal Sludge Management infrastructure. There are 7 public toilets in Itahari Sub-Metropolitan City.

Assessment done by the World Bank (2020) shows that the sub-metropolitan generated nearly 58 MT daily of which 48% is from domestic waste generators, 19% by commercial and rest by bulk generators such as markets and institutions. Among this, 26 MT of waste is taken to the waste disposal facility daily. The waste is collected daily in four wards (ward 5, 6, 9 and 10) daily which covers 21% of Itahari's population while rest are collected weekly. Since ward 14 is completely rural in nature, there is no waste collection from that ward. Municipality has a Waste to Energy plant with capacity of 30 tons/day in operation.

2.2 Biological Environment

The study of biological environment was based on filed observation, interaction with the locals and review of district level secondary data as well as Municipal Profile document of Itahari Sub-Metropolitan City Profile, 2075 BS.

2.2.1 Flora and Fauna

The major tree species of the project area, and near to the road alignment are Kadam (*Anthocephalus chinensis*), Ashoka (*Saraca asoca*), Sissau (*Dalbergia sissoo*), Teak (*Tectona grandis*), Masala (*Eucalyptus camaldulensis*), Simal (*Bombax ceiba*), Bar (*Ficus benghalensis*), Peepal (*Ficus religiosa*), Mango (*Mangifera indica*), Papaya (*Carica papita*), Guava (*Psidium guajava*), Banana (*Musaceae banana*), and Coconut (*Cocos nucifera*). These trees provide timer, fuel-wood, fodder, fruits, and some have ethnobotanical value. There are some fruit trees and local tree species present within the road width of the road. The list of trees that will need to be removed have been given in sub-heading 4.3.3.1 of Chapter 4.

The project district is home to various tropical terrestrial fauna. The proposed road alignment is not situated in close proximity to national parks or protected areas. However, end point of the proposed road alignment is close to a natural wetland area of Taltalaiya. The area belongs to community forests and is a well demarcated area being managed under committee named *Taltalaiya Management and Conservation Committee*. At the other side of the road is an urban settlement area.

Although there are some wild species like horse and deer that are placed under care of the Taltalaiya conservation team for touristic purpose, since the park area is daily visited by thousands of visitors, there is no occurrence of other wild species in the park area. Some of the frequently observed birds that are reported near the project area are White-breasted Kingfisher (*Halcyon smyrnensis*), Pond heron (*Ardeola grayii*), Water hen (*Amaurornis phoenicurus*), spotted dove (*Streptopelia chinensis*), Blue rock pigeion (*Columba livia*), Indian koel (*Eudynamys scolopacea*), Barred owlet (*Glaucidium cuculoides*), Jungle crow (*Corvus macrorhynchos*), and Bulbul (*Pycnonotus spp.*).

2.2.2 Ethnobotany

Neem (*Azadirachta indica*), Bel (*Aegle marmelos*), Harro (*Terminalia chebula*), Barro (*Terminalia bellirica*), and Tejpatta (*Cinnamomum tamala*) are among the major ethnobotanical species of the project area.

2.3 Socio-economic and Cultural Environment

2.3.1 Socio-economic overview

The project area is a multi-caste/ethnicity rich and a culturally rich place. Itahari sub-metropolitan city derives its name from Tharu words of '*Ita*' meaning brick and '*Hari*' meaning wood. It is believed that the name represents the '*chepuwa'* or '*turung'* made of brick and wood which is used to punish the prisoners during the past Rana regime. Since the project area is a rapidly urbanizing area, connectivity improvement is very significant for the proposed project area.

2.3.2 Details of settlements within the project area

Followings are the settlements falling within the project area that comes within ward number 2 of Itahari Sub-Metropolitan City, and starting at Bargachhi chowk (Koshi Highway) and ending at Taltalaiya;

Table 2.3: Details of settlements within the project area

Ward No.		Description
Itahari Sub-Metropolitan City	Ward No. 2	Bargachhi Chowk, Prabhat Chowk, Milijuli Tol, Tribhuvan Chowk, and Mahendra Chowk, Taltalaiya

** Note: Proposed road alignment passes through ward 2*

Based on the consultation meetings and numeration from google earth maps, the total numbers of households falling within 500 m distance towards both sides of the road alignment are 1899, and the total population is 9,248.

Figure 2.2: Settlements and facilities along the road Bargachhi (Koshi Highway) - Mahendra School - Taltalaiya Road Alignments

2.3.3 Existing Road Condition and Road Side Drains

As per the field observation, the road alignment has about 2.9 km road with stormwater side drains considering both sides of the road alignment which seem in poor condition for reusing purpose, thus side drain will be re-constructed based on hydrological analysis. The existing side drain network in the proposed road alignment is summarized as given in table below;

Table 2.4: Existing side drain structure along the proposed road project

SN	Chainage		Length (km)	Dimension (m)	Side From center
	From	To			
1	0+000	0+325	0.33	0.7x0.5	Both sides
2	0+410	1+445	1.04	0.7x0.5	Both sides
3	1+445	1+860	0.42	0.7x0.5	Both sides
4	2+340	2+418	0.08	0.7x0.6	Right side
5	2+418	3+019	0.60	0.7x0.7	Right side

2.3.4 Culverts along the road alignment

Table 2.5: Inventory and Condition Survey for Culverts (Section I)

S N	Location (km)	Type of Structures (Pipe, Slab, Box, Arch, bridge)	Thickness of Slab (m)	Span Arrangement and Total Vent way (No. x Length, m)	Carriage way Width (m)	Width of Culvert (m)	Condition of various features of Culvert					Adequacy of Water way
							Slab/ Pipe/ Box/ Arch	Head wall	Wing wall	Return wall	Parapet/ Handrail	
1	0+493	Irrigation Crossing	-	1x0.6	5	5	poor	No provision	No provision	No provision	N/A	No
2	1+163	Slab Culvert	0.125	5	5	5.5	poor	No provision	Poor	No provision	Poor	Yes
3	1+350	Irrigation Crossing	-	1x0.9	5	5	poor	Poor	Poor	No provision	No provision	Yes
4	1+622	Irrigation Crossing	-	1x0.6	5	5	poor	Poor	No provision	No provision	N/A	No
5	2+224	Multi Cell Box Culvert	-	5x6	6	6	Good	NA	Good	NA	Good	Yes
6	2+685	Pipe Culvert		1x0.6	5	5	Poor	Poor	No provision	No provision	N/A	Yes
7	2+735	Pipe Culvert		1x0.6	5	5	Poor	Poor	No provision	No provision	N/A	Yes
8	3+015	Slab Culvert	0.3	6.5	5	6	poor	No provision	Poor	No provision	Poor	Yes

2.3.5 Existing Structures along the road alignment

The road upgradation works will require reinstatement of around 5.95 km of water supply pipelines. In addition to this, following structures lie within the road width and need to be addressed as per;

Table 2.6: Existing structures along the road alignment

SN	Structures	Qty./Number	Remarks
1	Water supply pipeline (*Itahari Khanepani Upabhokta Sanstha*)	5.95 km (From the starting point)	HDPE Pipe ranging from 63 mm to 250 mm in dia.
2	Electric poles	66 nos.	Relocation will be carried out
3	Irrigation pipe (*Itahari Sub-Metropolitan City*)	From Chainage 0+493 km to 0+665 km, 172 m of earthen drain	600mm diameter irrigation crossing 20m

Source: DPR - Bargachhi-Mahendra School-Taltalaiya Road Upgradation, 2023

2.3.6 Population and Demography

The proposed project lies in Itahari Sub-metropolitan City of Sunsari District in the Koshi Province of Nepal. The total population of the district, is 934,461 with male population of 454,075 & female population of 480,386 and household number of 216,887. The average family size of the district is 4.31, which is lower than that of the national average 4.32 (*Source: NPHC, NSO - 2021*). The total population of Itahari Sub-metropolitan City is 157,457 and total household is 35,864. The average household size of the municipality is 4.39 which is greater than that of district household size of 4.31. The total number of households in ward no. 2 of Itahari Sub-metropolitan City is 3,201 and average household size is 4.87. The sex ratio is 1.03 of the ward no. 2 of the Itahari Sub-metropolitan City. (*Source: Itahari Sub-metropolitan City profile- 2079 BS). Please refer to table number 2.7 below;*

Table 2.7: Total number of HHs and average HHs size of ward level within project area

Local Level	Ward No.	Total Household	Average Households size
Itahari Sub-metropolitan City	Ward No. 2	3,201	4.87
	Total	**3,201**	**4.87**

Source: Itahari Sub-metropolitan City Profile- 2079 BS

The total population of the project area of ward no. 2 is 15,586. The male population is 7,912 and female population is 7,674 as shown in table 2.8 below;

Table 2.8: Ward level male and female population of the project area

Ward No.	Male	Percentage	Female	Percentage	Total
2	7,912	50.76	7,674	49.24	15,586

Source: Itahari Sub-metropolitan City Profile- 2079 BS

The economically active population (15 years to 59 years age group) of the project area is 10,496 which is around 67.34% of the total population of the project area. The population of children (0-14 years age group) is 3,460 and is around 22.20%, and the population of elderly people is 1,630 which is around 10.46% of the total population of the project area as shown in table 2.9 below;

Table 2.9: Age wise population distribution in Ward Level of the Project area

SN	Age//years	Ward No. 2	
		Population	Percentage
1	0 - 14 Years	3,460	22.20
2	15 - 59 Years	10,496	67.34
3	> 60 Years	1,630	10.46
Total		**15,586**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

Total male population in the age group of 15 years to 59 years is 5,271, and total female population in the same age group is 5,225 as shown in table 2.10 below;

Table 2.10: Age wise Male (M) & Female (F) Population Distribution in Ward Level

SN	Age/Years	Ward No. 2			
		Male Population	Percentage	Female Population	Percentage
1	0 - 14 Years	1,830	23.13	1,630	21.24
2	15 - 59 Years	5,271	66.62	5,225	68.09
3	> 60 Years	811	10.25	819	10.67
Total		**7,912**	**100**	**7,674**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

2.3.7 Ethnicity

The project area has heterogeneous community in terms of caste and ethnicity. In these wards, there are 52.29% Brahmin/Kshatri (Hill), 35.61% Aadibasi/Janajati (Hill), 6.11% Aadibasi/Janajati (Terai), 3.93% Dalit (Hill), 0.25% Brahmin/Kshatri (Terai), 0.10 Dalit (Terai), Others (Hills) 1.25%, and 0.46% Others (Terai) etc. are included. Aadibasi/Janajati (Hill) and Aadibasi/Janajati (Terai) are the indigenous people of this region of the project area as shown in table 2.11 below;

Table 2.11: Caste/Ethnicity wise population distribution in Ward Level of the Project area

Caste/Ethnicity	Ward No. 2	
	Population	Percentage
Brahmin/Kshatri (Hill)	8,150	52.29
Brahmin/Kshatri (Terai)	39	0.25
Aadibasi/Janajati (Hill)	5,550	35.61

Caste/Ethnicity	Ward No. 2	
	Population	Percentage
Aadibasi/Janajati (Terai)	953	6.11
Dalit (Hill)	612	3.93
Dalit (Terai)	15	0.10
Others (Hills)	195	1.25
Others (Terai)	72	0.46
Total	**15,586**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

2.3.8 Religion

The project area has majority of Hindu religion. In the project ward, there are 82.68% Hindu, 7.73% Buddhist, 6.46% Kirat, 2.81% Christian, and remaining of other religious group as shown in Table 2.12 below;

Table 2.12: Religion-wise ward level population distribution

Religions	Ward No. 2	
	Population	Percentage
Hindu	12,887	82.68
Buddhist	1,205	7.73
Kirat	1,006	6.46
Christian	438	2.81
Others	50	0.32
Total	**15,586**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

2.3.9 Education & Literacy

The project area has literacy rate of 87.55% and the illiterate population is 1,596 which is 12.45% of the total population. The total population having primary level education is 35.66%, and secondary level of education is 22.87%. However, only 4.85% of the populations have received education level from Bachelor's level up to MPhil levels as stated in the Table 2.13 below;

Table 2.13: Education Level (above 6 years) in the Project area

Education Level	Ward No. 2	
	Population	Percentage
Illiterate	1,596	12.45
Informal Education	3,097	24.17
Primary Level	4,570	35.66
Secondary Level	2,931	22.87
Bachelor's Level	522	4.07
Master's Level	88	0.69
MPhil or Above	11	0.09
Total	**12,815**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

2.3.10 Occupation

In the project area, 27.75% of the populations are housewives and 22.04% of the population are students. 10.28% of the population of the project area is unemployed. 9.17% of the population of the project area depends on services, 9.96% population of the project area goes to foreign employment, 6.78% of the population depend on wages occupation, 4.14% of business, and 3.68% of the population are dependent on agriculture. 0.54% of the population is in professional employment and 5.67% of the population is in other occupations in the project area as shown in table 2.14 below;

Table 2.14: Ward-wise Occupation data of the Project area

Ward No. 2		
Occupation	**Population**	**Percentage**
Agriculture	494	3.68
Service	1,230	9.17
Business	556	4.14
Wages	909	6.78
Professional	72	0.54
Foreign Employment	1,336	9.96
Student	2,957	22.04
Housewives	3,722	27.75
Unemployed	1,379	10.28
Others	760	5.67
Total	**13,415**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

2.3.11 Food sufficiency

About 91.94% of the households have food sufficiency for 9 to 12 months. Around 0.81% of the households have food sufficiency for only 3 months or even less; 1.28% of the households have food sufficiency for only 4 to 6 months; 5.97% of the households have food sufficiency for 7 to 9 months as shown in table 2.15 below;

Table 2.15: Food Sufficiency from their own regular income in Ward Level

Ward No. 2		
Food Sufficiency in Months	**Households**	**Percentage**
0 to 3 Months	26	0.81
4 to 6 Months	41	1.28
7 to 9 Months	191	5.97
9 to a Year	2,943	91.94
Total	**3,201**	**100**

Source: Itahari Sub-metropolitan City profile- 2079 BS

2.3.12 Agriculture

Food grains like paddy, wheat, maize, barley etc.; lentils like mustard, alas, gram, etc.; oil giving plants; vegetables like cauliflower, cabbage, potato, etc.; spices like cumin seeds, coriander, etc.; fruits like mango, litchi, etc.; and other crops are grown in the project area. The total amount of estimated production of food grains is 349,647 quintal; that of lentil products is 5,324 quintal; that of oil giving plants is 9,530 quintal; that of vegetables is 5,787 quintal; and that of cash crops is 211 quintal. (*Source: Itahari Sub-metropolitan City profile- 2079 BS*)

2.3.13 Migration

Both in and out migrations are common in the project area. In-migration in the project area from the Terai district has been the most common phenomenon. In the project area, most of the inhabitants are local and migrants are from neighbors' district - especially hilly districts i.e. Okhaldhunga, Khotang, Bhojpur, Taplejung, Sankhuwasabha and Tehrathum. Now-a-days, most of the households have male out-migration for employment.

2.3.14 Gender Based Violence Prevalence Status

In general, there are issues of GBV in Nepalese society. However, during the field study and community consultations, it was discussed that there are some minor cases of family disputes, like some dispute between husband-wife leading to GBV in some cases, reflecting gender violence, locals of the project area. It was also noted that most of the local women were also not aware about the provisions of complaint registering through toll free number 1145 dedicated by National Women Commission.Hecne awareness activities are required regarding GBV.

2.3.15 Financial Institution

There are various types of finance, saving & credit co-operatives operating in the project ward. Major commercial banks and other financial institutions are present in other nearby wards. Hence, improved road connectivity will enhance access to financial institutions for the locals of the project area.

2.3.16 Other socio-cultural and socio-economic aspects

The major cultural practices in the project area include Dashain, Tihar, Teej, Maghi, Holi, Buddha Jayanti, Christmas etc. Rajadevi Temple, Radha Krishan Temple, Sundar Devi Temple, Singha Devi Temple, Budha Subbha Temple, Ramjanaki Temple, Batis Church and Gumba are present in ward no. 2 of the project area. There is a pond named Sundar Devi pond next to the ward office and along the road alignment at Sundar Devi temple area. Although this pond will not be impacted, its protection will provide benefits to the locals. The economic vibrancy of the project area is also due to the presence of cottage industries, factories and large industries. Also, one of the famous tourist destination places of the belt, Taltalaiya also lies within the project area.

2.4 Socio Economic Information of Households along Road Alignment

Settlements located within five hundred meters either side of existing road alignment were selected for the study area, which is defined as Influence Zone. Local key informants and knowledgeable persons were consulted to gather the socio-economic information of the area.

The project's Influence Area has been considered as 500 m both sides from the edge of the road. However, there are other roads also within 200 m. Hence, the influence area varies from around 200 m at some sections and around 500 m at some sections. According to Sub-Metropolitan City office, and community discussions, around 1,899 households with population of 9,248 (4,694 male, 4,554 female) fall under the influence area of the project.

According to consultation meetings and field reference, a total of 180 HHs with 806 population have been found to be present along the road alignment. This includes 397 female, and 409 male population. The average household size along the road alignment is 4.47. This includes 96 Janajati households with total Janajati population of 430 with 212 female and 218 male.

3. LEGAL AND REGULATORY REQUIREMENTS

3.1 Key applicable national environmental and social laws and regulations

A summary of applicable rules and regulations is provided under the Chapter 2 of the NUGIP ESMF. The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. This ESIA has given due attention on the above guidelines and standards in the identification and prediction of the project's impact and in the design of the mitigation actions and monitoring protocols. Under the Constitution of Nepal, local governments have the authority (Schedule-8, The Constitution of Nepal) to enact new laws applicable to their municipality. The GoN's applicable laws, regulations, guidelines, standards shall be followed during the construction and operation phases of the project.

3.2 List of National Policies, Rules, Laws, Regulations, Relevant to the Project (if construction activities triggers then it applies)

1. Constitution of Nepal
2. Ancient Monument Protection Act 1956
3. Aquatic Animal Protection Act 1961
4. Environment Protection Act 2019
5. Explosive Act 1961 as Amended
6. Forest Act 2019
7. Labor Act 2017
8. Child Labor Act (CLA) 2001
9. Gender Equality Act, 2006
10. Land Acquisition Act, 1977 (and amendments 2010) and Land Acquisition Regulations, 1969
11. Local Government Operation Act 2017
12. Motor vehicle and Transport Management Act, 2049
13. National Foundation for the Development of Indigenous Nationalities Act 2002,
14. Plant Protection Act 2007
15. Public Road Act, 1974 and amendment 2010
16. Road Board Act 2059
17. Soil and Watershed Conservation Act, 1982 and Subsequent Amendment
18. Solid Waste Management Act 2011 and Solid Waste Management Rules 2013
19. Water Resources Act 1992
20. Environment Protection Rule 2020
21. Forest Regulation, 2022
22. Water Resources Regulations 1993
23. 20 Year Road Plan, 2059 - 2079BS (2002-2022AD)
24. National Dalit Commission, 2002
25. National Forest Policy, 2019
26. Land Acquisition, Resettlement and Rehabilitation Policy for Infrastructure Development Project, 2014
27. National Biodiversity Strategy and Action Plan (NBSAP) 2014-2020
28. National Environmental Standards Information Booklet 2018
29. National Human Rights Action Plan 2005
30. Public Works Directive 2002

31. Work Procedure to Provide Forest Area for other Purposes, 2006
32. EIA guidelines for human settlement and Urban Development Sector 1996
33. EIA guidelines for Road Sector 1994
34. National EIA guidelines 1993
35. Operational Guideline for mainstreaming GESI in MoUD
36. GoN Policies supporting vulnerable communities

3.3 Review of Relevant Acts and Policies

3.3.1 Environment Protection Act 2019, and Environment Protection Rule 2020

The act emphasis on new aspects like provisions of Brief Environmental Study, IEE and EIA under the jurisdiction of local authority, provincial government, and central government. Need of Strategic Environmental Assessment for policies/plans/programs, and considerations of climate change for projects are among the newly enforced aspects of this act. Environment Protection Rules (EPR), 2020 has defined thresholds for environmental assessment under 3 categories; Brief Environmental Study, IEE and EIA. It has defined the roles of the provincial government and the local government as well in the process of environmental assessment of development projects. The project will follow all the requirements of EPA 2019 and EPR 2020.

3.3.2 Child Labor Act (CLA) 2001

Child Labour Prohibition and Regulation Act, 2000 was enacted in favour of the welfare of the Children's right. The section 3 of this acts facilitates the children to inborne rights. Hence the Act prohibits the organizations to involve the children under fourteen years of age to employ in the works. The Child Labour Prohibition Act and Regulation shall be followed in all the works carried out under the Project.

3.3.3 Land Acquisition Act, 1977 (and amendments 2010) and Land Acquisition Regulations, 1969

The Land Acquisition Act, 1978, has been enacted to integrate the laws for Acquisition of Land, 1962. The section 3 of the Act empowers the government to acquire land at any place, for the purpose of public works by providing the required compensation to its owners. The Act oblizes the government to consider the compensation for acquisition of land for the benefit of the local people.

3.3.4 Local Government Operation Act 2017

The Local Government Operation Act, 2017 empowers the local authority for the conservation of local natural resources and implementation of environmental conservation activities along with prime responsibility of conducting development projects which includes water supply, sanitation and awareness activities. Provides basis for Local Government to monitor the environmental performance of the projects. EMP provides the responsibilities of LGs in EMP implementation.

3.3.5 Public Road Act, 1974 and amendment 2010

The Public Road Act, 1974 has been enacted to ensure the construction and operation of the road projects smoothly. Section 3 of the Act empowers GON to prohibit the construction of permanent structures (buildings) in the prescribed distance from the road, i.e. the Department of Roads (DoR) has the authority over everything within the boundaries of the road. The DoR may acquire temporarily the land and other property adopting compensatory measures during

the construction, rehabilitation and maintenance of the public road (Sections 14 and 15). The Act obliges the DoR to plant trees on both sides of the road and handover it to the local bodies (VDC or municipality) for their management (Section 16). The Act also empowers the DoR to operate quarries and borrow pits and other facilities during the road construction (Section 17). In sum, the Act facilitates the construction of this road by even acquiring land and property including for the execution of construction materials and development of other facilities during road construction through compensation as negotiated and as well as to maintain greenery along the roadside.

3.3.6 Land Acquisition, Resettlement and Rehabilitation Policy for Infrastructure Development Project 2014

The government has introduced Land Acquisition, Resettlement and Rehabilitation Policy, paving the way for developers of various physical infrastructure projects to acquire land without affecting livelihood of people who have to be relocated from the area where such projects will be built. The policy, which calls for creation of a scientific standard for land valuation and extension of compensation equivalent to minimum market value of land, is expected to facilitate developers to implement projects, like hydro, roads and transmission lines, on time. This will reduce chances of significant cost overrun, which inflates project cost. Also, a provision in the policy that allows the government to take action against those who try to disrupt land acquisition process or create hurdles for project developers that have acquired land by following the due process is expected to help project developers in completing the projects on time. Policy has tried to address these complex issues of resettlement and rehabilitation so that the country can achieve its development goals without causing adverse impact on living standard of the people who are displaced or affected by the projects.

In this regard, the policy has stressed on the need to first assess economic and social impact of the development project. Based on this, projects will be categorized as high, medium and low risk. High-risk projects refer to those which displace 50 or more households in the mountainous region, 75 or more households in the hilly region and 100 or more households in the Tarai. Medium-risk projects, on the other hand, are those that force relocation of less than 50 households in the mountainous region, less than 75 households in the hilly region and less than 100 households in the Terai. Likewise, low-risk projects refer to those which cause productive property to shrink by up to 10 per cent.

Upon evaluation of these impacts, a strategy on land acquisition and compensation must be framed for low-risk projects. But in the case of high- and medium-risk projects, a detailed resettlement and rehabilitation plan must be designed. Also, families should be entitled to compensation if works like installation of transmission, telephone and underground drinking water pipe lines affect livelihood. And in case the projects affect yields of registered commercial crop, fruit or flower producers, compensation equivalent to five years of revenue must be given in cash. All expenses related to land acquisition, compensation and implementation of resettlement and rehabilitation plans should be considered as project cost, according to the policy. Also, interest should be paid on compensation amount depending on the days it took to release funds to those affected by the project. The interest calculation begins from the day a formal decision was taken to operate the project, says the policy. The compensation amount for those affected by the project will be fixed by a five-member compensation committee formed

under chief district officer. The committee can form a technical team to determine the compensation amount. This team should derive the compensation amount by working closely with members of families that are likely to be displaced. The policy says that "Once the compensation amount is fixed by the committee, it cannot be reviewed," says the policy. Those not satisfied with land acquisition, resettlement and rehabilitation processes can lodge complaints at a body formed at the project office and complaint hearing offices at district and regional levels.

3.4 Environmental Standards of GoN

1. Generic Tolerance Limits for Industrial Effluent Discharged into inland Surface water, 2001
2. Nepal Vehicle Mass Emission Standard, 2012
3. Nepal Ambient Air Quality Standard, 2012
4. National Drinking Water Quality Standard, 2022
5. Nepal Noise Level Standard, 2012
6. National Indoor Air Quality Standards, 2009

3.5 Relevant sectoral policies and guidelines prepared by DoR

1. Environmental Assessment in the Road Sector of Nepal, January 2000
2. Environment Management Guidelines, GESU/DoR, July 1997
3. Reference Manual for Environmental and Social Aspects of Integrated Road Development, MPPW/DoR, 2003
4. The National Transport Policy, 2001.
5. Land Infrastructure Development Policy 2004
6. Public Infrastructure Built and Operate Policy, (2000)

3.6 List of International Conventions, Relevant to the Project

1. Convention on Biological Diversity, 1992)
2. Convention on the International Trade in Endangered Wild Fauna and Flora (CITES), 1975
3. United Nations Framework Convention on Climate Change, 1992
4. Gender-Related International Conventions (including Convention on Elimination of All Forms of Discrimination Against Women, CEDAW)
5. ILO Convention on Indigenous and Tribal Peoples, 1989 (No.169)
6. ILO Convention on Worst Forms of Child Labor (C182)

3.7 The World Bank Safeguard Policies

Table 3.1 represents the World Bank Safeguard policies that are triggered in the sub-project environmental and social assessment.

Table 3.1: World Bank Safeguard Policies relevant to Project

World Bank OP	Objective & Brief Description
Environmental Assessment (EA) OP/BP 4.01	An Environmental Assessment is conducted to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. Any World Bank project that is likely to have potential adverse environmental risks and impacts in its area of influence requires an EA indicating the potential risks, mitigation measures and environmental management framework or plan.
Natural Habitats OP/BP 4.04	The Natural Habitats Policy is triggered by any project (including any subproject under a sector investment or financial intermediary loan) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project). The policy has separate requirements for critical (either legally or proposed to be protected or high ecological value) and non-critical natural habitats. The Bank's interpretation of "significant conversion or degradation" is on a case-by-case basis for each project, based on the information obtained through the EA.
Forestry OP/BP 4.36	This policy is triggered by forest sector activities and other Bank sponsored interventions, which have the potential to impact significantly upon forested areas. The Bank does not finance commercial logging operations but aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty and encourage economic development
Physical Cultural Resources OP/BP 4.11	The Bank seeks to assist countries to manage their physical cultural resources and to avoid or mitigate adverse impact of development projects on these resources. This policy is triggered for any project that requires an EA.
Involuntary Resettlement OP/BP 4.12	Key objectives of the World Bank's policy on involuntary land acquisition are to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; assist displaced persons in improving their former living standards, income earning capacity, and production level, or at least in restoring them; encourage community participation in planning and implementing resettlement; and provide assistance to affected people regardless of the legality of land tenure. The policy covers not only physical relocation, but any loss of land or other assets resulting in relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood whether or not the affected people must move to another location. When the policy is triggered, a Resettlement Action Plan must be prepared. An abbreviated plan may be developed when less than 200 people are affected by the project. In situations, where all the precise impacts cannot be assessed during project preparation, provision is made for preparing a Resettlement Policy Framework. The Resettlement Action Plan / Resettlement Policy Framework must ensure that all the Bank's policy provisions detailed in OP 4.12 are addressed particularly the payment of compensation for affected assets at their replacement cost
	NOTE: The above OP/BP were proposed to review and integrate in ESMF during the time of submission of proposal. Upon consultation with the World Bank, it is advisable to use the latest standards of the World Bank to be used in ESMF and hence it will be referred and used in the ESIA and in conducting construction phase monitoring.

4. ENVIRONMENTAL & SOCIAL SCREENING, SCOPING, IMPACT IDENTIFICATION, PREDICTION AND MANAGEMENT

Environmental and social impacts are defined in terms of magnitude, extent and duration likely to occur during construction and operation phases. The issues are separated as beneficial and adverse environmental impacts, including direct, indirect, and induced impacts in the project influence area. In addition, closure and decommissioning phase impacts of the project are also highlighted. These impacts are categorized into impacts on the biophysical environment, health & safety impacts and socio-economic impacts. The Environmental and Social Management Plan (ESMP) will have measures to avoid, minimize, mitigate, and compensate the adverse impacts and measures to enhance the beneficial impacts. Based on the Safeguard Policies OP/BP 4.01 is triggered, and only minor cases of OP/BP 4.12 relevant.

Influence Area of the Project
The project's Influence Area has been considered as 500 m both sides from the edge of the road. However, there are other roads also within 200 m. Hence, the influence area varies from around 200 m at some sections and around 500 m at some sections.
Road Width
The actual width required for construction works including carriage way, tick drain, side drain, and footpath.

4.1 Environmental and Social Screening Checklist

Table 4.1: Checklist for Environmental Screening

SN	Particulars	Yes	No	Can't Say	Remarks
1.	Is the site vulnerable to major natural or induced hazards such as: Landslides, Flooding, Storm surge, Severe wind damage, Earthquakes, Fire, Explosion, Other (specify)	Yes			The project area is prone to urban flooding linked primarily to Budhi khola, Sehara Khola and Tengra khola
2.	Is the project area adjacent to or within any of the following environmentally sensitive areas? • Cultural heritage site (historical, religious, traditional, or cultural significance) • Protected Area (National Parks, Wildlife Reserve, Hunting Reserve, Conservation Areas, and Buffer Zones etc.) • Wetland/Ramsar Site/Simsar • Forest • Special area for protecting	Yes			The project area is not within any environmentally sensitive area Taltalaiya is a natural wetland adjacent to the end section of the proposed road alignment, so considerations need to be taken

	biodiversity/interest • Breeding/nesting ground of wildlife/occurrence of migratory species • Migration route/Wildlife corridor • Any site of national or international importance				to avoid any disturbances during the construction phase
3.	Likely impact on trees (including Timber & fruit bearing) and vegetation cover	Yes			The project will require felling of trees 26 trees which includes some fruit trees as well 15 private trees (fruit trees) and the remaining are within the ownership of the municipality. The details are provided in Annex 5.
4.	Possibility of degradation of land and ecosystems of surrounding?		No		
5.	Is the project area densely populated?		No		
6.	Heavy with development activities/big industries nearby & type?		No		
7.	Alteration of surface water hydrology of waterways due to the project resulting in increased sediment in streams affected by increased soil erosion at construction site?		No		
8.	Chance of deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction	Yes			The road alignment crosses Sehara khola
9.	Does the sub project require significant extraction of surface or ground water?		No		
10.	Increased risk of water pollution from oil, grease, fuel spills and other materials	Yes			This is probable if campsite is not managed properly
11.	Impact on water quality due to release of sewage/sludge?		No		
12.	Possibility of flooding due to sewage		No		
13.	Possibility of increased air pollution during	Yes			During

	Pre-construction/construction/operation phase?				construction phase
14.	Other pollution concerns relating to inconveniences in living conditions that may trigger cases of upper respiratory problems?		No		
15.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological hazards during project construction and operation	Yes			Physical hazards like accidents and illness are likely
16.	Noise and vibration due to blasting and/or other civil works?	Yes			However, blasting is not required
17.	Possibility of poor sanitation and solid waste disposal	Yes			Campsite management aspect
18.	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		No		
19.	Accident risks associated with pre construction, construction & operation phases of project	Yes			Injuries during construction phase, and traffic accidents during operation phase are potential risks
20.	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)		No		The population influx will be in small scale (estimated to be around 100 - 125/day during peak construction period)
21.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		No		Fuel and lubricants pose potential risks, but explosives are not used in the project
22.	Interference with other utilities and blocking of access to resource/utility	Yes			66 numbers of electric poles will need to be shifted. 5.95 km of water supply pipeline network will need to be restored.

					2 nos. of Pipe Culverts, 2 nos. of slab Culverts, 3 nos. of irrigation crossings and 1 multi cell box culvert will need to be reinstated
23.	Generation of solid waste and/or hazardous waste during construction/operation of project?		No		

Table 4.2: Checklist for Social Screening

SN	Particulars		Details
1	Proposed Site Location-		Itahari Sup-metropolitan city, Ward no. 2
…	1.1	Land requirement for the project	It is an up-gradation of an existing road. Existing road width is 9.75 m. There will be no land requirement
	1.2	Land ownership of the project area: Govt. / Private lands	Land within the proposed road width is already in use by the public. However, the ownership of private land strips is yet to be transferred. The parking lot proposed at Ch. 2+880 to 2+980 km is a public land.
	1.3	Does the project requires acquisition of Govt. land/structures?	No
	1.4	Present use of Govt. Land that will be used for the project activities with Persons/Households using for agriculture, residential, commercial and other purposes	No
	1.5	Does the project require acquisition of private land/structures?	No. The existing road width in use is 9.75 m, and is already in public use. The RoW was declared on 2072/06/01 BS, however, ownership of private land strips are yet to be transferred to the sub-metropolitan city. Itahari Sub-metropolitan city will conduct the process of transfer of deeds of these land parcels. (Minute on decision of RoW, and Public Notice in National Daily newspaper regarding the RoW is provided in Annex 1)
	1.6	Present use of Govt. Land that will be used for the project activities with Persons/Households using for; ✓Agricultural purposes ✓ Residential purposes ✓ Commercial purposes ✓ Other purposes (Indicate)	Public use
	1.7	Does the project require	No

SN	Particulars		Details
		relocation of encroachers/squatters	
	1.8	Does the project require relocation of community facilities/Govt. establishment or any objects that are of religious, cultural and historical significance	No It was observed that there public structures like Mahendra Secondary School, Sundar Devi Temple, Sundar Devi pond, Radha Krishna Mandir, Shiva Mandir with Chautari, Ward No. 2 Office and a pond close to the proposed road alignment. Since these do not fall within proposed Road Width, these structures will not be damaged during road upgradation. Provisions for protection and management of boundary of Sundar Devi pond is included in BoQ item, Abstract of Cost - M
	1.9	Proposed project located in an area where residents are- • All Mainstream • All Indigenous peoples • Majority Mainstream or Non-indigenous peoples • Majority Indigenous peoples	Majority Mainstream or Non-indigenous people
2	Potential Social Impacts- Will the Project cause		
	2.1	Involuntary resettlement of people? (physical displacement and/or economic displacement)	No, resettlement is not required in this project
	2.2	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	No such impact on poor women and children, indigenous people, and/or economic displacement.
	2.3	Will community facilities require relocation?	In total 66 numbers of electric poles will need to be shifted from the existing road alignment and new poles installed. Around 5.95 km of water supply pipeline network, considering both side of the road alignment, will need to be restored. 2 nos. of Pipe Culverts, 2 nos. of slab Culverts, 3 nos. of irrigation crossings and 1 multi cell box culvert will need to be reinstated

SN	Particulars		Details
	2.4	Will the sub-project disturb any traditional activity on adjoining or nearby?	No
	2.5	Poor sanitation and solid waste disposal in construction camps and work sites	Yes there will be concern of sanitation and solid waste disposal in construction camp and work sites.
	2.6	Possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?	Local peoples have knowledge on such communicable diseases but labourers' understanding may be low about possible transmission of communicable diseases
	2.7	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	No, the up-gradation of road project is a small scale intervention, and there will be only around 50 to 60 workers at a particular time.
	2.8	Social conflicts relating to inconveniences in living conditions where construction interferes with preexisting roads	No. But there will be temporary disturbances to locals during construction works. Traffic management plan will be prepared by the contractor and will be included in Contractor's Site specific ESMP.
	2.9	Describe any other impacts that have not been covered in this screening form	Gender-based violence and GESI aspects; These aspects will be incorporated in ESMP
	2.10	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	No such concerns
	2.11	RAP/ARAP Requirement	No

4.2 Impact Summary

Table 4.3: Overall Impact Summary

Summary	**Bargachhi Chowk (Koshi Highway) - Mahendra School-Taltalaiya Road - 3.019 Km**
What are the main potential environmental issues/ risks /impacts/ concerns and/or potential positive impacts;	As per the observation, there will not be any major environment issue. Yes, during the expansion of existing road, there will be chances of smooth movement of vehicles including dust pollution and noise pollution which should be properly managed prior to the start of construction work by the concerned contractor.
What is the level of	As per WB safeguard policy, ESIA document with an ESMP should

assessment needed in next steps; recommendations based on initial screening for technical planning/design	be prepared
Expected positive impacts/benefits to the local communities	The construction of road will give additional livelihood opportunities to the local communities as well as those who want to set up a new business from other parts of nation. Local people will have better connection with the people of other area and they will be able to expand their business too. Local people will have better vehicle facilities in their locality. The expansion of road will make the area livelier than now. It will reduce traffic jam and ease the people's life.

4.3 Impacts as per the National EIA Guidelines Numerical Scale

Numerical Scale mentioned as depicted in Table 4.4 below is used to analyze the impact of the proposed subproject. The combine score below 40 shall be termed as insignificant impact (IS). The scores ranging between 40 and 79 shall be termed as significant impact (S), scores ranging between 80 and 99 shall be termed as very significant (VS) and the scores above 100 shall be termed as highly significant impact (HS).

Table 4.4: Impact Quantification

Magnitude		Extent		Duration	
High (H)	60	Regional (R)	60	Long term (LT)	20
Medium (M)	20	Local (L)	20	Medium Term (MT)	10
Low (L)	10	Site Specific (SS)	10	Short Term (ST)	5

Source: National EIA Guidelines, 1993

4.3.1 Adverse Impacts - Physical Environment (Pre-Construction and Construction Phases)

4.3.1.1 Land use change

The proposed RoW of the road was declared by the municipality on 2072/06/01 BS (September, 2015). This is an up-gradation of an existing road, and road width of 9.75 m is available in site. The parking lot proposed at Ch. 2+880 to Ch. 2+980 km is a public land. Hence, land acquisition is not required. The indirect area of influence adjacent to Road Width contains built structures and cultivated lands. Since site clearance and excavation works are required, topsoil loss is a likely issue.

4.3.1.2 Quarry materials

The construction of road will require boulders, sand and aggregates in activities like gravelling, construction of retaining walls and other structures. The contractor will not operate its own quarry site. Sand and aggregates can be obtained from Gachhiya and Chisang at a distance of 7.5 km and 25 km respectively. Likewise, reinforcement, bricks and cement can be obtained from local markets of Itahari and Biratnagar. Transportation of quarry materials is another aspect. Anticipated impacts due to transporting construction materials will be direct in nature, medium in magnitude, local in extent and of short term in duration.

Table 4.5: Tentative quantity of quarry materials and borrow pit materials

SN	Item	Estimated Qty. (m^3)	Remarks
1	Granular Sub-Base	6254.00	
2	Cruser run Base	5952.00	
3	Borrow pit materials	2179.00	Locations will be identified by contractor and presented in CESMP

Figure 4.1: Proposed secondary source of quarry materials at Gachhiya

Figure 4.2: Proposed secondary source of quarry materials at Chisang

4.3.1.3 Construction Labour Campsite and Stockpile Area

If not managed well, stockpile sites may pose accidental risks, and there could also be safety issues for the local community of the project area, and its workers. The impact will be direct in nature, medium in magnitude, site-specific in extent and of short term in duration. Campsite area of around 0.2 hectare under ownership of Shree Mahendra Secondary School, has been proposed at an open land adjacent left to the road alignment at Ch. 2+250 to Ch. 2+420 km at Budhasubba chowk, Ward Number 2 (*Photo in Annex 7*). However, this will be finalized only during the stage of mobilization of the contractor. (*Ref. Fig. 4.3 below*). Fuel, chemicals and

paints will also be stored in stockpile site within the campsite. If not well managed, they can cause land pollution, and also pose health harms.

4.3.1.4 Ambient Air pollution, Noise nuisance and water pollution

Excavation and road widening works will generate dust nuisance in settlements like Bargachhi Chowk, Prabhat Chowk, Milijuli Tol, Tribhuvan Chowk, and Mahendra Chowk, Taltalaiya of the project area. Other construction activities causing air pollution are plying of project vehicles, and operation of machinery, etc. Since the road stretch is of short length, the contractor will not establish its own asphalt/hot-mix plant. Hence, associated pollution risks are ruled out. Asphalt will be purchased from licensed suppliers located at Biratnagar.

Noise nuisance is anticipated due to increase of vehicular movements and machinery equipment. Settlements of Bargachhi Chowk, Prabhat Chowk, Milijuli Tol, Tribhuvan Chowk, and Mahendra Chowk, Taltalaiya are likely to have greater exposure to noise nuisance.

If not managed well, the project activities may trigger underground water pollution due to leakage of lubricants & discharge of waste water on open land, and may also cause surface water pollution of local water bodies. Water pollution may be caused if sanitation facilities in the campsites are not provided with septic structures. Spillage of fuel and paints may also cause such concerns. Likewise, since construction works will also be conducted at both sides of the river, there might be chances of spoil disposal or discharge of waste water into the river.

The anticipated impacts on air, noise and water pollution will be direct in nature, low in magnitude, local in extent and of short-term to medium-term in duration.

4.3.1.5 Solid waste generation

Estimated per capita waste generation is 369 grams per person per day, and the waste generation in Itahari Sub-Metropolitan City is 58 metric tons per day. Households contributed 48% of the waste generated, followed by bulk generators generating 19%, and commercial establishments 33%. Waste generated by the contractor's camp and campsites will also fall under the source of commercial establishments. Solid wastes from construction campsites are also likely to be a visible source of pollution. Assuming that per capita waste generation of a worker will also be 0.369 kg/day, every month around 554 kgs of waste will be generated from campsite with at least 50 workers in average. Although this is not a big volume of waste, if not well managed, it will contribute largely in pollution of the local environment.

Waste generated during dismantling of temporary campsite will be a concern during the end of the construction phase. This may degrade land and cause waste nuisance in the local community.

4.3.1.6 Spoil generation

It is estimated that around 3491 m^3 of spoil will be generated during the construction works. Though not a major problem, spoil disposal will also be one of the environmental concerns during construction phase. If spoil generated during the upgrading of road alignments is not well managed, it will cause pollution on land and surface water bodies. Piling of excavated materials, hauling of spoil materials and its disposal may cause dust pollution while its disposal is also a source of traffic nuisance as well as noise pollution. However, the quantity of spoil generation will not be significant, and will be confined in one site only.

4.3.2 Adverse Impacts - Physical Environment (Operation & Maintenance Phase)

4.3.2.1 Road stability and management

During the operation phase, big vehicles may frequently pass through this route as it passes through the tourist center and is also linked towards Mahendra Highway. Hence, if the road is not maintained well, there may be increased concerns of accidents, and this will also increase dust pollution. The impact will be direct in nature, medium in magnitude, site specific in extent and of long term in duration.

4.3.2.2 Water pollution

If traffic management is not given due consideration, there may be malpractices like washing of vehicles at road sides, and at Sehara river which can cause local water pollution. The impact will be indirect in nature, low in magnitude, site specific in extent and of medium to long term in duration.

4.3.2.3 Air pollution and Noise nuisance

Increased vehicular movement is likely to increase emission of carbon and sulfur compounds from vehicles to the atmosphere which increases the pollution level of ambient air along the road corridor. Noise of vehicles and particularly its horns can be a nuisance at the settlement areas of ward 2. The impact will be indirect in nature, low in magnitude, site specific in extent and of long term in duration.

4.3.3 Adverse Impacts - Biological environment (Pre/Construction Phases)

The project will have no impact on wild life, avian fauna, aquatic life and reptiles. The project alignment is neither habitat nor biological corridor of the wild animals.

4.3.3.1 Vegetation loss

There is need of cutting 26 trees along the Road Width. These are small to medium sized trees with girth size ranging between 300 mm to 900 mm. Trees to be cut include 3 Ashoka (*Saraca asoca)* trees, 2 Mango (*Magnifera indica)* trees, 8 Betlenut (*Areca catechu*) trees, 3 Coconut (*Cocus nucifera*) trees, 3 Kapur (*Cinnamomum camphora*) trees, 2 Neem *(Melia azadirach)* trees, 1 Kadam (*Anthocephalus kadamba*) tree, 2 Guava (*Psidium guavaja*) trees and 2 other small pole size trees. Among these, there are 15 private trees (fruit trees) and the remaining are within the ownership of the municipality. The details is provided in Annex 5.

4.3.4 Adverse Impacts - Biological environment (Operation & Maintenance Phase)

There will be no biological impact during the O&M Phase of the project.

4.3.5 Adverse Impacts - Socio-economic and Cultural (Pre-Construction & Construction phases)

4.3.5.1 Land use change

There is no additional land requirement for the road upgradation works. Land within the proposed road width is already in use by the public. The RoW was declared on 2072/06/01 BS (September, 2015), and there is existing track of sufficient width to carry out upgrading work. Hence road width is clear. There are private land parcels within proposed road width of the road alignment. Transfer of deeds of these land parcels is remaining. Temporary land will be required for campsite and stockpile site. These will be leased or rented by the contractor.

4.3.5.2 Damage to private and public utilities

In total, 66 electric poles will need to be shifted from the Road Width of the proposed road alignment. In total 5.95 km of water pipelines will need to be relocated considering both sides of the road alignment. There will also be need of replacement of 172 m of earthen canal (*Kulo*) from Chainage 0+493 km to 0+668 km. Vibration due to movement of heavy construction equipment and due to excavation works may cause damage to houses just close to the road alignment. Such risks are seen at Bargachhi chowk (Chainages 0+000 to 0+250 km), and other chainages 0+260 to 0+340 km, 0+820 to 2+910 km. However, there might be only minor vibration related impacts, the details of which cannot be tabulate at this stage. This aspect of impact will be site specific, low and medium-term impact.
Sundar Devi pond lies along the edge of the road alignment at Ch. 0+365 to 0+410 km. However, the pond will not be affected.

4.3.5.3 Difficulties in access & mobility to private properties and premises

There are no schools or any other public facilities/places adversely affected by the proposed road. Shree Mahendar Secondary School is around 70 m inwards from the road alignment. However, access and mobility to houses, shops and commercial settings along the road alignment will be partially hindered due to road excavation and upgradation works. Local business and factories might face temporary disturbances. Access and mobility concerns will be even more for the children, school & college goers, elderly and differently-able persons. Such issues are likely to be concerning even more during the rainy season.

4.3.5.4 Community Health & Safety

During construction phase, increased number of construction vehicles will be plying the road therefore due to pressure and mismanagement accidents may likely occur. Open trenches are also clear means of accidents, especially for the children, and during night times. Along with this, if exposure to prolonged high level noise, it may also cause adverse health impacts.

4.3.5.5 Occupational Health & Safety

Risks of injuries and accidents, and health issues of workers is one of the potential impacts. Since road project involves hauling of materials like boulders, excavation works, masonry works and other regular construction related works, the workers are always prone to health risks. In addition to this, if the provisions of drinking water and WASH is not adequate, then water borne and other diseases are likely to affect the health of the workers.

4.3.5.6 Social Disturbance/Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and Communicable diseases

The project construction may disturb the local population with interactions of non-local workers. The outside workers may breach local social/cultural norms and values. If code of conduct is not well implemented for the workers, then there can be cases of SEA/SH, GBV and HIV AIDS. Concerns of sexual misconduct and STDs remains a pertinent social risk.

Human trafficking is a problem in the project district as well as per Nepal Human Rights Year Book 2023, INSEC. Hence, there are possibilities that this problem might be seen to be increased - especially for woman & girl trafficking during the construction phase. Under similar circumstances, communicable diseases may spread from workforce to the community. This is more relevant in context of recent threat of CoVID pandemic.

4.3.5.7 Child labour, forced labour and wage discrimination

The Child Labor (Prohibition and Regulation) Act of 2000 establishes the minimum age for work at age 14 and the minimum age for hazardous work at age 16. Any case of child labour violates the national law, and is very likely to expose the child to unacceptable & risky circumstances.

If unforeseen, forced labour will violate the basic human rights of a person. However, this is a less likely case for the project and the project area.

If not well monitored, there are always chances of discrimination of wage between male & female, and sometimes also for male workers.

4.3.5.8 Traffic Management Issues

The flow of traffic along or near the proposed area will be affected, especially during the rush hours and peak travel periods. Traffic will be a more important concern for areas like Bargachhi chowk and Taltalaiya chowk. Traffic management at Taltalaiya area will be a major concern as the road is primarily used also by the visitors and tourists coming to the Taltalaiya park.

4.3.6 Adverse Impacts - Socio-economic and cultural (Operation & Maintenance Phase)

4.3.6.1 Risk of road accidents

During operation phase, if the traffic management is not given due priority, then there is likeliness of increase in road accidents. This is a local and long-term impact with high significance. Road safety concerns will be more significant along the stretch of Mahendra Secondary School (Ch. 1+360) and Taltalaiya park area.

4.3.6.2 Community Health and Safety

Noise nuisance will be one of the concerns to the community. On the other hand, if the cover slabs of broken or removed, there may be chances of accidents - especially for the children. The impacts will be local and long-term and with moderate significance.

4.3.6.3 Impacts due poor maintenance of road-drains

Drainage blockage, overtopping of the roads due to flooding and odour nuisance during removal and disposal of sludge are some of the other impacts that arise during operation phase. These impact will be local, short term and of moderate significance.

4.3.7 Beneficial Impacts

In a borad sense, the project will increase the quality of life of the locals of the project area. The following sub-sections elaborates the major benefits of the proposed road project under both - Construction Phase as well as Operation & Maintenance Phase;

4.3.7.1 Beneficial Impacts during Construction Phase

i. Employment generation and skill enhancement

The contractor can hire locals for skilled, semi-skilled and unskilled works. Apart from income, locals are likely to get On-the-Job trainings as relevant, and will gain experience in road construction works. The sub-project will generate skilled, semi-skilled and unskilled employment opportunities throughout the project life cycle. Priority will be given on sourcing labor requirements locally from the project area itself. In cases that skilled workers are not locally available, they will be recruited from other parts of country. In addition to this, skill

development training will be provided for the locals. Priority will be given to the families of indigenous and dalit families along the road alignment. This impacts can be considered significantly positive, and long term in nature.

ii. Increase in Trade and Business

The project will create increased demand of daily commodities like food items, clothings and accessories. In addition to this, there will be increased demand of construction related products and services such as basic building materials, construction equipment, laundry, clothing, food services, cleaning services, excavation, construction material supply, etc. Hence, this will directly increase the trade and business in the project area and its nearby vicinity.

4.3.7.2 Beneficial Impacts during Operation & Maintenance Phase

The qualitative beneficial impacts that are likely to occur during operation & maintenance phase of this road upgradation project are as follows;

i. Improved Transportation Facilities and Decrease in Traffic Congestion

This road upgradation project will enhance the road access and will cater traffic volume as per design capacity. This will help to reduce the traffic congestion in the locality. Improved road transportation facility will make the road transportation more comfortable, and will reduce the wear & tear as well as fuel cost of the vehicles.

The properly designed sidewalks throughout the road alignment, enough lights at intervals of 25 m, and resting areas provided at Taltalaiya belt will make it easy for the pedestrians with different needs. Zebra crossings are provided at Chainages (km) 0+085, 0+574, 0+934, 1+358, 1+890, 2+428 and 2+908. The mobility will be comfortable for women, children and elderly. The school-going children, differently-able and elderly people will benefit from this road after completion of the upgradation works.

ii. Rise of Land Value

Proposed road upgradation is likely to lead to increased land values along the road corridor and its vicinity. This will also enhance local peoples'/farmers' capability for borrowing loans from financial institutions on collateral. High value lands are acceptable to banks and other financial institutions to provide loans. This impact will be an indirect, high, significant, local and long-term in nature.

iii. Enhancement in Trade and Business

The improved road facility will ensure continued and smooth flow of products and commodities. This will be supportive mainly for small business, groceries shop, and commercial agriculture productions and local off farm activities. The project area has significant presence of factories, and hence this will enhance their businesses also. During its operation phase, the project will also enhance trade & business of the nearby and surrounding areas of the project area.

iv. Increase in Tourism Sector

Itahari Sub-Metropolitan City is connected to the borders of Gadhi Rural Municipality, Inaruwa, Duhabi, Ramdhuni and Dharan. So, the Taltalaiya area attracts local tourists from these areas. In addition to this, visitors from different places of Nepal and nearby country of India also visit the Taltalaiya area which is spread over around 20 hectares in wards 2 & 3. Hence, improved road transportation will help to promote this area. This road section joins Koshi Highway with Taltalaiya, and also Yippie land amusement and waterpark. These are among one of the

important recreational places of Itahari enhancing tourism. Taltalaiya attracts up to 5,000 tourists a day during holidays of the peak tourist seasons of October to mid February. Hence, it is a significant center of tourism of Sunsari district itself, thus the benefits of this upgradation project will be in a larger scale.

v. Enhancement in Access to Social Services

People living along the road alignment, or living close to the road alignment will have improved accessibility to social services like educational institutions, health care facilities, and other social services. Safer and quicker accessibility to available social services means enhancement in use of these social services by the locals.

vi. Increased time saving and reduced travel exhaustion

Better road facility will reduce the time of travelling through connectivity improvement and through smooth travelling experience. Upgradation of the road with urban standard design means easiness for the drivers as well as the travelers. So this will reduce the difficulties of travelling along partially maintained or gravel/earthen roads. While this will save time and exhaustion for all road users, this will be significant especially for women, children, differently-able and the elderly people.

4.3.8 Summary of Impact Evaluation

The following table summarizes the evaluation of the physical, biological and socio-economic & cultural impacts during pre-construction & construction phase, and during operation & maintenance phase;

Table 4.6: Impact Evaluation Summary

Impacts	Nature	Magnitude	Extent	Duration	Total score and Significance
Beneficial Impacts					
Construction Phase					
Employment generation and skill enhancement	Direct	M (20)	L (20)	St (05)	Significant (45)
Increase in Trade and Business	Direct	M (20)	L (20)	St (05)	Significant (45)
Operation & Maintenance Phase					
Improved Transportation Facilities and Decrease in Traffic Congestion	Direct	H (60)	R (60)	Lt (20)	Highly Significant (140)
Rise of Land Value	Indirect	M (20)	L (20)	Lt (20)	Significant (60)
Enhancement in Trade and Business	Indirect	M (20)	L (20)	Lt (20)	Significant (60)
Increase in Tourism Sector	Indirect	M (20)	Ss (10)	Lt (20)	Significant (50)
Enhancement in Access to Social Services	Indirect	M (20)	L (20)	Lt (20)	Significant (60)

Impacts	**Nature**	**Magnitude**	**Extent**	**Duration**	**Total score and Significance**
Increased Time Saving and reduced travel exhaustion	Indirect	M (20)	L (20)	Lt (20)	Significant (60)
Adverse Impacts					
Physical Environment					
Construction stage					
Land use change	Direct	L (10)	Ss (10)	Lt (20)	Significant (40)
Quarry materials	Direct	L (10)	L (20)	Mt (10)	Significant (40)
Stockpiling area and construction labour campsite	Direct	M (20)	L (10)	Mt (10)	Significant (40)
Ambient Air pollution, Noise nuisance and water pollution	Direct	M (20)	L (20)	St (5)	Significant (45)
Solid waste generation	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Spoil generation	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Operation & Maintenance					
Road stability and management	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Water pollution	Direct	M (20)	Ss (10)	Mt (10)	Insignificant (40)
Air pollution and Noise nuisance	Direct	L (10)	Lc (20)	Mt (10)	Insignificant (40)
Biological Environment					
Construction Phase					
Vegetation loss	Direct	L (10)	Ss (10)	St (5)	Insignificant (25)
Socio-economic Environment					
Pre-construction & Construction Phase					
Land use change	Direct	M (20)	Ss (10)	Lt (20)	Significant (60)
Damage to private and public utilities	Direct	M (20)	Ss (10)	St (5)	Insignificant (35)
Loss of Standing Agricultural Crops due to Construction	Direct	L (10)	Ss (10)	Mt (10)	Insignificant (35)
Difficulties in access & mobility to private properties and premises	Direct	H (60)	Ss (10)	Mt (10)	Very Significant (80)
Community Health & Safety	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Occupational Health & Safety	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)

Impacts	Nature	Magnitude	Extent	Duration	Total score and Significance
Social Disturbance / Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and communicable diseases	Direct	L (10)	L (20)	Mt (10)	Significant (40)
Child labour, forced labour and wage discrimination	Direct	L (10)	L (20)	Mt (10)	Significant (40)
Traffic Management Issues	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Operation & Maintenance Stage					
Risk of road accidents	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Community Health and Safety	Direct	M (20)	Ss (10)	Mt (10)	Significant (40)
Impacts due poor maintenance of road-drains	Direct	L (10)	Ss (10)	St (05)	Significant (25)

4.4 Mitigation Measures

4.4.1 Mitigation Measures for Adverse Impacts - Physical Environment (Pre-Construction and Construction Phases)

4.4.1.1 Land use change

The land use change is an irreversible aspect of the project. However, topsoil will be conserved and re-applied. Top soil will be also be used in greenery management, plantation and will be given to farmers upon request. Spoil from road sites will be used for the completed road formation batters after approval by the Supervision Consultant.

4.4.1.2 Quarry materials

The Contractor will obtain required construction materials from the legally operating licensed crusher industries with environmental clearance for GoN. Amount of quarry materials to be obtained will be included in Contractor's Environment and Social Management Plan (CESMP) to be submitted within 45 days of commencement of works. PIU & DSC will check the site requirements and quality of quarrying material and approve it. The potential sources for quarry materials have been mentioned in sub-section 4.3.1.2 above. Borrow pit materials will also be brought from the same private quarry sites. For any new borrow pit sites, if required, the contractor will identify and get approval from the municipality based on DSC's recommendation. Further details, if required, will be detailed in C-ESMP. The borrow pit sites will be managed to minimize environmental as well as social impacts. The topsoil will be collected and stockpiled before excavation, borrow pit sites will be well demarcated, regularly monitored and Topsoil should be put back on the surfaces and the areas revegetated. The cost of transportation of these materials have been included in the BoQ itself.

4.4.1.3 Construction Labour Campsite and Stockpile area

An open area at Budhasubba chowk of ward 2 has been identified as a potential site for campsite and stockpile area. This area is under ownership of Shree Mahendra Secondary School. And, its management committee have provided consent for the use of the land (Annex 1). However, this will be finalized only during the stage of mobilization of the contractor.

Contractor will be responsible to present the details in C-ESMP with map. The site will be well fenced, and provided with a 24-hour guard. The construction materials will be covered and the site will be provisioned with proper lighting system. Fuel and chemicals/paints will be stored in a well contained systems with proper book-keeping. Adequate space for sleeping, separate dining space, standard WASH facilities and potable water to be provisioned for the workers. General Code of Conduct will be implemented for the workers. The site will be reclaimed after the closure of the facility.

4.4.1.4 Ambient Air pollution, Noise nuisance and water pollution

Water will be sprinkled on the road surface as required during construction to control dust. Active sites and stretches along settlement areas like Bargachhi Chowk, Prabhat Chowk, Milijuli Tol, Tribhuvan Chowk, and Mahendra Chowk, and Taltalaiya will be due considered. This will be scheduled and prioritized with focus on dry seasons. The construction vehicles will be regularly well maintained and will strictly comply with the GoN pollution regulation with compulsion in obtaining green sticker. The vehicles carrying construction materials will ensure that it is well covered so as to avoid littering. Waste burning will be strictly prohibited. Use of fuel wood in the campsite will be strictly avoided and provision of LPGs, electric cook heaters will be used.

Heavy construction equipment will be operated during the day time only (preferably, after 8 am and up to 6 pm only). For the safety of construction workers, dust mask and earplugs will be provided to workers as required to avoid impact due to air and noise while on duty. With respect to noise nuisance to settlement areas like Bargachhi Chowk, Prabhat Chowk, Milijuli Tole, Tribhuvan Chowk, Mahendra Chowk, and Taltalaiya, the local ward chairperson and local community members will be regularly consulted to schedule works involving heavy equipment so as to avoid noise nuisance during major social & cultural events.

Disposal of construction spoil in and nearby water bodies (*Sehara khola & Budhi khola*) will be strictly prohibited. Such spoil will be disposed of at the designated spoil sites as recommended in the CESMP. An open land of around 500 sq. m. at Shiva chowk close to the proposed road alignment has been identified as a potential spoil disposal site during the field study. Similarly, the contamination of water by the use of cement and bitumen will be avoided and strongly monitored. Proper storage of chemicals and lubricants, and use of absorbents for emergency spills will be provisioned. Washing of vehicles at bank of Sehara khola will be strictly prohibited. The contractor will arrange for sufficient water supplies and proper sanitation facilities for its labor force. Ambient water quality will be monitored as per parameters and national standards provided in Annex 3.

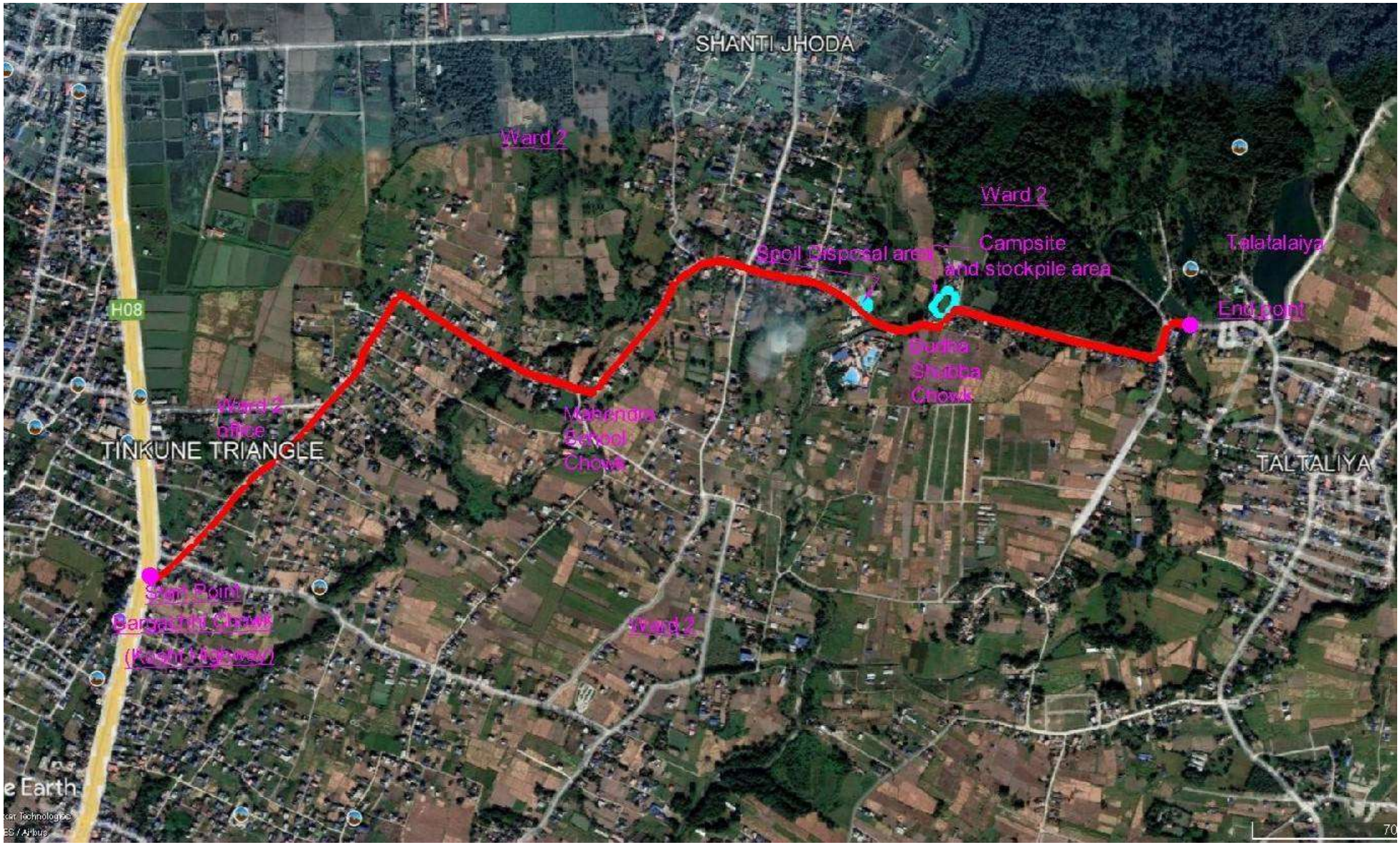

Figure 4.3: Proposed Campsite, Stockpile site & Proposed Spoil Disposal site

4.4.1.5 Solid waste management

Solid waste generated from the camps will be disposed within the proposed camp site only (as recommended in the CESMP), away from local water bodies and efforts will be made to minimize such waste through reuse, reduction, and recycling concepts. Soak pits or septic tanks will be established for the sanitation units/latrines.

Regarding the waste generated during decommissioning of the temporary campsite, the reusable like cardboards, plastics, bins, etc. will be sold, the metal scrap will be sent or sold to scrap dealers, and any residue will be disposed off in coordination with the local ward/municipal authority through the solid waste management (collection & disposal) system of the municipality. The land will be cleared and restored to the satisfaction of the landholder or the local authority.

4.4.1.6 Spoil management

Construction debris will be disposed at designated spoil site only (as recommended in the CESMP), away from local water bodies. An open land of around 500 sq. m. at Shiva chowk close to the proposed road alignment has been identified as a potential spoil disposal site (Fig. 4.3). While hauling and storing spoil temporarily, spoil will be covered with plastic/tarpaulin cover. The specific conditions for spoil disposal and its management will be included in the construction contract.

4.4.2 Mitigation Measures for Adverse Impacts - Physical Environment (Operation & Maintenance Phase)

4.4.2.1 Road stability and management

The probability of flood disaster and climate change resilience have been considered during the design of the road. Maintenance of the road will be a key factor further. The municipality will be suggested for the periodic maintenance. It is also recommended that awareness activities to be carried out in community level to reduce the incidences of disposal of waste into road-side drains. Speed limit signs will be placed. Awareness activities on this topic will be included in the awareness campaign carried out during the later stage of construction phase. It is recommended that the road will be provisioned with proper traffic management system. This will be the responsibility of the local authority in coordination with local traffic control office/DTO.

4.4.2.2 Avoiding Water Pollution

Washing of vehicles at bank of Sehara khola and Budhi khola will be strictly prohibited. Likewise, disposal of any septic or industrial wastewater into the roadside drains will be strictly prohibited. This will be the responsibility of the local authority.

4.4.2.3 Air pollution and Noise nuisance

There will be a consensus between the Sub-Metropolitan City, District Transportation Office, Transportation entrepreneur, and local people regarding the operation of conditioned vehicles to prevent impacts during operation. Campaigns like 'No Horn' campaigns can be initiated by the local authority. The project vehicles will be provisioned with soft-horns. This will be monitored by the municipality during the time of operation.

4.4.3 Mitigation Measures for Adverse Impacts - Biological environment (Pre-Construction & Construction Phases)

4.4.3.1 Vegetation loss

Compensatory plantation will be carried out at the rate of 10 trees per tree cut. Hence, 260 trees need to be planted to compensate the loss of 26 trees in coordination with the Itahari Sub-Metropolitan City. In addition to this, greenery promotion works will be carried out. Road side plantation, plantation at open public land, and parks will be carried out as a part of enhancing climate resilience in the project area. Compensation of 15 private trees at the rate of NPR 3,500 per fruit tree (15 trees) needs total NPR 52,500 to be provided by Itahari Sub-Metropolitan City. The private tree owners were consulted and informed about safeguards provisions during field study, and then a consultation was carried out. The compensation amount has been discussed and agreed among the local representatives in presence of the technical team of Itahari Sub-Metropolitan City office (Minute in Annex 1). The details of private trees and list of tree owners is provided in Annex 5.

4.4.4 Mitigation Measures for Adverse Impacts - Socio-economic and Cultural (Pre-Construction & Construction phases)

4.4.4.1 Land use change

There is no need of acquisition of land for the road upgradation works. The proposed road width is within the existing road width already under public use. There are no any outstanding issues or grievances related to the land that is in public use at the moment.
In case of land parcels falling under the proposed road width, the municipality will initiate and complete the process of transfer of deeds. Letter of Itahari Sub-Metropolitan City office regarding this has been provided in Annex 1. Itahari Sub-Metropolitan City office has initiated coordination with the Survey Office, Sunsari for the process. It plans to take the process ahead at earliest possible. Temporary land will be required for campsite and stockpile site. These will be leased by the contractor. As far as applicable, non cultivable land will be used for the purpose.

4.4.4.2 Damage to private and public utilities

Timely coordination will be carried out with the electricity authority for shifting of the poles. This will require installation of new electric poles. All the cost of poles, wires and accessories have been provided in Abstract of Cost: A-1 of BoQ. Water supply pipelines will be reinstated in coordination with the local water supply user group. New pipelines will be laid before excavating the old ones, and connections will be done promptly to avoid delays in water supply. During the time of excavation, if piped water supply cannot be supplied, potable tanker water supply will be provisioned. The project will ensure that affected households have unhindered access to the water supply. The earthen irrigation canal (*Kulo*) of 172 m for irrigation purpose will also be restored. This has been discussed with irrigation canal user committee (Annex 1). The cost of relocation of utilities has been calculated and included in BoQ item A-1 & A-2. Also, the provisions for protection and management of boundary of Sundar Devi pond is included in BoQ. To avoid the damages from vibration, the heavy equipment like dozer will be used with caution, and excavation works close to private properties will be carried out under close observation of the locals/owners. Photographic evidence of pre and post construction will be documented as per requirement. Any cracked walls or damaged portions due to vibration effect will be reinstated.

4.4.4.3 Difficulties in access & mobility to private properties and premises

Ramps have been provisioned at a total of 35 points. Metal planks and wooden planks will be placed to ease the access to private houses and shops. These additional provisions will be placed tentatively at 20 points. Safety barriers like caution tapes and hard barricades will be

installed around the construction sites ensuring safety. Notices and sign boards will be placed regarding diversions and blockages will be placed at visible sites in local languages. Traffic diversions will be maintained where possible along the alignment. Traffic Management Plan will be prepared by the contractor and will be implemented accordingly. The plan will be submitted together with C-ESMP.

4.4.4.4 Community Health & Safety

Barricades, including hard barricades, will be placed to avoid any accidental falls. Sign boards with safety messages and warnings will be placed in local languages. 'Drive slow' messages will be placed along the active working sites. The dug trenches will be backfilled with immediate effect after the construction purposes are met. Safety signage boards together with hard barricade will be in place to avoid any accidental hazards due to deep excavated trenches. Work delay will be avoided. Awareness activities will be conducted to inform and aware the locals about the possible risks to the community health & safety.

4.4.4.5 Occupational Health & Safety

Awareness and orientations will be carried out to the workers to inform and aware them about nature of works, associated risks and measures to avoid any injury or risk. The project will provide safety equipment with reference to the provisions of Nepali Law and the World Bank Group Occupational Safety Guidelines to ensure the safety of the workers. Personal Protective Equipments (PPEs) such as hard hat, visibility vest, safety shoes, safety goggles, gloves etc. as required will be provided to the workers. Use of the PPEs will also be monitored through the Design and Supervision Consultant (DSC) team. First aid boxes will be provided at campsites as well as active working sites. Code of Conduct (CoC) will be implemented for the operators, drivers and labourers. Proper WASH provisions will be provided in the labour camps. Toilets will be provided at the ratio of at least 1 unit for 15 people. Provision of potable water for the workforce will be ensured. Water quality test to be carried out based on the list of parameters provided in Table B-1 of Annex 3 of this document, and compliant to National Drinking Water Quality Standard, 2079 BS.

4.4.4.6 Social Disturbance / Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and Communicable diseases

Locals will be given due priority for any employment opportunity in the project's construction phase. The contractor will hire the skilled, semi-skilled and unskilled workers from local communities if the criteria for the contractor's works are matching. This will reduce any social grievances and will help enhance social harmony among the contractor's workforce and local communities.

Code of Conduct (CoC) will be implemented for the operators, drivers and labourers. Separate toilets for male and female workers will be provisioned. Awareness activities will be conducted for the workers as well as the local community regarding SEA/SH, Human trafficking, GBV, and HIV AIDS. During community consultations, it was shared that family disputes, like disputes between husband and wife, were there in the project area. As per the Nepal Human Rights Year Book 2023 by the Informal Sector Service Centre (INSEC), there are recorded cases of polygamy, rape and human trafficking in Sunsari. Hence, awareness activities are required to avoid any such potential cases in the project area - especially because the project district is close to the Nepal-India border. Hiring locals as much as possible will help avoid these problems. In addition to this, the project will facilitate in formulation of Grievance Redress Committee in municipal level, and also a Women Cell/SEA-SH cell will be formed. These mechanisms will be used to address any social issues, SEA/SH issues, human trafficking issues, and GBV issues in relation to the project. Itahari Sub-Metropolitan City office has already deputed Ms. Sangita Pokharel as focal person of 'Anti-Harassment Cell' for

documentation and coordination of grievances regarding GBV in relation to this project. The letter regarding this task has been provided in Annex 1.

Under circumstances of possible outbreak of CoVID, health screening of the workers will be carried out before joining them into workforce, and this will be carried out on regular basis. Such provisions will be arranged through Emergency Response Plan of the contractor.

4.4.4.7 Child labour, forced labour and wage discrimination

Child labour will be strictly prohibited (age below 16 years). The contractor will be strictly supervised to verify any suspicious cases through the Citizenship card or other valid personal ID card. Awareness among the workers and the local community will be raised through awareness events addressing the concerns of child labour. Likewise, forced labour will be strictly prohibited. Equal wage for male and female workers will be ensured. The local authority and DSC will monitor on this with the contractor's team. Any malpractices under these aspects will be addressed through GRM of the project.

4.4.4.8 Traffic Management Issues

Traffic awareness will be raised through awareness events in the project area. Road design will consider road furnitures and amenities required to reduce the risk of road accidents. Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points of the road alignments. Diversions will be identified, and a brief Traffic Management Plan will be prepared by the contractor for the peak construction phase of the project.

4.4.5 Mitigation Measures for Adverse Impacts - Socio-economic and cultural (Operation & Maintenance Phase)

4.4.5.1 Risk of road accidents

Traffic awareness will be raised through initiatives of the local authority. The local authority will seek support from the traffic management office. Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points of the road alignments. Speed limits will be defined. The local authority will be responsible for this.

4.4.5.2 Community Health and Safety

The construction works will consider the requirements of EWCD (Elderly, women, child and disabled) friendly aspects. Campaign like 'No Horn' can be initiated by the local authority. This will be monitored by the DSC team. The project will ensure that the side drain cover slabs are all intact. Street lights will be placed along the road alignment. Sign boards with safety messages will be placed at chowks and strategic locations along the road alignment.

4.4.5.3 Impacts due poor maintenance of road-drains

Awareness activities will be carried to stop disposal of waste into the road-side drains. Drainages will be regularly cleared under periodic maintenance schedule.

5. SEXUAL EXPLOITATION AND ASSAULT (SEA)/SEXUAL HARASSMENT PREVENTION & RESPONSE ACTION PLAN

5.1 SEA/SH - National Scenario

The current status of gender inequality and gender-based violence (GBV) in Nepal reveals the serious need to mainstream gender sensitivity and GBV risk mitigation measures, and more specifically, sexual exploitation and abuse, and sexual harassment (SEA/SH) risk mitigation measures at all organization levels and in all phases of project cycles. In Nepal, SEA/SH is prevalent due to unequal gender relations and discrimination towards women in both the public and private sphere. It has direct implications on the reproductive health status of women and on the physical, emotional, and mental health of their children. As per Nepal Human Rights Year Book 2023 by the Informal Sector Service Centre (INSEC), there were 4226 GBV related cases in Nepal during the year 2023, and in Sunsari district the number was 78, which includes cases like early/child marriage, human trafficking, rape, domestic abuse, polygamy and sexual abuse.

Based on the SEA/SH Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Risk Mitigation Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate GBV, in particular SEA/SH risks that the project activities might trigger. The Plan has also addressed "Table - 1: Recommended actions to address SEA/SH Risks in IPF Projects" as per the "Good Practice Note" published by the World Bank in September 2018. The SEA/SH Risk Mitigation Action Plan is included under Chapter 7 of the ESMF for NUGIP. The plan applies to all sub-projects under NUGIP and provides recommended actions for addressing and mitigating SEA/SH risks.

Based on the consultation meetings and numeration from google earth maps, around 1,899 households with population of 9,248 including 4,694 male and 4,554 female fall under the influence area of the project.
According to consultation meetings and field reference, the most highly benefited beneficiary group includes a total of 180 HHs with 806 population who have been found to be present along the road alignment. This includes 397 female, and 409 male population. The average household size along the road alignment is 4.47. This includes 96 Janajati households with total Janajati population of 430 with 212 female and 218 male. Out of this, 73 men and 14 women participated in the consultative meetings.

5.2 The Purpose of SEA/SH Risk Mitigation Action Plan

The project draws upon NUGIP SEA/SH Risk Mitigation Action Plan to address and mitigate against any SEA/SH risk during subproject implementation, and will make any adjustments as required to meet subproject specific SEA/SH risks that were identified during ESIA preparation. The purpose of the action plan is to identify the issues, stakeholders, possible service providers and assess their capacity and document the legal and institutional mechanisms that aid in accessing grievance redress process. The subproject will focus on sensitizing the communities and other stakeholders and strengthening institutional capacities. A survivor-centric approach is followed whereby all through the subproject, victim/survivors' care and providing access to different referral mechanisms are considered key aspects of this plan.

5.3 SEA/SH Risk Mitigation Action Plan Principal and Approach

The survivor-centric approach is a human-rights based approach which aims to create a supportive environment in which the survivor's rights are respected and in which she is treated with dignity and respect (UNICEF, 2010). This approach helps to promote survivor's recovery and ability to identify and express needs and wishes, as well as to reinforce the survivor's capacity to make decisions about possible interventions (GPN - Addressing SEA/SH in civil works, World Bank 2020). The key principals of this approach are:

- To treat victimized women/girls with dignity & respect instead of being exposed to victim blaming attitude; and not to deal the issue through the feeling of powerlessness.
- To maintain privacy confidentiality and safety instead of exposure.
- Do not discriminate survivor based on gender, age, race/ethnicity, ability, sexual orientation, HIV status or any other characteristics.
- Enable timely access to quality services as required by the survivor
- Ensure informed consent of the survivor since the survivor has the right to understand the options and decide whether to talk about the incidence or not

5.4 Additional SEA/SH Risks in relation to Labor Influx

Amongst all required human resource needed for the subproject, skilled labor requirements will be less and unskilled labor will be high. All labor requirements cannot be met through hiring from the local community, for various reasons including worker unavailability and lack of skilled labor, therefore the contractor will hire labor externally according to need. In many cases, labor influx is compounded by influx of other people who appear in the project area along with the development of the project for various reasons including to seeking opportunities to sell goods, and services. The social impacts resulting from labor influx are critical to address, as even a modest labor influx may lead to negative impacts on the host community. Below are potential risks in the subproject area which are associated with labor influx:

- Risk of social conflict due to conflicts like high consumption of alcohol, and dispute/fights in the local area
- Increased risk of illicit behavior and crime that includes theft, physical assaults, substance abuse, and human trafficking.
- Influx of additional population followers like workers families, traders, suppliers, vendors and traders of different types
- Burden on and competition for public service provision due to increased population, increased density of traffic on roads, increased patients and accidents in the workplace
- Increased risk of communicable diseases and burden on local health services
- Child labor & school dropout due to increased job opportunity & forced labor due to poverty
- Increased pressure on accommodations and rents, traffic and inflation of price

5.5 Mitigating against SEA/SH risks

Mitigation measures against the risk of SEA/SH in the subproject are outlined below:

- Reduce labor influx by using local manpower and prioritizing eccentrically throughout the local ward, municipality, district, province and federal state. Training can be conducted to train or upgrade the performance
- Awareness programs related to community and workers, trafficking, sexually transmitted disease etc. to be conducted (for workers & community) for social harmony
- School-Based Awareness Programs about development, environment, social cultures, probable impacts during construction and operation
- Management of Alcohol and drug abuse through implementation of code of conduct and the provision of punishment for breaching of the code of the conduct

- Building Capacity for SEA/SH mitigation through the integrated approach of local and federal bodies and the locals and the security forces
- Managing the influx of other people into the area:
- Communicable diseases like AIDS, CoVID etc. & to apply strict preventive measures
- Child labor & school dropout should be enforced by cross examining the use of child labor
- Increased pressure on accommodations and rents, traffic and inflation of price as the workforce will be better using the rented house & due to high demand the price may surge
- SEA/SH related to female workers by providing female labor-centric facilities such as separate female toilets, separate female camps, separate family camps and mother's rooms on the site.

5.6 SEA/SH, GBV Risk Mitigation Action Plan

As noted above, the subproject will draw on the SEA/SH Risk Mitigation Action Plan developed for NUGIP, which is included in the NUGIP ESMF and provided in Table 5.1 below;

Table 5.1: SEA/SH, GBV Risk Mitigation Action Plan

SN	Objective	Indicator	Measures	Timeline	Responsibility	Cost (NPR)
1	Include the assessment of SEA/SH, GBV risks (as low SEA/SH risk) as part of the social/gender assessment in project's Environmental and Social Impact Assessment (ESIA)	Low SEA/SH, GBV risks highlighted and preliminary mitigation measures identified Mapping completed of available, quality services in the project affected area	Consultations have been conducted and identified SEA/SH, GBV risks in project are, as identified and include the main measure agreed to with the local administrative office Map out SEA/SH, GBV prevention and response services in project area of influence - reference to be made from the service mapping that already exists at the national level	Construction Phase (as part of ESIA)	Local Body /PIU	Included in ESIA cost
2	Reflect SEA/SH risks, and measures to address them, ESMP and contractor ESMP including the costs	SEA/SH risk Mitigation Action Plan included in the ESMP Procurement for SEA/SH-related activities and costs outlined in the contract.	SEA/SH risk Mitigation Action Plan provided and SEA/SH related costs are included in the ESMP and contract documents to mitigate risks. It has been discussed with local stakeholders to conduct orientations / awareness events on SEA/SH, GBV aspects	Year 1 (during preparation of ESMP)	Itahari Sub-Metropolitan City (local body) /PIU	SEA/SH costing is included in ESMP matrix
3	Develop stakeholder engagements plan and inform communities in project areas of SEA/SH risks and options for response	Number of awareness and consultations held	The plans for stakeholder engagements during the subproject implementation include awareness raising activities (specialized service	During preparation of ESMP, beginning of construction,	Local Body /PIU	ESIA covers stakeholder consultation costs; construction

SN	Objective	Indicator	Measures	Timeline	Responsibility	Cost (NPR)
			providers/contractors/NGOs identified and hired under contract) and awareness and consultations carried out. This plan will be implemented during the project construction.	and during construction		phase stakeholder engagements costs should be inbuilt into overall budget
4	Formulate and adopt code of conduct (CoC) including sections on safety of women and girls	CoC developed, included in all contracts, and staff, consultants, contractors trained.	CoC will be included in the contract document. Training on the CoC will be provided. It has been discussed with the Itahari Sub-Metropolitan City officials for implementation of CoC during project construction phase	Prior to contractor mobilization and during project period.	Local Body /PIU / Contractor	The awareness and orientation program cost to be inbuilt in PIU and at individual contractor level in BoQ
5	Expert support on SEA/SH to advise and monitor action plan during project implementation	Appointment of a Specialist Measure effectiveness of the SEA/SH Action plan	Social specialist/any designated focal person will be assigned to oversee this responsibility. Coordinate, report to and work closely with the specialist from NUGIP on the implementation and monitoring of SEA/SH action plan	Year 1	Local Body /PIU	Included in Project Cost
	Project Construction					
6	Codes of Conduct signed and understood	Number of people officially oriented and trained	CoC will be implemented for all workers and orientation will be provided to the operators, drivers and labourers	During subproject implementation	Contractor, PIU	Built into overall project cost

SN	Objective	Indicator	Measures	Timeline	Responsibility	Cost (NPR)
			Ensure CoCs are clearly understood, signed and behaviourally applied to the job site Disseminate CoCs (including visual illustrations) and discuss with employees and surrounding communities. The World Bank approved CoC is attached in Annex 6			
7	Awareness on SEA/SH	Number of participants and the awareness materials and the resources on project area	Awareness to the woman children school students and the professionals that includes - Community based-awareness program - School based awareness program The project should work with women's groups to support the awareness programs. Two (2) events of awareness on SEA/SH, GBV (at least 25 participants in each orientation/training, during first 2nd & 3rd Quarter - Year 1) Two (2) events of awareness on Women/Girl Trafficking (at least 24 participants in each orientation/training; during 3rd & 4th Quarter-Year 1)	During subproject implementation	PIU, Contractor, Concerned Specialist, Ward office CBO/NGOs working in area Contractor (*Support of DSC & Coordination of PIU*) Contractor (*Support of DSC & Coordination of PIU*)	The costs are included in ESMP NPR 100,000 NPR 100,000

SN	Objective	Indicator	Measures	Timeline	Responsibility	Cost (NPR)
			Two (2) events of awareness on HIV AIDS & Communicable diseases (at least 25 participants in each orientation/training; 1 event during 1st Quarter-Year 1, another to be scheduled as per requirement)		Contractor (*Support of DSC & Coordination of PIU*)	NPR 100,000
8	Grievance Redress Mechanism	Availability of an effective GRM with multiple channels to initiate a complaint relating to / parallel SEA/SH Number of GRM members trained. Inclusive GRM system in place. Number of SEA/SH issues which have been referred to GBV Services Providers	The GRM allows for the appropriate referral of sub project-related complainants. -Discourage or prevent harassment anti-harassment policies in the workplace. At the subproject level, select one women member as first point of contact for the survivors of SEA/SH and provide appropriate training to them. Undertake stakeholder engagements as outlined in the ESMP and conduct community awareness raising about SEA/SH risk mitigation measures, taking support from local women's groups, for example, CoC, GRM, how to report and provide multiple entry-points Maintain proper documentation is maintained for complaint registration and management	During subproject implementation	Social specialist/ designated focal person to oversight gender related issues of the Project	Built into overall project cost and SEA/SH awareness raising outlined above
9			Have separate, safe and easily			

SN	Objective	Indicator	Measures	Timeline	Responsibility	Cost (NPR)
	Implement appropriate subproject-level activities to reduce SEA/SH risks prior to civil works commencing	Documentation of measures taken to reduce SEA/SH risks.	accessible facilities for women and men working on the site. Establish locker rooms/secured rooms and/or latrines for workers and project staff, well-lit areas and include the ability to lock them from inside. Visibly display signs around the project site (if applicable) that signal to workers and the community SEA/SH is prohibited. As appropriate, public spaces around the subproject grounds should be well-lit.	During subproject implementation	PIU, Gender Specialist of the project.	Include in Project Cost
	Project Monitoring					
10	Report in the quarterly progress report and review during Implementation Status Review (ISR) missions	Successful implementation of agreed SEA/SH action Plan (Y/N)	Reports SEA/SH-related issues in the quarterly progress report review during ISR missions	Project period	PCO, PIU, Concerned specialist	

Note: The requirements of the SEA/SH Risk Mitigation Action Plan must be included in CESMP document prior to start of construction works.

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

6.1 Background

This Environmental and Social Management Plan (ESMP) for the project identifies the principles, approach, procedures and methods that will be used to control and minimize the environmental and social impacts of all construction and operational activities associated with the project development that is intended to ensure that commitments made to minimize project's related environmental and social impacts are upheld throughout all project phases. The management and monitoring program will involve the following: a) collection and analysis of appropriate environmental social and cultural data; b) preparation of periodic reports including an annual environmental and social performance report to DUDBC and the WB and liaison with other relevant bodies (e.g. ministries, departments and relevant agencies); c) identification of unexpected environmental and social impacts; and d) formulation of mitigation measures for the unexpected negative impacts.

6.2 Implementation of Environmental and Social Management Plans

The mitigation measures will be integrated into project design and the agreements/contract documents. The project bid documents will include the implementation and reporting of the ESMP and contractor must follow it. The impact of the construction on the environment will be kept to a minimum and appropriate measures as brought out to in the ESMP are taken to mitigate any adverse effects during the construction. The Environment, Health, and Safety requirements of the construction contractor will be clearly spelled out in the contract document and the necessary cost will be included in the BoQ. The sub-project ESMP implementation arrangements can be summarized as follows;

SN	Stakeholder	Role & Responsibilities for ESMP implementation
1	Itahari Sub-Metropolitan City/PIU	✓ The overall project environmental management is the responsibility of PIU ✓ The regular monitoring will be carried out by the PIU
2	Contractor	✓ The contractor is required to submit C-ESMP within 45 days of signing of the contract ✓ Implement the mitigation measures and provisions as per ESMP of the project's DPR/ESIA
3	DSC	✓ Preparation of ESIA during DPR phase ✓ Supervision support to the Contractor to implement the ESMP ✓ Monitoring of implementation of ESMP and its compliance ✓ The E&S safeguards specialists of DSC will work closely with its technical staff to ensure project implementation in accordance to World Bank's safeguard standards.
4	PCO & PMST	✓ The PCO will have overall responsibility to ensure compliance with pertaining laws, policies, regulation for all sub projects ✓ The PCO with support from PMST will review implementation support of environmental and social safeguard studies/ management plan prepared by PIU/DSC

Figure 6.1: Institutional Arrangement for ESMP Implementation

As all the ESMP costs and activities are included in the BoQ, the budgetary activities lie within the contractor's responsibility. The DSC within the PIU, Project Management Support Team and Municipality are also responsible for the implementation of the mitigation activities and their monitoring. The public awareness campaign will be done through municipality and oversight by UDST. The contractor must ensure Environmental Management and Mitigations addressing ESMP and mitigation management as shown in table below;

Table 6.1: Environmental and Social Impact Mitigation Plan

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
	Physical (Construction Phase)			
1.	Land use concerns	▪ Leaseholder or rental contract will be maintained for any temporary land required for the project. ▪ Fertile topsoil will be conserved and reapplied as and when possible. ▪ All the temporary acquired land will be rehabilitated into previous state or better than the earlier state maintaining natural drainage and acceptable to the land owner/DSC. ▪ Spoil disposal sites will be rehabilitated into	Contractor	
		▪ Prior notification (2 months' before award of construction contract) for avoiding crop plantation within Road Width will be given.	Itahari Sub-Metropolitan City	
2.	Use of quarry and borrow materials	▪ Contractor will obtain required construction materials from the legally operating crusher industries only. ▪ PIU & DSC will check the site requirements and quality of quarrying material and approve it. ▪ The contractor will bring borrow pit materials from crushers, In case if borrow pits are required, the borrow pit sites will be well demarcated, regularly monitored and topsoil will be collected. Later, the topsoil will be put back on the surfaces and the areas revegetated, if required. Such cost, if required, will be incurred under Contingency budget of the project.	Contractor DSC/client	
3.	Issues of stockpiling	▪ Only barren land will be used for stockpiling and proper insulator cover and proper drain will be managed to store the chemical to avoid the leakage of chemicals. ▪ Stock of sand will be set wet to prevent it from blowing with the wind; water sprinkler will be used for this purpose. ▪ The places used for the stockpiling of construction materials will be cleaned promptly after the completion of the project. ▪ The site will be well fenced, and provided with a 24-hour guard. ▪ The site will be provisioned with proper lighting system.	Contractor	
4.	Ambient air pollution in the construction locality	▪ Water sprinkling (at least 3 times a day) at dry exposed surfaces and stockpiles of aggregates as necessary. ▪ Require trucks delivering aggregates and cement to have tarpaulin cover. ▪ Limit speed of construction vehicles in access roads to maximum of 30 kph.	Contractor (Supervision support of	Included within BoQ, Abstract of Cost B-2

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ All diesel generators, haul trucks, pavers, graders, and rollers, required to comply to regulations prior to use ▪ No firewood for cooking and heating bitumen and incineration of wastes will be allowed by the contractor. ▪ Burning of waste (from campsite) will be strictly prohibited. ▪ Maintenance of vehicles on regular basis. ▪ Ensure use of equipment and fuel complying with applicable emission standards. ▪ Stockpiles of construction materials will be done away from roadways and from riverbanks. ▪ Air quality monitoring (at least 3 times during construction phase).	Design & Supervision Consultant)	NPR 270,000 for air quality monitoring
5.	Noise nuisance	▪ Involve the local authority and the community in planning the work program so that any particularly noisy or otherwise invasive activities can be scheduled to avoid sensitive times ▪ Restrict noisy construction activities at night-time ▪ Minimize drop heights when loading and unloading coarse aggregates ▪ Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach ▪ Utilize modern vehicles and machinery with the requisite adaptations to limit noise and exhaust emissions, and ensure that these are maintained to manufactures' specifications at all times ▪ Soft horns to be used, and use silent type generators (if required) ▪ If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor will post warning signs in the noise hazard areas. Identify any building at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity ▪ Contractor will monitor noise level along the construction site monthly. ▪ Complete work in settlement areas as quickly as possible	Contractor (Supervision support of Design & Supervision Consultant)	Cost of Noise level monitoring comes within the cost of Air Quality monitoring
6.	Impact on water bodies (Sehara khola and Budhi khola)	▪ Earthworks generating higher amount of spoil will be conducted during dry season to avoid the difficult working conditions that prevail during monsoon season such as problems from runoff. ▪ Location for stock yards for construction materials are identified at least 100 m away from water courses. Place for storage of fuels and lubricants will be away from any drainage leading to water bodies. ▪ Washing of project vehicles at river banks will be restricted.	Contractor (Supervision support of Design & Supervision Consultant)	

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ Proper storage of chemicals and lubricants, use of spillage kit to avoid spillage. Take all precautions to prevent entering of wastewater into streams, watercourses, or irrigation system. Install temporary silt traps or sediment basins ▪ While working across or close to any water body, the flow of water must not be obstructed. Ensure no construction materials like earth, stone, are disposed in a manner that may block the flow of water of any watercourse ▪ Proper and timely implementation of design measures to avoid impact of water discharge at the outfall point ▪ Water quality monitoring (Sehara khola & station will be where the road alignment intersects) to be carried out as per requirement (at least 6 samples; 1 before starting work and should be included as baseline in CESMP, 4 quarterly, and 1 during end period of the project) and the parameters will be as per the requirements provided in Annex 3 ▪ Any disposal on Sehara river will be prohibited; fishing by the workforce will be strictly prohibited; Washing of project vehicles along the river bank will also be prohibited; ▪ Awareness activities will be carried out for the workforce (during 1st & 3rd Quarters - Yr. 1; at least 30 participants/event)		NPR 100,000 NPR 120,000 NPR 50,000
7.	Solid waste and spoil generation	▪ Waste minimization and waste segregation will be prioritized; 3R approach will be promoted. ▪ Composting of organic waste generated from the camps will be disposed within the proposed camps. ▪ Containment of hazardous waste will be carried out. ▪ Awareness raising event will be carried out. ▪ Decommissioning waste will be re-used, sold to local scrap dealers. ▪ Coordination with local municipality team for final disposal into the municipality's waste collection & disposal system. ▪ It has been planned that basic facilities like composting, waste segregation, etc will be started from first month/quarter of contractor's mobilization; other practices under 3R approach (e.g. waste minimization) will be carried out through out; and awareness events will be carried out every quarter (detailed plan will be provided in CESMP document) ▪ Disposal of spoil into water bodies will be strictly prohibited. ▪ Generated spoil will be disposed only at designated spoil disposal sites.	Contractor	NPR 150,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		Details of disposal sites will be confirmed during construction by the contractor and will be presented in the C-ESMP.		
8.	Others	▪ Contractor will dispose all the chemical wastes generated during the time of construction safely without interrupting the existing nearby settlements, water bodies, forests and wildlife.		
	Physical (Operation & Maintenance Phase)			
9.	Road Stability and Drainage Management	▪ Regular/periodic maintenance of the road ▪ Construction of drainage system to mitigate possible inundation in the settlements along the project alignment ▪ Ensure proper compaction as per design ▪ Awareness activities to be carried out in community level to reduce the incidences of disposal of waste into road-side drains	Itahari Sub-Metropolitan City	Included within BoQ, General B-2 Included within BoQ, Abstract of Cost A-6
10.	Air pollution and Noise nuisance	▪ There should be a consensus between metropolitan, District Transportation Office, Transportation Entrepreneur, and the local people regarding the operation of conditioned vehicles ▪ Campaigns like 'No Horn' and use of soft-horns can be initiated by the local authority	DTO, transportation entrepreneur, local people	No extra cost will be required.
11.	Water pollution	▪ Disposal of any septic or industrial wastewater into the roadside drains will be strictly prohibited ▪ Washing of public and private vehicles at river banks will be restricted	Itahari Sub-Metropolitan City	No extra cost will be required.
	Biological (Construction Phase)			
12.	Vegetation loss	▪ Compensatory plantation of 260 trees, @ 1:10 for each tree cut ▪ Greenery promotion works along available green belt areas along the road alignment will be carried out ▪ Compensation of 15 private trees @ NPR 3500 per fruit trees; total NPR 52,500 to be provided by Itahari Sub-Metropolitan City Compensatory plantation (as per plan in Annex 5) and greenery promotion works will be carried out at open public space close to bank of Budhi khola in WN 4	Contractor Itahari Sub-Metropolitan City	NPR 455,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
	Socio-economic and Cultural (Construction Phase)			
13.	Impact on property from vibrations due to the use of heavy machinery and other construction activities	▪ Establish photographic and video graphic evidences of structures and properties in and alongside proposed road width; cracked walls will be reinstated. ▪ Conducting excavation works at critical sites under close observation of the local representatives	Contractor	NPR 300,000
		▪ Awareness raising, information and dissemination about GRM (meetings, monitoring and logistic costs@ 1 meeting every month)	Contractor (Supervision support of DSC & coordination of PIU)	NPR 270,000
14.	Disturbance to electric poles in the proposed road width	▪ Relocate and install 66 new electric poles along the alignment in coordination with the local electricity office and telecommunication authority. ▪ In coordination with local branch of NEA and the local representatives	Itahari Sub-Metropolitan City and Contractor	Included in BoQ (Abstract of cost, A-1)
15.	Reinstatement of Water Supply Pipe lines, and irrigation canal (*kulo*)	▪ The project must work in close coordination with the locals and *Itahari Khanepani Upabhokta Sanstha* regarding disruption of water supply system; alternative means of water supply (e.g. potable drinking water through tanker supply) during pipeline disruption, re-establishment and reestablishment of 5.95 km of pipelines of the system (*as detailed in Table 2.6*) should be addressed without any delay ▪ The project will timely reinstate 172 m of irrigation canal (*kulo*) in coordination with the local users	Contractor in support with Itahari Sub-Metropolitan City/DSC	Included in BoQ; Abstract of cost, A-2 Included in BoQ; Abstract of cost, K-iv
16.	Difficulties in access & mobility to private properties and premises	▪ Diversions and proper crossings will be available for elderly and differently-able people in the construction phase to ensure their mobility is not impacted during construction. Elderly people should have access to socialize and meeting people and family to nurture their mental need/health. ▪ Metal planks and wooden planks will be placed to ease the access to private houses and shops (tentatively 20 sites) ▪ In total 35 ramps have been provisioned (at Chainages in km - 0+040, 0+160, 0+240, 0+280, 0+420, 0+440, 0+660, 0+700, 0+840, 0+880, 0+900, 1+000, 1+160, 1+180, 1+240, 1+680, 1+700, 1+840, 2+140, 2+160, 2+180, 2+200, 2+240, 2+260, 2+360, 2+460, 3+019)	Contractor (Supervision support by DSC)	NPR 150,000 Included in BoQ (Abstract of cost, J)

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
17.	Road safety & Community safety	▪ 'Drive slow' messages will be placed along the active sites. ▪ Barricades will be placed to avoid any accidental falls ▪ Sign boards with safety messages and warnings will be placed in local languages all along the alignment at the construction sites and at the trench excavation area. ▪ Construction works to consider elderly, women, child & differently able people (EWCD) requirements ▪ Trenches will be backfilled with immediate effect. ▪ Awareness activities will be conducted to inform & aware locals. ▪ Carry out site management practice such as the fencing around work area and road signage. ▪ Increase public awareness of safety, health and environmental issues by providing information directly and indirectly through campaign. ▪ Display appropriate signage for use during construction and implementation of the project to enhance awareness creation on the potential hazards of the project. ▪ The contractor will be supervised to prepare a Traffic Management Plan. ▪ The contractor will assign a safety supervisor and will monitor daily construction works in terms of health and safety. ▪ The contractor will perform campsite management as per the measures provided in sub-heading 4.4.1.3	Contractor	Included in BoQ (Abstract of cost, H) NPR 50,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
18.	Occupational Health & Safety	▪ Personal Protective Equipment (PPEs) will be provided to the workers, and its use will be monitored closely. ▪ Replacement of PPEs after 'wear & tear' - at least every quarter ▪ First aid boxes will be provided at campsites as well as active working sites (the kits to be refilled and updated every month). ▪ CoC will be implemented for the operators, drivers and labourers ▪ Proper WASH provisions will be provided in the labour camps ▪ Drinking water quality monitoring (at least 1 sample/quarter x 6 times) ▪ Provision of potable water for the workforce will be ensured ▪ Toilets will be provided at the ratio of at least 1 unit for 15 people. ▪ Provision of insurance to cover physical damage to workers. ▪ Drivers with authorized license holders will only be allowed for the operation of construction vehicles. ▪ Workers and staff at the construction site will be provided with proper training to ensure that workers are trained on what to do in the event that an accident occurs on site. ▪ The contractor's supervisors should conduct 'pre-work instructions' to the workers everyday - explaining them about the nature of works, condition of the site, and associated risks as well as safety measures. ▪ Agreement with nearby health institution will be in place by the contractor. ▪ Contractor will be responsible to maintain the records of each and every accident and incidence and will make available to DSC/PCO/PMST as and when required.	Contractor (Supervision support by DSC team)	To be included within contractor's overhead (*General Condition of Contract document*) NPR 120,000 for drinking water quality monitoring

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
19.	Social Disturbance / Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and Communicable diseases	(i) Regarding SEA/SH, GBV ▪ Locals will be given due priority for any employment opportunity ▪ CoC will be implemented for the operators, drivers and labourers ▪ Separate toilets will be provided for male and female workers ▪ SEA/SH, GBV awareness raising activities, trainings and stakeholder engagements such as - Community based-awareness program, School based awareness program ▪ Awareness program for women and against the gender based violence will be conducted for the workers as well as the local community regarding these concerns ▪ 2 orientations/trainings with at least 25 participants in each training; to be conducted during first 2nd & 3rd Quarter - Year 1 (ii) HIV AIDS & Communicable diseases ▪ Awareness creation and sensitization to workers and other persons post-project to reduce or eliminate chances of infections of HIV-AIDS and other sexually transmitted diseases ▪ Distribute HIV & AIDS awareness materials in collaboration local health related agencies ▪ Ensure protective measures for communicable diseases is followed, prepare and follow SOPs by all workers and staff (hand washing, using sanitizer, masks etc) including the community health and safety awareness and management ▪ Health screening of the workers will be carried out before joining them into workforce ▪ Emergency Response Plan will be implemented during any critical circumstances (e.g. CoVID spread) ▪ 2 orientations/trainings with at least 25 participants in each training; 1 event during 1st Quarter-Year 1, another to be scheduled as per requirement (iii) Human trafficking - focused on women & girl trafficking ▪ Awareness program will be developed and implemented ▪ 2 orientations/trainings with at least 20 participants in each training; during 3rd & 4th Quarter-Year 1	Contractor with consent, & coordination support from municipality office (Women Development Office), mobilization of NGOs/CBOs/ Clubs Supervision support of DSC & coordination of PIU for all these activities under i, ii & iii	NRs. 100,000 NRs. 100,000 NRs. 100,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
20.	Child labour, forced labour and wage discrimination	▪ Child labour & forced labour will be strictly prohibited ▪ Citizenship card or other valid personal ID card ▪ Awareness among the workers and the local community ▪ Equal wage for male and female workers will be ensured	Contractor (Supervised by local authority and DSC)	NPR 50,000
21.	Traffic Management	▪ Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points. ▪ Emergency traffic management plan should be prepared by the contractor and approved by the Project. The plan may include informing about the scheduled road closure and the alternative routes identified to divert the normal traffic flow, transport material during off-peak time. ▪ Provide advance notice to stop vehicles by erecting indicator signs at a necessary distance in order to reduce congestion at the site of work, thus enabling making of proper security arrangements, or lane wise traffic management.	Contractor	Included in BoQ (Abstract of cost, H)
	Socio-economic and Cultural (Operation & Maintenance Phase)			
22.	Traffic accidents and associated risks	▪ Raise awareness of traffic rules, and installation of speed humps to control speed near pedestrian crossing areas ▪ Awareness will be raised regarding traffic safety ▪ Speed limits will be defined ▪ Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points	Itahari Sub-Metropolitan City	Cost will be borne by municipality
23.	Community Health and Safety	▪ Bus laybys and Bus Shelters are provided at various locations where public buses or micro buses pull out of the traffic to pick and drop off passengers. ▪ Ramps are provided in interlinking points, and crossing points of roads ▪ Installation of Road markings at all major as well as minor intersections. Road Signs and Markings Road Markings has been provided as per Traffic Sign & Marking manual as per DPR ▪ Reinforced Cement Concrete covered drain must be provided throughout the alignment in integration with footpath.	Itahari Sub-Metropolitan City	
24.	Impacts due poor maintenance of road-drains	▪ Awareness activities will be carried to stop disposal of waste into the road-side drains ▪ Drainages will be regularly cleared under periodic maintenance ▪ Road side plantation of aromatic and green-cover plants like *Chameli*, *Kapur* and *Ashoka*	Itahari Sub-Metropolitan City	Cost will be borne by municipality

6.3 Costs of Executing the Environmental and Social Management Plan (ESMP)

All proposed mitigation measures will be integrated in the project design so that these measures may automatically form part of the construction and operational phases of the project. For the awareness and consultative activities, there will be initiative as well as supportive role from DSC and PIU. The total cost for the ESMP is outlined in Table 6.2 below;

Table 6.2: Cost of ESMP Implementation

SN	Items & Headings	Unit	Qty	Rate	Total, NPR	Reference
	Provisional Sum amount					
1	Water quality test	Samples	12	20000	240,000	Table 6.1; S. N. 6 & S.N. 18
2	Air quality and Noise level monitoring	Samples	3	90000	270,000	Table 6.1;S. N. 5
3	SWM works				150,000	Table 6.1; S. N. 7
4	Storage of chemicals & lubricants				100,000	Table 6.1; S. N. 6
5	Public safety (planks, etc)				150,000	Table 6.1; S. N. 16
6	Damage repairing for any vibration related damages				300,000	Table 6.1; S. N. 13
7	Greenery promotion				455,000	Table 6.1; S.N. 12
8	Awareness on Health & safety, environmental conservation		6		150,000	
(i)	Environmental Awareness (during 1st & 3rd Quarters - Yr. 1; at least 30 participants/event)	Events	2	25,000		Table 6.1; S.N. 6
(ii)	Road safety & Community HS	Events	2	25,000		Table 6.1; S.N. 17
(iii)	CoC, and Child Labour	Events	2	25,000		Table 6.1; S.N. 20
9	Awareness on Communicable Diseases, Communicable diseases, Girls/Women Trafficking, SEA/SH risks, GBV (*Events will be conducted for workers as well as community*)	Events	6		300,000	
(i)	SEA/SH, GBV (at least 45 participants in each orientation/training, during first 2nd & 3rd Quarter - Year 1)	Events	2	50,000		Table 6.1; S.N. 19 (i)
(ii)	HIV AIDS & Communicable diseases (at least 30 participants in each orientation/training; 1 event during 1st Q -Year 1, another to be scheduled as required)	Events	2	50,000		Table 6.1; S.N. 19 (ii)
(iii)	Women/Girl Trafficking (at least 30 participants in each orientation/training; during 3rd & 4th Quarter-Year 1)	Events	2	50,000		Table 6.1; S.N. 19 (iii)
10	Social safeguards (grievance meetings, joint monitoring, etc)	Meetings /Events	18		270,000	Table 6.1; S.N. 13
	Total				**2,265,000**	

The total cost of implementation of ESMP activities is NPR 2,265,000 (*In words: Twenty two lakhs sixty-five thousands*).

6.4 Monitoring Cost

Environment and Social Unit of the PIU is responsible for monitoring the impact of proposal implementation. The unit will be supported by the Safeguard experts of the DSC so no separate cost will be required.

7. STAKEHOLDER ENGAGEMENT AND CONSULTATATIONS

7.1 Stakeholder engagement overview

Regular stakeholder engagement and consultations are necessary to ensure widespread and meaningful participation of key stakeholders with focus on the project affected people. Successful implementation of the subproject requires coordinated efforts of various stakeholders at different levels. Hence, communication and consultations at different levels were used as a tool to inform and educate stakeholders about the proposed project intervention.

There are two key objectives of effective stakeholder engagement and consultations. First, it is to keep all stakeholders informed of the project activities, and any potential beneficial and adverse impacts. Second, it is to ensure that stakeholders actively participate at all levels of the project cycle, to enable sharing of valuable local knowledge involvement in the development of mitigation plans to minimize the potential negative impacts of the project, and so are well equipped to take over the responsibilities of operation and management once the project phases out. These will ultimately contribute towards narrowing down the gaps between the project officials and beneficiaries, and to help create a conducive environment to mitigate against the adverse social and environmental issues through optimal cooperation from the project beneficiaries themselves.

Community participation can be effective if local people are empowered. The method of community participation needs to be planned to reflect the community profile and nature of the project. Different communication methods are integrated together communicates the community as focus group discussions, meetings, and workshop. The plan ensures the following:

- Ensure local ownership
- Include different types of stakeholder's group in participation process
- Generate and respond to feedback

Public consultation and community participation helps to remove such uncertainty and at the same time help the project implementation with its methodology as well as work plan. It is assisted in the identification of the problems associated with the project, as well as the needs of the population likely to be impacted. This participatory process helps in reducing the public resistance to change and enabling the participation of the local people in the decision-making process. The involvement of the various stakeholders ensures that the affected population and other stakeholders are informed consulted and are allowed to participate at various stages of project preparation. Different strategies have been adopted for communication/ consultation during implementation stages. Stakeholder engagement strategy outlines engagement through the project development phases and recommends a set of stakeholders' engagement activities to be carried out throughout the project development phases. This chapter also outlines the disclosure to be made and other communications to be made during the project cycle.

7.2 Stakeholder Engagement Procedures and process

The subproject will draw on existing mechanisms and procedures established at the local level to carry out stakeholder engagements. The municipality forums will be the primary mechanism for engaging with stakeholders and community participation, to ensure that projects identified

reflect local needs and priorities. Other mechanisms for community engagement and consultations include community-based user committees in construction supervision and operations and maintenance, as a social accountability and safeguard mechanism. The stakeholder consultations will draw on mechanisms already established at the local level. Where mechanisms for stakeholder engagement do not already exist, a mechanism elaborated below will be followed;

7.3 Stakeholder Mapping

The primary objective of stakeholder analysis is to map the stakeholders, their role, operational network, representation requirements and impact on type of activity in the project to strategically prioritize consultations with them. The stakeholder interactions will be through:

- Focused group discussions (FGD)
- Public consultations
- Key informant interview (KII)
- Indigenous and women groups discussion
- Consultation with institutional stakeholders

The stakeholder mapping is undertaken through formal and informal consultations and their interests concerned with the project activities should be identified throughout the project cycle. The stakeholders identified for the subproject are presented in Table 8.1 below;

Table 7.1: Stakeholder roles and responsibilities

Level	Stakeholder	Roles and Responsibilities	
Federal	MoUD DUDBC (PIU)	Facilitate the implementation of the subproject, coordinate with agencies, undertake monitoring and reporting to WB	
	DoR, MoFE, (PIU)	Support coordination, and sectoral policy implementation	
Local	Municipality, Ward Offices Tole Development Committees	Support the process of subproject selection, identify beneficiary and their needs, support coordination, support grievance and dispute resolution	
	NEA, DFO, LRO, DoI DCC, Traffic Police, Water Users Committee	Provide specialized inputs on local conditions, permissions, technical input limitations and needs of the public, provide compensation estimation, provide required assistance during project implementation, and support monitoring	
Subproject Level	Ward representative Associations) and All types of local user groups	Engage and participate in consultations, support in project implementation	
	Extended users of the project		
PCO		Overall Monitoring and Coordination	Executing agency
PMST		To support PCO in monitoring and control ,will work as a helping hand to PCO, coordinate with the municipalities and DSC	Executing Agency
DSC (Design and Supervision Consultant)		Design and overall management of UDG contract in municipality Will help PIU of municipalities in overall design, contract	Consultant

Level	Stakeholder	Roles and Responsibilities	
		management, supervision will coordinate with PMST	

During the study, a series of field visits and consultations were carried out. During this time, local communities, local institutions, ward offices and Itahari Sub-Metropolitan City Office were contacted. The list of people and institutions consulted are given in table below;

Table 7.2: Lists of People and Institutions Consulted

SN	Name	Organization/Address
1.	Mr. Hem Karna Paudel	Mayor, Itahari Sub-Metropolitan City
2.	Mrs. Sangita Kumari Chaudhary	Deputy Mayor, Itahari Sub-Metropolitan City
3.	Mr. Ram Charitra Mehata	CEO, Itahari Sub-Metropolitan City
4.	Mr. Pramod Sherpa	Member of Municipal Council, Itahari Sub-metropolitan city
5.	Mr. Jiban Pd. Ghimire	Chief, IDS, Itahari Sub-Metropolitan City
6.	Mr. Arjun Pd. Dahal	Engineer, Itahari Sub-Metropolitan City
7.	Mr. Sangita Pokharel	Chief, SDS, Itahari Sub-Metropolitan City
9.	Mr. Chandra Pd. Bhattarai	Social Development Expert, Itahari Sub-Metropolitan City
10.	Mr. Surendra Limbu	Sub Engineer, Itahari Sub-Metropolitan City
11.	Mr. Kayaram Majhi	Sub Engineer, Itahari Sub-Metropolitan City
12.	Mr. Bhawendra Chaudhari	Sub Engineer, Itahari Sub-Metropolitan City
13.	Mr. Madhav Koirala	Chairman, Ward No. 2, Itahari Sub-Metropolitan City
14.	Mr. Bhima Kumari Tumbahamphe	Member, Ward No. 2, Itahari Sub-Metropolitan City
15.	Mr. Durga Bdr. Khatri	Member, Ward No. 2, Itahari Sub-Metropolitan City
16.	Mr. Champa Maya B.K.	Member, Ward No. 2, Itahari Sub-Metropolitan City
17.	Mr. Rani Subba	Secretary, Ward No. 2 Office, Itahari Sub-Metropolitan City
18.	Mr. Krishan Kumar Rai	Member, Ward No. 2, Itahari Sub-Metropolitan City
19.	Mr. Mausam Bhattarai	Sub Engineer, Ward No. 2, Itahari Sub-Metropolitan City
20.	Mr. Shankar Rai	Businessman, ward no. 2
21.	Mr. Padam Bhattarai	Farmer, ward no. 2
22.	Mr. Ram Bdr. Paudel	Businessman, ward no. 2
23.	Mr. Jiban Kumar Ghimire	ward no. 2
24.	Mr. Bhim Kumari Bhujel	Housewife, ward no. 2
25.	Mr. Nakul Pariyar	Service, ward no. 2
26.	Mr. Ishwari Wasti	Social worker, ward no. 2
27.	Mr. Sailendra Blon	Social worker, ward no. 2
28.	Mr. Lokendra Dangal	Social worker, ward no. 2
29.	Mr. Laxmi Pd. Ghimire	Social worker, ward no. 2
30.	Mr. Anita Budhathoki	Teacher, ward no. 2
31.	Mr. Krishan Pd. Bhattarai	Social worker, ward no. 2
32.	Mr. Ram Pd. Kafle	Social worker, ward no. 2
33.	Mr. Lochan Paudel	Social worker, ward no. 2
34.	Mr. Niraj Dulal	Student, ward no. 2
35.	Mr. Ganesh Dulal	Service, ward no. 2
36.	Mr. Nabin Gurung	Student, ward no. 2
37.	Mr. Amar Bhujel	Social Worker, ward no. 2
38.	Mr. Ganesh Blon	Social Worker, ward no. 2
39.	Mr. Niru Tamang	Social Worker, ward no. 2

SN	Name	Organization/Address
40.	Mr. Susma Tamang	Social Worker, ward no. 2
41.	Mr. Ramesh Tamang	Contractor, ward no. 2
42.	Mr. Phonix Thapa	Student, ward no. 2
43.	Mr. Bhakta Raj Rai	Ward no. 2
44.	Mr. Ganga Pd. Khatiwada	Ward no. 2
45.	Mr. Kedar Pd. Koirala	Ward no. 2
46.	Mr. Govinda Pd. Bhattarai	Ward no. 2
47.	Mr. Narayan Kumar Rai	Ward no. 2
48.	Mr. Tikaram Dhamala	Ward no. 2
49.	Mr. Taranath Timilsina	Ward no. 2
50.	Mr. Bishwa Nath Bhattarai	Ward no. 2
51.	Mr. Dinesh Khadka	Ward no. 2
52.	Mr. Durga Bdr. Dhamala	Ward no. 2
53.	Mr. Mr. Rana Bdr. Rai	Ward no. 2
54.	Mr. Belas Pd. Dhamala	Ward no. 2
55.	Mr. Hom Pd. Dhamala	Ward no. 2
56.	Mr. Mr. Sailendra Blon	Ward no. 2
57.	Mr. Krishna Pd. Gelal	Ward no. 2
58.	Mr. Setuman Rai	Farmer, Ward no. 2
59.	Mr. Harka Datta Rai	Farmer, Ward no. 2
60.	Mr. Dhansher Rai	Farmer, Ward no. 2
61.	Mr. Shila Bhattarai	Ward no. 2
62.	Mr. Sajana Bhattarai	Ward no. 2
63.	Mr. Shrijana Adhikari	Ward no. 2
64.	Mr. Goma Pandey	Ward no. 2
65.	Mr. Nir Bdr. Shrestha	Farmer, Ward no. 2
66.	Mr. Govinda Pd. Parajuli	Farmer, Ward no. 2
67.	Mr. Ganesh Kumar Shrestha	Ward no. 2
68.	Mr. Hira Devi Gelal	Housewife, ward no. 2
69.	Mr. Lila Karki	Housewife, ward no. 2
70.	Mr. Bishnu Kumari Lama	Housewife, ward no. 2
71.	Mr. Mangali Maya Tamang	Housewife, ward no. 2
72.	Mr. Binda Tamang	Businessman, ward no. 2
73.	Mr. Ganga Dahal	Housewife, ward no. 2
74.	Mr. Sita Rai	Housewife, ward no. 2
75.	Mr. Kamala Dhamala	Housewife, ward no. 2
76.	Mr. Januka Gelal	Housewife, ward no. 2
77.	Mr. Kalpana Koirala	Housewife, ward no. 2
78.	Mr. Hem Kumari Dhakal	Housewife, ward no. 2
79.	Mr. Bimala Dhamala	Housewife, ward no. 2
80.	Mr. Debika Limbu	Housewife, ward no. 2
81.	Mr. Rita Subba	Member, ward no. 2, Itahari, Sub-metropolitan city
82.	Mr. Bhakta Raj Rai	Businessman, ward no. 2
83.	Mr. Sita Rai	Housewife, ward no. 2
84.	Mr. Debika Limbu	Housewife, ward no. 2
86.	Mr. Harka Bdr. Magar	Farmer, ward no. 2
87.	Mr. Rajesh Rai	Farmer, ward no. 2
88.	Mr. Sailendra Blon	Farmer, ward no. 2

7.4 Mechanism for Consultation

The consultation process envisages involvement of all the stakeholders' at each stage of subproject planning and implementation. Involvement of the community is not limited to interactions with the community but also disclosing relevant information pertaining to the project tasks. Community participation is and will be ensured at all stages. Dissemination of project information to the community and relevant stakeholders will be carried out by the PIU. The community will be made aware of the project alternatives and necessary feedback will be obtained; other stakeholders will be involved in the decision making to the extent possible.

The outcome of consultations is incorporated as appropriate into the design and ESMP. As part of such consultations, the draft ESMP will be presented and explained to the people on the content and process of the implementation of the plans. Consultations with project affected persons and their profiling are conducted as per the requirements of ESIA.

7.5 Public/Community Consultation Plan

All consultations on social and environmental issues will be carried out during implementation of the project will be done in an inclusive manner, including vulnerable social groups (such poor household, caste, persons with disabilities, among others) and women. Details of the Project Consultation Plan are presented in Table 8.3 below;

Table 7.3: Project Consultation Plan

Objective and Target Goal	Method	Responsibility
I. Build Local Ownership		
Introduce Project DPR Report and its components	Group Meeting/Workshops	DPR Consultant/ PCO/Municipality
Maintain efforts for two-way communication with relevant stakeholders through the project	Face to face meeting with concerned stakeholders	PCO, Design Supervision Consultant, Ward Level Authority
II. Start Consultation Process with Potentially Affected Communities by construction and operation of road		
Identify communities to be potential affected by project	Electronic and face to face communication with relevant stakeholders and implementing agencies	PCO, DPR Consultant Municipality Ward Authority
Consult with community representatives and ensure that their concerns with the proposed project are addressed	Face to face meeting with community representative (includes social officer of Municipality, women's representative etc.) Meeting will take place following protocol for meeting (social distancing , wearing of masks by all the participants, use of hand sanitizers, conducting meeting in an open and ventilated places)	PCO, DPR Consultant Municipality Ward Authority
Ensure that the views and needs of vulnerable segment (if required) of communities, including but not limited to poor, women, elderly, and are addressed by the subproject	Face to face meeting with affected communities' representative (including social officer of Municipality, women's representative etc.)	PCO, Design and Supervision Consultant Municipality Ward Authority
III. Implementation Phase		

Objective and Target Goal	Method	Responsibility
Maintain effective communication with PIU	Electronic and face to face communication with representative of relevant agency /organization	PCO, Design and Supervision Consultant Municipality Ward Authority
Raise awareness of project activities among potential beneficiaries	Media advertisements and targeted campaign	PCO, Consultant/ Municipality
Maintain consultation process with a potential affected communities and beneficiaries	Face to face meeting with affected communities' representative (including social officer of Municipality, women's representative etc.)	PCO, Design and Supervision Consultant Municipality Ward Authority
Monitoring and evaluation community involvement	Face to face meeting with affected communities' representative	PCO, Design and Supervision Consultant Municipality Ward Authority
Reports outlining progress of activities related to engagement and communication	Collation of progress report, self-evaluation by PCO	PCO
Agreement on operation and maintenance system	Electronic or face to face communication with relevant stakeholder Face to face meeting with local authority	PCO, Design and Supervision Consultant Municipality Ward Authority
Implementation of ESIA	The contractor will prepare the various stand-alone plans to comply with ESIA requirements By including all the stand alone plans, the contractor will prepare Contractor's Environmental and Social Management Plan (ESMP) and submit it to PIU. This requirements will be included in the contract BoQ	The requirements stipulated in ESIA shall be included in bid document of the contractor. The contractor will prepare the stand alone plans and submit it to the PIU before the construction begins and obtain approval. The stand-alone plan includes; environment, health and safety management plan, traffic management plan, grievance redress plan, spoil management plan, emergency preparedness plan, camp management plan, labor management plan, air/water/noise management plan to name a few.

7.6 Consultations Conducted

Formal, semi-formal and informal consultations have been carried out. The following table presents the details of the consultations carried out;

Table 7.4: List of Public Consultations and their Summary

SN	Meeting	Date	Total Participants	Outcomes
1	Stakeholder consultation held at Municipality Office	September 04, 2023	11 (M - 9, F - 2)	Presentation and discussion on DPR Report and Socio-economic condition, Safeguards aspects, Land requirement and acquisition process etc.
2	Consultation meeting with Itahari Khanepani Upabhokta Sanstha, Meeting held at Itahari Khanepani Upabhokta Sanstha Office, Itahari	June 07, 2023	8 (M - 8, F -0)	Sharing of design and coverage area; and safeguards requirements of the project etc.
3	Community consultation held at Tribhuvan Chowk (Bargachhi Chowk-Mahendra School-Taltalaiya Road)	June 06, 2023	28 (M - 21, F - 7)	Detailed Discussion on avoiding vegetation loss; land requirement, land acquisition process and on social and environmental aspect including GBV, SEA/SH
4	Community consultation held at Tribhuvan Chowk	September 05, 2023	45 (M - 38, F-7)	Detailed Discussion on updated design aspects; discussion on avoiding vegetation loss; land requirement, land acquisition process and on social and environmental aspect including GBV, SEA/SH

The stakeholder consultations and community included Ward Committee Chairperson, Itahari Sub-Metropolitan City office authorities and local people along the road alignment. Since the settlements along the road alignment are a mixed community, these consultations included indigenous people. The major concerns during the consultations were following;

- Need of timely reinstatement of any private or public properties damaged during the construction phase
- Problem of dust and noise due to project activities was raised as a concern
- Need of considering road safety concerns likely to arise during construction works
- Need of considering dust problems due to movement of heavy vehicles during construction phase
- It was discussed that open land at Budhasubba chowk (WN 2 can be leased) for campsite & stockpile site.
- It was discussed that space near Sehara bridge (WN 2) can be used as site for spoil disposal and levelling of the land
- Concerns of social issues that may arise due to influx of workforce was discussed
- Employment opportunity to the locals was one of the topics put forward
- Quality of the road construction works was one of the concerns raised

The minutes of the meetings are provided in Annex 1.

7.7 Information Disclosure

For the success of the project, all information about the proposed activities and their expected results will be publicly shared with the affected people and interested stakeholder. In collaboration with the relevant local authorities, NGOs and other community groups, the project will disclose all the relevant information in the various stages of project cycle. Agencies working for environmental and social aspects will also be informed about the ongoing and planed activities, to identify jointly appropriate protective or corrective measures. The following approaches will be adopted to make information accessible to all the concerned stakeholders throughout the project cycle;

- Mass Media: Use local media like newspaper, radio and TV.
- Meeting/Workshops
- Distribution of project documents: Certain project documents will be disclosed in Nepali (or other relevant local language). Project-related information materials will be distributed prior to each construction work to local officials, local people, stakeholders and other concerned offices like municipality, Ward, Tole Committee etc.

Point of information will be defined at the municipality office level during implementation to disseminate all the documents related to the project activities. Based on the public information disclosure policy, PCO and the municipality will unveil the information through its website. The information dissemination plan for Bargachhi - Taltalaiya Road project is presented in Table 8.5 below;

Table 7.5: Information Dissemination Plan

Means of Communication	Timeline & Frequency	Responsibility	Resources
Municipality Website (project details, grievance mechanism)	At the start of the project which will be maintained throughout the project	PIU/ Information Officer	Information Officer
Newspaper and local Radio (project salient features, dates, grievance mechanism etc.)	Project implementation phase Weekly basis	PIU, municipality Information Officer	Radio-program/Talk, FM Radio Clip
Project leaflets and Fact Sheet	Project details, Implementing agencies, project period - 2 times	PIU, Information Officer	Double-sided color A4 (500 copies)
Face to face engagements - meetings, focus group discussion with relevant stakeholders	Project Main Activities, Financial Assistance, Implementing agencies, project period etc. 2 time in year	PIU, Information Officer	

7.8 Grievance Redress

As part of the implementation stage the PIU, project engineers and Environment and Social staffs will directly interact and consult with the project affected persons. These would comprise of consultations towards addressing the impacts on private properties, public properties, trees, etc.

The stakeholders may raise any grievances related to the impacts on them or any other grievances. Such types of grievances needs to be addressed through Grievance Redress Mechanism (GRM) for timely response on stakeholders query and concerns. At first instance, the project-affected grievant should raise their grievance with the Grievance officer of the project, and the Grievance officer will determine whether it can be resolved within the project, at

the ward level, or whether another mechanism should be used. The records will be kept properly.

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

Current Grievance Redress Processes

Currently all grievances including environmental and social issues are directly submitted to the project municipality's judicial committee (Nyayik Samiti). The views of the unit related to environmental and social development are taken in decision making process, if the judicial committee determines that is required.

Structure of the GRM

The project will follow the existing Grievance Redress procedures. GRM has been initiated, and 1st Level GRC has been formed at project's ward level. At the Ward level, the staffing of the grievance redress committee (GRC) includes ward representatives, DSC representative under coordination of Chairpersonof WN 2. Likewise, 2nd Level GRC has already been established under coordination of Deputy Mayor of Itahari Sub-Metropolitan City office (Annex 1). For effective redressal of the grievances, the following Grievance Redress Mechanism is proposed;

The third level will be at the PCO level, comprising members from the PCO. The PCO will forward the same to WB. Those engaged as the monitoring unit for ESMP, RAP related issues (as of no issues and implications that RAP will trigger for this project) but if triggers due to some circumstances, it could be part of the committee. Special project grievance mechanisms such as on site provision of complain hearings allows project affected persons to get fair treatment on time. The subproject will also handle issues regarding the compensation damages done during construction.

The details of the proposed GRC structure and GRM process were discussed during public consultations with stakeholders in all levels.

Processes of the GRM

Grievances shall be submitted through various mediums, including in person, in written form to a noted address, through a toll-free phone line or through direct calls to concerned officials, and emails. The PCO will appoint a person (Operator) at PCO- Kathmandu to receive such calls and online messages. The person (Operator) based on nature of complaint, will forward the same to the information office or ward committee.

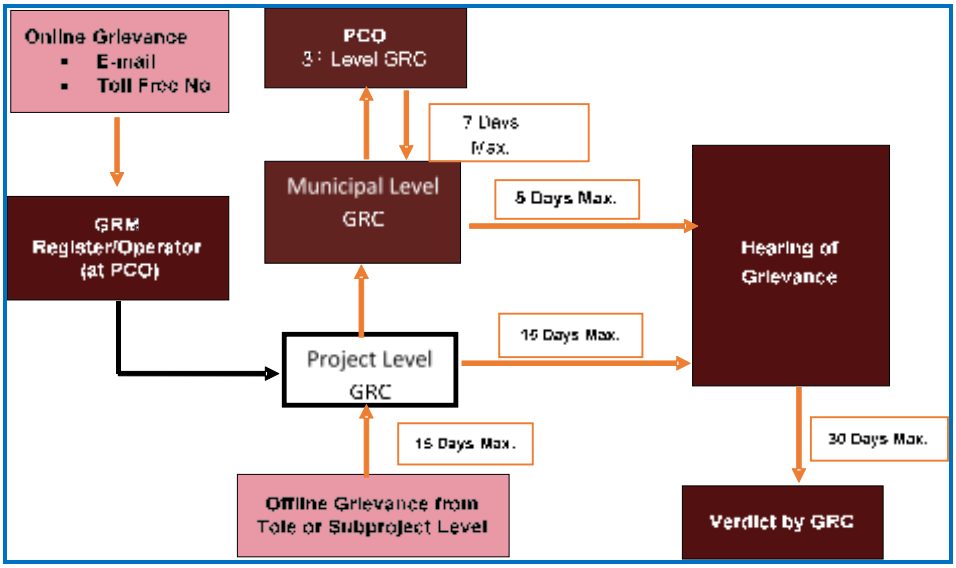

Figure 7.1: Grievance Redress Process

All complaints will be responded within two weeks at any level. In case response is not received from 1st level within 15 days, the complaint will be escalated to next level. If complaint remains unaddressed at 1st and 2nd within maximum 30 days after registering the compliant, it will be elevated to 3rd level at PCO level. The PCO within 7 days of time should instruct the concerned person at PMC level to arrange for a hearing within maximum 5 days of time. Effort will be given by all levels of GRCs to conduct hearing and resolve the concern at their level up to the satisfaction of complainant within the stipulated timeframe. In case 1st and 2nd level GRCs are unable to resolve the concern up to the satisfaction of complainant, these GRCs' or Complainant may approach to 3rd level of GRC at PCO Level. After conducting hearing at any level of GRC, the decision will be communicated to complainant within maximum 30 Days of time.

All local contact information and options for complaint submission will be available on site, on Toles, Wards, municipality office, PCO on information boards and the project municipality websites. A half yearly report on Grievance Redress by the subproject project will be prepared and will be sent to the project municipality's GRCs by Wards' GRCs and ultimately to GRC of PCO. The PCO will forward the same to the World Bank.

Further details of the GRM

The functions of grievance mechanism include redressing grievances of community / beneficiaries /project affected persons in all project respects, providing rehabilitation and resettlement assistance and related activities, and hearing grievances from workers involved in the project at any level or phase. The system should be established to report back to the concerned community or persons regarding the decision on the complaint. The grievances related to women should be dealt by women officer. As required, the social mobilizers will be recruited. GRC will deal/hear the issues related to Environment, R&R and individual grievances and will give its decision/verdict within 30 days after hearing the aggrieved person. The final verdict of the GRC will be given by the Head of GRC in consultation with other members of the GRCs and will be binding to all other members.

Potential grievances which may need to be addressed are listed below:

- Rehabilitation & Resettlement and Compensation issue
- Loss of livelihood
- Access to resource /utility/facility
- Ambient air and noise Quality
- Impact on water quality/resource
- Grievance from vulnerable community
- Gender related issues
- Grievances from workers
- Safety and risk repeated to project development

Other Mechanisms for Grievance Redress

All complainants have the option to approach court/judiciary or the World Bank's Grievance Redress Service in case he or she is not satisfied with the verdict provided.

List of References

- *Environment Protection Act, Government of Nepal, 2019*
- *Environment Protection Regulations, Government of Nepal, 2020 (and amendments)*
- *Environmental and Social Management Framework, Nepal Urban Governance and Infrastructure Project, August 2020, the World Bank*
- *Final Detailed Project Report on Upgradation of Bargachhi (Koshi Highway) – Mahendra School - Taltalaiya Road, September 2023*
- *Municipal Profile of Itahari Sub-Metropolitan City, 2079 BS - Itahari Sub-Metropolitan City Office, Sunsari*
- *Project Implementation Manual, Nepal Urban Governance and Infrastructure Project, December 2022, the World Bank*
- *https://censusnepal.cbs.gov.np/Home/Index/EN*
- *https://www.iqair.com/nepal/eastern-region/itahari, 18th August 2023*

List of Annex

Annex 1: Minutes, Public Notice and Letters
Annex 2: Proposed Typical Cross Sections
Annex 3: GoN Permissible Environmental limits/standards
Annex 4: Water Quality Test Report
Annex 5: List of trees to be cut, List of Private Trees and Compensatory Plantation Plan
Annex 6: Code of Conduct (CoC) for GBV
Annex 7: Photographs

Annex 1: Minutes, Public Notice and Letters

इटहरी उप-महानगरपालिका

नगरकार्यपालिकाको कार्यालय

इटहरी, सुनसरी कोशी,प्रदेश

प.स.:२०८०/०८१
च.नं.: ३१४३

मितिः-२०८०/०५/१७

श्री आयोजना प्रमुख ज्यू,
आयोजना समन्वय कार्यालय,
नेपाल शहरी शासकिय पूर्वाधार आयोजना,
शहरी विकास तथा भवन निर्माण विभाग,
बबरमहल, काठमाडौं, नेपाल ।

विषयः- बरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडकको क्षेत्राधिकार (RoW) सम्बन्धमा ।

उपरोक्त विषयमा यस इटहरी उप-महानगरपालिकाको वडा नं. २ मा पर्ने बरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको स्तरोन्नति गर्ने कार्यका लागि विश्व बैंकको आर्थिक सहयोगमा त्यस आयोजना मार्फत निर्माण गर्न लागिएको सडकको क्षेत्राधिकार (Rigth of Way) ३२ फिट (९.७५ मिटर) कायम गर्ने भनि मिति २०७२/०६/०१ मा सरोकारवालाहरुको बैठक बसी उक्त बाटोको क्षेत्राधिकार (RoW) ३२ फिट (९.७५ मिटर) निर्धारण भएको व्यहोरा जनाकारीको लागि अनुरोध गर्दछु । साथै उक्त निर्णयको प्रतिलिपी यसै पत्रसाथ संलग्न गरि पठाइएको व्यहोरा समेत अनुरोध गर्दछु ।

हेमकर्ण पौडेल
नगर प्रमुख

हेमकर्ण पौडेल
नगर प्रमुख

बोधार्थः

श्री BN-PEA JV
काठमाडौं, नेपाल ।

Public Notice of RoW

बिएसी न्युज

BAC NEWS

दैनिक

(September 21, 2015 Monday)

इटहरी उपमहानगरपालिका

इटहरी, सुनसरीको

सूचना ! सूचना !! सूचना !!!

मिति : २०७२/६/४

इटहरी उपमहानगरपालिका क्षेत्र भित्र सञ्चालनमा रहेका देहाय अनुसारका सडकहरुको क्षेत्राधिकार नगरपालिकाको मिति २०७२।०६।०१ गतेको निर्णय अनुसार तपशिल बमोजिम कायम गरिएको हुँदा सम्बन्धित सबैको जानकारीको लागि यो सूचना प्रकाशन गरिएको छ ।

क्रम	सडकको नाम	वडा नं.	कायम सडक क्षेत्राधिकार
१	टेवा खोला छेउबाट डाँर पशुपति चौक सम्म मोलिकेवी मार्ग	४ र २	३० तीस फीट
२	जुट विकास चौक देखि तालतलैया सम्म	४ र ३	वडा नं. ४ तर्फ ५० फिट वडा नं. ३ तर्फ ६० फिट
३	सतन मार्ग (दिपेन्द्र चौक देखि दक्षिण बिजुली अफिस)	९ र ८	३० तीस फिट
४	दिपेन्द्र चौक देखि गोलढ़ि चौक हुदै जुट विकास चौक सम्म	९ र ६	३० तीस फिट
५	बरगाछी देखि तालतलैया सम्म	२	३२ बत्तीस फिट
६	तरहरा लहिपुर सडक	२०र१७	३० तीस फिट
७	बालग्राम तरहरा सडक	१७र२०	३० तीस फिट
८	नेपाली सेनाको गेट देखि पश्चिम आइतबारे सडक, पुर्व पश्चिम राजमार्ग सम्म	४ र ६	३० तीस फिट

मेष: धर्म कर्ममा मन जाने, उपहार प्राप्ती, विशिष्ट व्यक्तिसँग भेटघाट तथा कार्य सफल हुनेछ ।

वृष: व्यापार व्यवसाय र धन सम्पत्ति वृद्धि । रोल हालेको काम सजिलै पुरा हुने र पारिवारीक तथा प्रेम सम्बन्ध सुमधुर हुनेछ ।

मिथुन: भेटिएकेको काम बन्ने पारिवारीक तथा प्रेम सम्बन्धमा सुदृढ र मनोरञ्जनपूर्ण दिन बिलेछ ।

कर्कट: समय तिन्के खराब छ । परिश्रम अनुरूप फल नभिल्ने, यात्रा असफल र स्वास्थ्य प्रतिकूल हुनेछ ।

सिंह: विद्या, बुद्धि प्राप्ति, प्रेमीजन तथा सन्तानबाट सहयोग, व्यापार र व्यवसायबाट लाभ मिल्नेछ ।

कन्या: प्रतिकूल समय भएकोले धैर्य संघर्ष गर्नुपर्नेछ । खर्चमा वृद्धि र पारिवारीक अशान्ति बढ्नेछ ।

तुला: भाग्यले साथ नदिदा अस्वस्थता, बढी परिश्रम, शत्रु सक्रिय र पारिवारीक अशान्ति बढ्नेछ ।

वृश्चिक: अड्टेलोकेको काम सजिलै पुरा हुनेछ, अकबाट सहयोग प्राप्त, निकै जोश, जाँगर र पराक्रम बढ्नेछ ।

धनु: प्रशंसनिय दिने मान्छे बढी आउनेछ । तिन्के परिश्रम पश्चात काम बन्नेछ ।

मकर: तपाईको राशीमा चन्द्रमा बसेकाले महत्वपूर्ण काम बन्ने, व्यापार, व्यवसायमा वृद्धि र रमाईलोसँग दिन बिलेछ ।

कुम्भ: चन्द्रमा नै खर्च स्थानमा बसेकोले भान्दानी भन्दा खर्च बढ्ने, अस्वस्थता र विवाद बढ्नेछ ।

मीन: मान, सम्मान बढ्ने, रोजगारको अवसर, विरोधीहरु पनि पछि हट्नेछन् ।

Letter regarding availability of Road Width

इटहरी उप-महानगरपालिका

नगरकार्यपालिकाको कार्यालय

इटहरी, सुनसरी,

कोशी प्रदेश

प.स. : २०८०/०८१

च.नं. : ५२१९

मिति २०८०/०८/०५

श्री आयोजना प्रमुख ज्यू,
आयोजना समन्वय कार्यालय, NUGIP,
शहरी विकास तथा भवन निर्माण विभाग (DUDBC),
बबरमहल, काठमाण्डौ ।

विषय: बरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैया सडक खण्डमा कुनै मुद्दाहरु (Outstanding Issues) नरहेको सम्बन्धमा ।

यस उप-महानगरपालिकाको वडा नं. २ मा पर्ने बरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैया सडक खण्डको शहरी विकास तथा भवन निर्माण विभाग (DUDBC) अन्तर्गत नेपाल सहरी शासकिय पूर्वाधार आयोजना (NUGIP) मार्फत विश्व बैंकको आर्थिक सहयोगमा स्तरोन्नति हुन लागेको सन्दर्भमा उक्त सडक खण्डको क्षेत्राधिकार मिति २०७२/०६/०१ मा सरोकारवालाहरुको बैठक बसी निर्धारण भए अनुसार विद्यमान एवं प्रस्तावित सडक चौडाई ९.७५ मिटरको अहिले साइट (Site) खुल्ला रहेको छ । उक्त सडक खण्डको स्तरोन्नतिका लागि सडक चौडाईमा कुनै मुद्दाहरु (Outstanding Issues) जस्तैः क्षतिपूर्तिका मुद्दा, झैझगडा वा अदालति मुद्दा आदि नरहेको व्यहोरा जानकारीको लागि अनुरोध गर्दछु । साथै, सर्वसाधारणको जनकारीको लागि वातावरणीय एवं सामाजिक प्रभाव मूल्याङ्कनको अन्तिम प्रतिवेदन तयार भएपछि उक्त प्रतिवेदनलाई यस उप-महानगरपालिकाको वेव साइट र सम्बन्धित निकायहरुमा राखी आयोजना सम्बन्धि पारदर्शीता अपनाउन यस उप-महानगरपालिका प्रतिवद्ध रहेको व्यहोरा समेत जानकारी लागि अनुरोध गर्दछु ।

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Minute regarding compensation for private trees

आज मिति २०८०/०८/०१ गतेका दिन यस ईटहरी उपमहानगरपालिकाका नगर प्रमुख श्री हेमकर्ण पौडेलज्यूको अध्यक्षतामा यस नगरपालिकको वडा नं. २ मा पर्ने वरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैया सडक खण्डको र त्यसै गरी वडा नं. ३ र ४ मा पर्ने जुट विकास चोक (महेन्द्र राजमार्ग) - तालतलैया सडक खण्डको शहरी विकास तथा भवन निर्माण विभाग (DUDBC) अन्तर्गत नेपाल सहरी शासकिय पूर्वाधार आयोजना (NUGIP) मार्फत विश्व बैंकको आर्थिक सहयोगमा स्तरोन्नति हुन लागेको सन्दर्भमा वातावरणीय तथा सामाजिक सुरक्षणका विषयमा निम्नानुसारको उपस्थितिमा छलफल सम्पन्न भयो :

उपस्थिति:

क्र.सं.	नाम	पद	दस्तखत
१	श्री हेमकर्ण पौडेल	नगर प्रमुख	
२	उमेश [illegible]	वडाध्यक्ष	
३	पविता कोइराला	वडा सदस्य	
४	मिना [illegible]	" "	
५	दिपेन्द्र लिम्बु	" "	
६	[illegible]	" " सदस्य	
७	दुर्गा [illegible]		
८	माधव कोइराला	वडा अध्यक्ष	
९			
१०			
११			

छलफलका बुँदा एवं निर्णयहरु :

(१) वातावरणीय तथा सामाजिक मूल्याङ्कन (ESIA) प्रतिवेदन तयारीका क्रममा गरिएको सर्भेका अनुसार वरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैया सडक खण्ड (सडक चौडाइ - ९.७५ मिटर) भित्र जम्मा २६ वटा बोट विरुवा तथा रुखहरु काट्न पर्नसक्नेमा १५ वटा निजी फलफूलका रुखहरु काट्न पर्नसक्ने देखिएको छ । त्यसै गरी जुट विकास चोक (महेन्द्र राजमार्ग) - तालतलैया सडक खण्ड (शुरु विन्दु देखि चेनेज १+५१५ कि.मी. सम्ममा १३.७ मिटर देखि १५.२३ मिटरसम्म सडक चौडाइ, र बाँकि सडक खण्डमा १५ मिटर देखि १८.२८ मिटर) भित्र जम्मा ४५ वटा बोट विरुवा तथा रुखहरु काट्न पर्नसक्नेमा २६ वटा निजी रुखहरु (२३ वटा काठ-दाउरामा प्रयोग हुने रुखहरु, तथा ३ वटा फलफूलका रुखहरु) काट्न पर्नसक्ने देखिएको छ ।

(२) यस सडक स्तरोन्नतीका क्रममा सम्भव भएसम्म कम मात्र बोट-विरुवा तथा रुखहरु काटिने गरी काम गराउनुपर्ने विषयमा छलफल गरी तथा सोही अनुसार काम गराउने विषयमा निर्णय भयो । यसका साथै प्रति काटिएको रुख बराबर १० वटा नयाँ बोट विरुवा लगाउने विषयमा पनि छलफल गरी सोही अनुसार काम गराउने विषयमा पनि निर्णय भयो ।

(३) वडा नं. २ मा पर्ने वरगाछी चोक (कोशी राजमार्ग) - महेन्द्र स्कुल - तालतलैया सडक खण्ड र त्यसै गरी वडा नं. ३ र ४ मा पर्ने जुट विकास चोक (महेन्द्र राजमार्ग) - तालतलैया सडक खण्डको डिजाइन अनुसारको सडक चौडाइ भित्र पर्ने निजी रुखहरु मध्ये काठ-दाउरामा प्रयोग हुने रुखका लागि प्रति रुख रु. २५०० का दरले, र त्यसै गरी फलफूका रुखका लागि प्रति रुख रु. ३५०० का दरले आवश्यकता अनुसएार क्षतिपूर्ति रकम प्रदान गर्ने विषयमा छलफल गरी निर्णय गरियो ।

Minute of Meeting with Municipality

आज मिति २०८०।०४।१८ गतेका दिन यस इटहरी उप-महानगर पालिकाको उप-प्रमुख संगिता कुमारी चौधरी ज्यू को अध्यक्षतामा नेपाल शहरी सायोजन तथा स्वाधार आयोजना अन्तर्गत इटहरी उप महानगर पालिका वडा नं. ३मा पर्ने प्रस्तावित बरगाछी चौक - महेन्द्र स्कुल - तालतलैया सडक स्वरुप र वडा नं. ३ र ४ मा पर्ने प्रस्तावित जुद्द विकास चौक (महेन्द्र राजमार्ग) - तालतलैया सडक स्वाइडो स्टरोन्नती गर्ने कार्यको विस्तृत परियोजना सर्वे वातावरणिय सामाजिक प्रभाव मुल्यांकन (ESIA) तयारीका क्रममा तपशिल बमोजिमको उपस्थितमा विस्तृत छलफल गरियो तथा निर्णय गरियो ।

(१)	श्री संगिता कुमारी चौधरी	उप-प्रमुख	
(२)	श्री प्रमोद गोर्खा	कार्यपालिका सदस्य	
(३)	श्री अर्जुन कुमार ढकाल	भौ. पु. विज्ञ	
(४)	श्री भोवन घिमिरे	इन्जिनियर	
(५)	श्री संगीता पोखरेल	आयोजना प्रवन्धक	
(६)	श्री चन्द्र प्रताप भट्टराई	सामाजिक वि. विज्ञ	
(७)	श्री रघुनाथ खनाल	Social Expert / BN.	
(८)	श्री योगेश आचार्य	Environmental Specialist/BN	
(९)	डा. सुदिश लिम्बु	सब-इन्जिनियर	
१०	श्री कृष्ण प्रसाद मिश्र	५-वडा कार्यालय	
११	श्री गोविन्द चौधरी	स. इ	

निर्णयहरु :

(१) प्रस्तावित जुद्द विकास चौक (महेन्द्र राजमार्ग) - तालतलैया सडक खण्डका जुद्द विकास चौक देखि वडा नं ३ र ४ को सिमाना सम्म ५० फिट RoW (बाटोको क्षेत्राधिकार) रहेको र सो स्थानवाट तालतलैयासम्म ६० फिट RoW रहेको र सोही अनुसार डिजाईनमा आवश्यक संरचनाहरु समावेश गरिएको विषयमा छलफल गरियो ।

(२) प्रस्तावित बरगाछी - महेन्द्र स्कुल - तालतलैया सडक खण्डमा बाटोको क्षेत्राधिकार (RoW) ३२ फिट रहेको र यसै किराडी

डिजाईन कार्यमा आवश्यक सँस्थानाई समावेश गरेको विषयमा छलफल गर्ने।

(३) यस अन्तर्गतको संचालन गरिदिने यस आयोजना सम्बन्धी सम्झौता, अनुमतिको अवधि पाने सरोकारवालाई सँग छलफल गरेको र EMP का क्रममा पनि सार्वजनिक जानकारी सूचना प्रकाशन गरेको र २०८०/०५/०८ तथा २०८०/०५/०९ मा सार्वजनिक जानकारी गरी यस आयोजनासंग सम्बन्धित वातावरणीय तथा सामाजिक पक्षहरुका बारेमा जानकारी तथा छलफल गर्ने विषयमा निर्णय गरिने।

(४) आयोजना क्षेत्रमा यस आयोजनाका कारण पर्न सक्ने वातावरणीय तथा सामाजिक असरहरु सँकलन गर्ने, र आवश्यक उपायहरु समावेश गरी वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन (ESIA) प्रतिवेदनमा समावेश गर्ने विषयमा निर्णय गर्ने।

Public Notice regarding Public Consultation

Notice for Public Consultations

इटहरी उपमहानगरपालिका

नगरकार्यपालिकाको कार्यालय

इटहरी, सुनसरी, कोशी प्रदेश

सूचना टास गरेको मुचुल्का

प्रस्तुत विषयमा यस इटहरी उपमहानगरपालिका, नगरकार्यापलिकाको कार्यालयको मिति २०८०/०५/०८ गते प्रकाशित सूचना वमोजिम यस इटहरी उपमहानगरपालिकाको वडा नं. २ अन्तर्गत पर्ने धरगाछी चोक(कोशी राजमार्ग) देखि महेन्द्र स्कुल हुदै तालतलैयासम्मको सडक स्तरोन्नति गर्ने सम्वन्धमा विस्तृत छलफल तथा अन्तरक्रिया कार्यक्रममा उपस्थित हुनका लागि सम्वन्धित सवै सरोकारवालाहरुला सूचित गराइएको सूचना आज मिति २०८०/०५/०८ गते दिनको २:०० वजे हामी तपसिल वमोजिमका व्यक्तिहरुको रोहवरमा यस कार्यालयको सूचना पार्टीमा सर्वसाधारणले देख्ने गरी टास गरेको ठीक हो भनी यो मुचुल्का गरी सहीछाप गरिदियौं ।

तपसिल

१. नविन सिंह ठकुरी

२. सविना खड्का

३ समिर पौवबेल्ल

काम तामेली गर्ने : श्री डिल्ली प्रसाद अधिकारी (का.स.)

Public Consultations

सार्वजनिक छलफल तथा अन्तरकिया

आज मिति २०८०/०५/१८ गते सोमबारका दिन यस इटहरी उप-महानगरपालिकाकी उपमेयरज्यूको अध्यक्षतामा इटहरी उप-महानगरपालिका, वडा नं. २ स्थित त्रिभुवन चोकमा भएको छलफल तथा अन्तरकिया कार्यकममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत सुनसरी जिल्लाको इटहरी उप-महानगरपालिकाको वडा नं. २ मा पर्ने प्रस्तावित बरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको स्तरोन्नति गर्ने कार्यको विस्तृत परियोजना एवं वातावरणीय सामाजिक प्रभाव मूल्याङ्कन (ESIA) तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, उप-महानगरपालिका र स्थानिय सरोकारवालाहरुका बिच निम्न उल्लेखित बुदाँहरु माथि विस्तृत छलफल तथा अन्तरकिया गर्ने कार्य सम्पन्न भयो । साथै छलफलका कममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका मुद्दाहरु (Issues) र तिनका समाधानका उपायहरुका बारेमा विस्तृत छलफल गरि निर्णय गरियो ।

उपस्थिति:

क.सं.	नाम	पद/पेशा	दस्तखत	संपर्क नं.
१.	रेणिता कुमारि चौधरी	उप-प्रमुख		
२.	राम चरित्र मेहता	प्र.प्र.अ.		
३.	अर्जुन कुमार लाहाल	भौ.पुं.विज्ञ		
४.	जीवन घिमिरे	डाक्तिन्दा		
५.	रेणिता पौडेल	अधिवक्ता (ले.)		
६.	माधव कोइराला	वडा अध्यक्ष	माधव कोइराला	
७.	रीता खुल्ला	वडा सदस्य		९८४२०३४५९२
८.	शंकर राई	व्यापार		९८४२९८०६६८
९.	पदम पहुरांई	किसान		९८४२९०३८३२
१०.	सुदन घिमिरे	किसान		९८९२०३४९३२
११.	राम बहादुर पौडेल	व्यापार		
१२.	जीवन कुमार घिमिरे			
१३.	मल राज रर्ची			
१४.	गंगा प्रसाद खतेडा		गंगा	
१५.	बुद्धि ज. कोइराला			
१६.	गोविन्द प्र. मरिक्ष			
१७	नारायण कुमार राई			
१८	विकास कमना			९८४२०४९७३२

क.सं.	नाम	पद/पेशा	दस्तखत	संपर्क नं.
१८१	मनिराज थिङ	स्थानीय	[illegible]	
१९.	मानबहादुर मगर	स्थानीय	[illegible]	
२0	रमेश आचार्य	जापा वन क्षेत्र के सदस्य	[illegible]	98499[illegible]
२१)	रेणुका राई	कृषि	[illegible]	9849068[illegible]
२२	दुर्गा शर्मा (गौतम)	शिक्षक	[illegible]	9842966256
२२	[illegible]	[illegible]	[illegible]	9842994036
२२	वालेन कुमारी	[illegible] गृहिणी	[illegible]	9804326594
२४.	समिला राई	गृहिणी	समिला	9804338846
२४	कमला तामाङ			
२६.	शोभा चौधरी	गृहिणी	कमला	9820[illegible]
२६,	शिव कुमार गिरी	स्थानीय शि० अ० [illegible]	[illegible]	9806019910
२६	प्रेम कुमार [illegible]	स्थानीय	[illegible]	98[illegible]
२८	लक्ष्मी जोइला			9808382[illegible]
२९	कृष्ण प्रसाद तिवारी	कृषि शिक्षक	लक्ष्मी	
३0)	सावित्री [illegible]	[illegible]	[illegible]	98[illegible]
३१)	रघु खकुरेल	(Socialogist/BN)	[illegible]	98[illegible]
३२)	योगेश शाक्य	Environmental Specialist	[illegible]	

आज माथि उल्लेखित महानुभावहरुको उपस्थितिमा भएको छलफलका बुँदा एवं निर्णयहरु

१. यस इटहरी उप-महानगरपालिकाको वड नं.२ मा पर्ने प्रस्तावित बरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको क्षेत्राधिकार ३२ फिट (९.७५ मिटर) रहेको सम्बन्धमा सम्बन्धित सबै सरोकारवालाहरु जानकार रहेको र उक्त सडक खण्ड यथाशिघ्र निर्माण र गुणस्तरीय हुनु पर्ने सम्बन्धमा विस्तृत छलफल गरियो । साथै सडक निर्माण कार्य गर्दा अपनाइने विधि र प्रकृयाका बारेमा जानकारी दिने कार्य समेत गरियो ।

२. सडक निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय बासिन्दाहरुलाई दिनु पर्ने सम्बन्धमा विस्तृत छफल गरियो ।

३. बाटो निर्माण गर्दा बाटोमा पर्ने पानीका पाइप, बिजुलीका पोल, कल्भर्ट र सिंचाइको कुलो निर्माण कार्य शुरु गर्दा पहिलो चरणमा नै उचित स्थानान्तरण गरिनु पर्ने विषयमा जानकारी दिई छलफल गरियो । साथै निर्माण चरणमा खानेपानी सेवा अवरुद्ध हुन गएमा बैकल्पिक रुपमा ट्याङ्करबाट शुद्ध पिउने पानी उपलब्ध गराउनु पर्ने र ढल निकास अवरुद्ध भएमा त्यसको उचित व्यवसथापन हुनु पर्ने सम्बन्धमा विस्तृत छलफल गरियो ।

४. यस प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद सम्बन्धि खासै समस्या नदेखिए पनि बाहिरी कामदार र स्थानीय समुदाय बिच हुन सक्ने झैझगडा वा अवान्छित गतिविधिका सम्बन्धमा पालना गर्नु पर्ने आचार संहिताको बारेमा जानकारी दिई विस्तृत छलफल गरियो ।

५. सडक निर्माणका कममा हुन सक्ने ध्वनी, वायु प्रदुषण जस्ता समस्याका र त्यसको निराकण सम्बन्धमा विस्तृत छलफल गरियो ।

६. सडक निर्माणका कममा प्रस्तावित सडक खण्डका किनारमा रहेका वर पीपलका रुख/चौतारी एवं धार्मिक सम्पदाको संरक्षण गर्ने, र सकेसम्म कम मात्र रुखहरु काट्ने गरी डिजाइन गर्ने विषयमा छलफल भयो । साथै काटिएका रुखहरुका हकमा प्रति एक रुख वरावर १० नयाँ विरुवाहरु लगाउने, तथा हरियाली प्रबर्धनका कियाकलापहरु गरिने विषयमा छलफल गरियो ।

७. निर्माण व्यवसायीको क्याम्प र कामदारका लागि शिविर वडा नं. २, बुढासुब्बा चोक..... नजिकको खाली स्थान उपयुक्त हुने र बाटो खन्दा उत्पन्न हुने माटो ढुङ्गा आदि फाल्न वडा नं. २, बुढासुब्बा चोक..... नजिकको खाली स्थान उपयुक्त हुने सम्बन्धमा छलफल गरियो ।

८. यस प्रस्तावित सडक खण्डको प्रस्थान विन्दु (बरगाछी चोक) देखि अन्तिम विन्दु (तालतलैया) सम्मको सडकको दाँया बाँया झण्डै १८० घरधुरी रहेको र महिला संख्या लगभग ३३८ र पुरुषको संख्या ४०९ रहेको छ ।

९. यस प्रस्तावित सडक चौडाइ (Road width) भित्र कुनै पनि संरचनाहरु नरहेको सम्बन्धमा विस्तृत छलफल गरियो ।

१०. वातावरणीय सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदन वारे यस उप-महानगरपालिकाको कार्यालयमा सम्पर्क गरि जानकारी लिन सकिने लगायत सडक निर्माणका कममा आइपर्ने विविध वातावरणीय एवं सामाजिक समस्या र तिनका समाधानका उपायहरु माथि विस्तृत छलफल गरियो ।

आदिवासी/जनजातिहरुसंग भएको छलफल

आज मिति २०८०/०५/१८ गते सोमवारका दिन यस इटहरी उप-महानगरपालिकाकी उपमेयरज्यूको अध्यक्षतामा इटहरी उप-महानगरपालिका, वडा नं. २ स्थित त्रिभुवन चोकमा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत सुनसरी जिल्लाको इटहरी उप-महानगरपालिकाको वडा नं. २ मा पर्ने प्रस्तावित बरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको स्तरोन्नति गर्ने कार्यको विस्तृत परियोजना एवं वातावरणीय सामाजिक प्रभाव मूल्याइन (ESIA) तयारीका क्रममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याइन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, उप-महानगरपालिका र स्थानिय जनजातिहरुका बिच निम्न उल्लेखित बुदाँहरु माथि विस्तृत छलफल तथा अन्तरकिया गर्ने कार्य सम्पन्न भयो । साथै छलफलका क्रममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका मुद्दाहरु (Issues) र तिनका समाधानका उपायहरुका बारेमा विस्तृत छलफल गरि निर्णय गरियो ।

उपस्थिति:

क.सं.	नम	पद/पेशा	दस्तखत	संपर्क नं.
१.	रंगिता कुमारी चौधरी	उप-प्रमुख		
२.	दास चरित्र मेहता	प्र. प्र. अ.		
३.	अजुन कुमार ढाकाल	सा. इ. विज्ञ		
४.	अविन घिमिरे	कानुनविद्		
५.	रंगिता पोखरेल	आमन्त्रित पात्रो		
६.	शंकर राई	व्यापार		
७.	साधना कोइराला	वडा अध्यक्ष		९८४२९०९६८
८.	सीता चुक्का	वडा सदस्य		
९.	भक्त राज राई	व्यापार		
१०.	मगनी माया	ताम्राकार महिला		९८१५३१८७८५
११.	विन्दा तामाङ	व्यापार		९८०७००५३
१२.	सीता राई	गृहिणी		१३
१३.	विष्णु कुमारी लक्ष्मा	[illegible]		९८९६२८६२९८
१४.	देवीका घिमिरे	गृहिणी		९८९०४९६५३९
१५.	[illegible]			९८९४५४९६२७
१६	राजेश राई	किसान		९८२६३८६२८७
१६	[illegible]	—		९८०६३३२६६३
१८	रन बहादुर राई	—		
१९	नारायण कुमार राई			

आज माथि उल्लेखित महानुभावहरुको उपस्थितिमा भएको छलफलका बुँदा एवं निर्णयहरु:

१. यस इटहरी उप-महानगरपालिकाको वड नं.२ मा पर्ने प्रस्तावित वरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको क्षेत्राधिकार ३२ फिट (९.७५ मिटर) रहेको सम्बन्धमा सम्बन्धित सबै सरोकारवालाहरु जानकार रहेको र उक्त सडक खण्ड यथाशिघ्र निर्माण र गुणस्तरीय हुनु पर्ने सम्बन्धमा विस्तृत छलफल गरियो । साथै सडक निर्माण कार्य गर्दा अपनाइने विधि र प्रकृयाका बारेमा जानकारी दिने कार्य समेत गरियो ।

२. सडक निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय बासिन्दाहरुलाई दिनु पर्ने सम्बन्धमा विस्तृत छफल गरियो ।

३. बाटो निर्माण गर्दा बाटोमा पर्ने पानीका पाइप, बिजुलीका पोल, कल्भर्ट र सिंचाइको कुलो निर्माण कार्य शुरु गर्दा पहिलो चरणमा नै उचित स्थानान्तरण गरिनु पर्ने विषयमा जानकारी दिई छलफल गरियो । साथै निर्माण चरणमा खानेपानी सेवा अवरुद्ध हुन गएमा वैकल्पिक रुपमा ट्याङ्करबाट शुद्ध पिउने पानी उपलब्ध गराउनु पर्ने र ढल निकास अवरुद्ध भएमा त्यसको उचित व्यवसथापन हुनु पर्ने सम्बन्धमा विस्तृत छलफल गरियो ।

४. यस प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद सम्बन्धि खासै समस्या नदेखिए पनि बाहिरी कामदार र स्थानीय समुदाय बिच हुन सक्ने झैझगडा वा अवान्छित गतिविधिका सम्बन्धमा पालना गर्नु-पर्ने आचार संहिताको बारेमा जानकारी दिई विस्तृत छलफल गरियो ।

५. सडक निर्माणका क्रममा हुन सक्ने ध्वनी, वायु प्रदुषण जस्ता समस्याका र त्यसको निराकण सम्बन्धमा विस्तृत छलफल गरियो ।

६. सडक निर्माणका क्रममा प्रस्तावित सडक खण्डका किनारमा रहेका वर पीपलका रुख/चौतारी एवं धार्मिक सम्पदाको संरक्षण गर्ने, र सकेसम्म कम मात्र रुखहरु काट्ने गरी डिजाइन गर्ने विषयमा छलफल भयो । साथै काटिएका रुखहरुका हकमा प्रति एक रुख बराबर १० नयाँ बिरुवाहरु लगाउने, तथा हरियाली प्रवर्धनका कियाकलापहरु गरिने विषयमा छलफल गरियो ।

७. निर्माण व्यवसायीको क्याम्प र कामदारका लागि शिविर वडा नं. २, बुढासुब्बा चोक..... नजिकको खाली स्थान उपयुक्त हुने र बाटो खन्दा उत्पन्न हुने माटो ढुङ्गा आदि फाल्न वडा नं. २, बुढासुब्बा चोक..... नजिकको खाली स्थान उपयुक्त हुने सम्बन्धमा छलफल गरियो ।

८. यस प्रस्तावित सडक खण्डको प्रस्थान बिन्दु (वरगाछी चोक) देखि अन्तिम बिन्दु (तालतलैया) सम्मको सडकको दाँया बाँया जनजातिको घरधुरी संख्या लगभग ९९. रहेको र महिला २१२. र पुरुषको २१८ संख्या रहेको विषयमा छलफल गरियो ।

९. यस प्रस्तावित सडक चौडाइ (Road width) भित्र कुनै पनि संरचनाहरु नरहेको सम्बन्धमा छलफल गरियो ।

१०. वातावरणीय सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदन बारे यस उप-महानगरपालिकाको कार्यालयमा सम्पर्क गरि जानकारी लिन सकिने लगायत सडक निर्माणका क्रममा आइपर्ने विविध वातावरणीय एवं सामाजिक समस्या र तिनका समाधानका उपायहरु माथि विस्तृत छलफल गरियो ।

२०. हनुमान राई शिक्षक [signature]
२१. केशव राई ,, [signature]
२२. धन बहादुर राई ,, [signature].
२३. मिन बहादुर श्रेष्ठ . शिक्षक ९८०४३९२८०६
२४. गणेश कुमार श्रेष्ठ [signature] ९८४२२९४२३६
२५. कृष्ण कुमार राई वडा सदस्य [signature] ९८४२०३६९५५
२६. रघु खकुरेल (Sociologist/BN) [signature]
27. योगेश शाक्य Environmental Specialist [signature]

महिलाहरुसंग भएको छलफल

आज मिति २०८०/०५/१८ गते सोमवारका दिन यस इटहरी उप-महानगरपालिकाकी उपमेयरज्यूको अध्यक्षतामा इटहरी उप-महानगरपालिका, वडा नं. २ स्थित त्रिभुवन चोकमा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत सुनसरी जिल्लाको इटहरी उप-महानगरपालिकाको वडा नं. २ मा पर्ने प्रस्तावित बरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको स्तरोन्नति गर्ने कार्यको विस्तृत परियोजना एवं वातावरणीय सामाजिक प्रभाव मूल्याङ्कन (ESIA) तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, उप-महानगरपालिका र स्थानिय महिलाहरुका बिच निम्न उल्लेखित बुदाँहरु माथि विस्तृत छलफल तथा अन्तरक्रिया गर्ने कार्य सम्पन्न भयो । साथै छलफलका कममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका मुद्दाहरु (Issues) र तिनका समाधानका उपायहरुका बारेमा विस्तृत छलफल गरि निर्णय गरियो ।

उपस्थिति:

क.सं.	नम	संस्था/ठेगाना	दस्तखत	संपर्क नं.
१.	सँगीता कुमारी चौधरी	उप-प्रमुख		
२.	राम चरित्र मेहता	प्रा॰प्र॰अ॰		
३.	अर्जुन कुमार ढकाल	भौ॰इ॰ फिल्ड		
४.	अविन घिमिरे	डाक्टेनिम		
५.	सँगीता पोखरेल	अधिवक्ता		
६.	माधव कोइराला	वडा अध्यक्ष		
७.	रीता शुक्ला	वडा सदस्य		9842032752
८.	मौसम आलुवाले	सब-इन्जिनियर		
९.	हिरा देवी डोवाल	गृहणी टोल।		
१०.	लिला कार्की	गृहणी		
११.	विरेन्द्र कु. लामा	गृहणी		
१२.	मंगली माया तामाङ,	गृहणी		
१३.	विन्दा तामाङ,	अवसायी		
१४.	गंगा ढकाल	गृहणी		
१५.	सिता राई	"		

क.सं.	नाम	पद/पेशा	दस्तखत	सम्पर्क नं.
१६.	सुजना गहराई	विद्यार्थी	Sajana	
(१७)	सिला गहराई	गृहेणी	शिला	9842308732
(१८)	कमला घमला	गृहणी	कमला घमला	9826423696
१९)	धाउका गलाल	गृहणी		9842065030
२०)	कल्पना कोइराला	गृहीणी	कल्पना	9824922239
२१)	हेम कु. ढकाल (धमला)	"	हेम	
२२)	बिमला धमला	"	बीमाला धमा	
२३)	सिर्जना अधिकारी (थापा)	"	Sirja	9841200685
(२४)	गोमा पाण्डे	"	Gomal	9842610231
(२५)	देविका लिम्बु	"	Devika	9810497539
(२६)	रघु खकुरेल (Sociologist / BH)		Raghu	
(२७)	योगेश शाक्य Environmental Specialist		Y	

आज माथि उल्लेखित महानुभावहरुको उपस्थितिमा भएको छलफलका बुँदा एवं निर्णयहरु:

१. यस इटहरी उप-महानगरपालिकाको वड नं.२ मा पर्ने प्रस्तावित वरगाछी चोक - महेन्द्र स्कुल - तालतलैया सडक खण्डको क्षेत्राधिकार ३२ फिट (९.७५ मिटर) रहेको सम्वन्धमा सम्वन्धित सवै सरोकारवालाहरु जानकार रहेको र उक्त सडक खण्ड यथाशिघ्र निर्माण र गुणस्तरीय हुनु पर्ने सम्वन्धमा विस्तृत छलफल गरियो । साथै सडक निर्माण कार्य गर्दा अपनाइने विधि र प्रकृयाका वारेमा जानकारी दिने कार्य समेत गरियो ।

२. सडक निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय वासिन्दाहरुलाई दिनु पर्ने सम्वन्धमा विस्तृत छफल गरियो ।

३. वाटो निर्माण गर्दा वाटोमा पर्ने पानीका पाइप, विजुलीका पोल, कल्भर्ट र सिंचाइको कुलो निर्माण कार्य शुरु गर्दा पहिलो चरणमा नै उचित स्थानान्तरण गरिनु पर्ने विषयमा जानकारी दिई छलफल गरियो । साथै निर्माण चरणमा खानेपानी सेवा अवरुद्ध हुन गएमा वैकल्पिक रुपमा ट्याङ्करवाट शुद्ध पिउने पानी उपलव्ध गराउनु पर्ने र ढल निकास अवरुद्ध भएमा त्यसको उचित व्यवसथापन हुनु पर्ने सम्वन्धमा विस्तृत छलफल गरियो ।

४. हाल यस प्रस्तावित सडक खण्ड स्तरोन्नती आयोजना क्षेत्र भित्र महिला हिंसा, वाल श्रम, लैङ्गीक विभेद र वालविवाह जस्ता घटनाहरु उल्लेख्य रुपमा घटेको देखिदैन । तथापी, भविश्यमा यस्ता संवेदनशील घटनाहरु हुन नदिन र यदि कहि कतै भएमा अपनाउनु पर्ने सजगताको विषयमा जानकारी दिई छलफल गरियो ।

५. आयोजना निर्माण पश्चात स्थानीय बजार विस्तार र आर्थिक कियाकलापहरु अभिवृद्धि भई आय आर्जनमा टेवा पुग्ने विषयमा विस्तृत छलफल गरियो ।

६. यस प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद सम्वन्धि खास्सै समस्या नदेखिए पनि वाहिरी कामदार र स्थानीय समुदाय विच हुन सक्ने झैझगडा वा अवान्छित गतिविधिका सम्वन्धमा पालना गर्नु पर्ने आचार संहिताको वारेमा जानकारी दिई विस्तृत छलफल गरियो । साथै वातावरण सामाजिक व्यवस्थापन ढाँचा (ESMF) मा समेत उल्लेख गरिएको महिला हिंसा, लैङ्गिक विभेद (GBV, SEA/SH) आदि विषयका वारेमा छलफल गरियो ।

७. वातावरणीय सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदन वारे यस उप-महानगरपालिकाको कार्यालयमा सम्पर्क गरि जानकारी लिन सकिने लगायत सडक निर्माणका कममा आइपर्ने विविध वातावरणीय एवं सामाजिक समस्या र तिनका समाधानका उपायहरु माथि विस्तृत छलफल गरियो ।

Meeting Minutes of Ward Representatives and Community Members (ward no. 2)

आज मिति २०८०/०२/२३ गतेका दिन World Bank को सहयोगमा शहरी विकास तथा भवन निर्माण विभाग (DUDBC) मार्फत यस ईटहरी उप-महानगरपालिकामा संचालन भएको नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना (NUGIP) अन्तर्गत तालतलैया - बरगाछी सडक खण्डको सम्भाव्यता Feasibility Study को क्रममा स्थानीय सरोकारवालाहरु, ई. उप-महानगरपालिका प्रतिनिधि, तथा DSC परामर्शदाता (BN consultancy) को टोली बिच यस आयोजना डिजाईन निर्माण तथा कार्यान्वयनका क्रममा आउनसक्ने वातावरणीय तथा सामाजिक सुरक्षा सम्बन्धी विषय तथा प्रभावहरुका बारेमा छलफल सम्पन्न भएको छ;

उपस्थिति:

क्र.सं.	नाम	पद/संस्था/पेशा	दस्तखत	सम्पर्क नं.
१.	माधव कोइराला	इटहरी उ.म.न.पा. वडा नं. २, अध्यक्ष		९८४२०३३६२०
२.	दुर्गा बा. ईबजी / श्रीमा कार्की कुम्फापाङ्ग	वडा नं. २, सदस्य / वडा नं २ कार्यपालिका सदस्य		९८४२१६६७३४ / ९८१४०८८२३८
३.	चम्पा माया वि.क.	" " २, "		९८१२३४११०२
४	मिना कुमारी गुरुङ	" " गृहणी		९८४२४२८०६९
५.	नकुल पख्रिन	" २ नोकरी		९८०७३८८४१७
६.	इश्वरी बस्नेत	" २ समाजसेवी		९८४२०३४५३७
७.	भुपेन्द्र लिम्बु	" २ "		९८०७३३२६६९
८.	लोकेन्द्र ढुंगाल	" २ "		९८४२१७८३४८
९	लक्ष्मी प्र. मिश्रित	" २ "		
१०.	सुनिता बुढाथोकी	" २ शिक्षिका		९८१६३४९२४९
११.	कृष्ण प्र. भट्टराई	" " समाजसेवी		९८४२२३२२६४
१२.	राम प्र. काफ्ले	" " "		९८४२०८०४३७
१३.	लोचन पौडेल	" २ "		९८४२०६२३६२
१४.	निरज दुलाल	" २ विद्यार्थी		९८०२७४७७४९
१५.	गणेश दुलाल	" २ नोकरी		"
१६.	नविन गुरुङ	" २ विद्यार्थी		९८०४८४४२११
१७	अमर भुजेल	" २ समाजसेवी		
१८	गोरा लाठा	" २ समाज		
१९.	निरु तामाङ	" २ समाज		९८१६८३६०८२
२०.	सुष्मा तामाङ	" २ समाज		९८०४०३४९८४

१८.	कुमारी	ख.क्ष. जिल्ला समन्वय [illegible]	९८४४२४१२९२
१९.	मणिराम [illegible]	— [illegible]	९८५७०५४५३६
२०.	रुद्र बहादुर बस्नेत		९८६२११८३६०
२१.	प्रविन घिमिरे	[illegible]	
२२.	अर्जुन बराल	"	
२३.	रघु नाथ खड्केल	Sociologist/BN	9851048987
२४.	योगेश शाक्य	Environmental Specialist/BN	9843203357
२५.	नवराज भण्डारी	Road safety Engineer BN	
२६.	प्रेम राज थापा	BN Const, Eng	

छलफल तथा सहमति :

१. यस तालतलैया - बरगाढी सडक खण्डको सडक क्षेत्राधिकार (RoW) फिट रहेको बारे स्थानीय जानकार रहेको र सोही अनुरुप DSC टोलीले बाटोको सर्वे र डिजाइनका लागि आवश्यक गर्ने / गराउन उचित रहेको ।

२. प्रस्तावित सडक खण्डको दायाँ बायाँ रहेका टोल बस्तीहरुका बासिन्दा तथा आदिवासी - जनजाति लगायतका सम्पूर्ण बासिन्दाका यस सडक स्तरोन्नती आयोजनाले दैनिक आवत जावत, बजार बिस्तार, स्थानीय पर्यटन प्रवर्धन जस्ता फाइदा प्रदान गर्ने तथा कुनै खाले नकारात्मक असर पर्न नदिने विषयमा छलफल भयो।

३. गुणस्तरीय सडक सम्पर्क स्तरोन्नती कार्य सम्पन्न हुने, हुनुपर्ने तथा सो क्रममा वायु प्रदूषण, ध्वनी प्रदूषण तथा स्थानीय खोला नालामा हुन सक्ने प्रदूषण बारे सजग भई सोको उचित रोकथाम र न्यूनीकरणका विषयमा छलफल गरियो ।

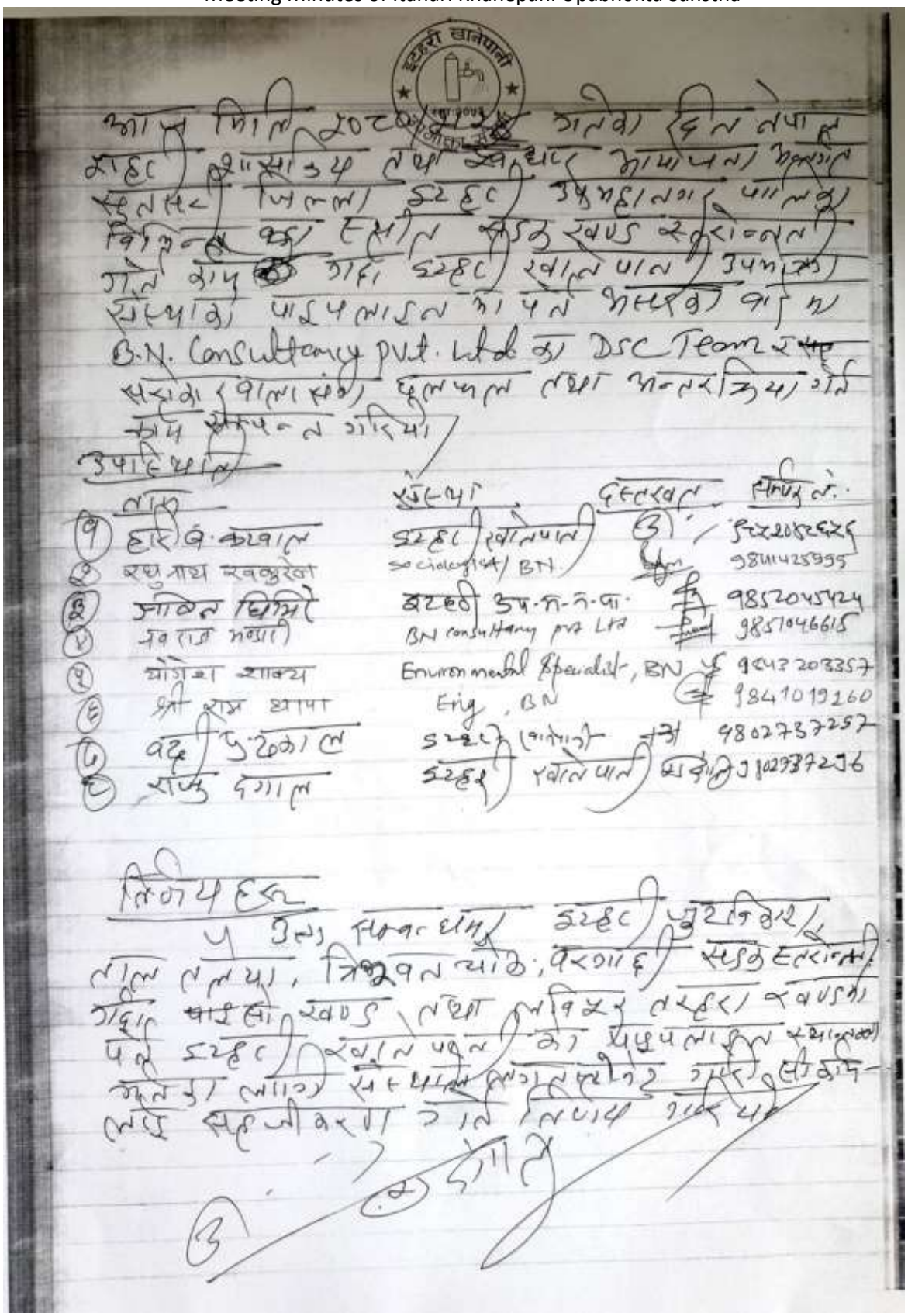
४. आयोजना कार्यान्वयनका क्रममा बाटोको छेउमा रहेका ढल- विद्यालय, सार्वजनिक नभत्काइने, वर-पिपलका रुख र चौतारा बचाइने, र रुखहरु काट्नु पर्ने खण्डमा अतिरिक्त वृक्षारोपण गर्ने, हरियाली प्रवर्धन गर्ने विषयमा छलफल भयो।

५. निर्माण कार्य संचालन गर्दा विद्यमान खानेपानी, ढल तथा बिजुलीका पोलहरु, स्थानान्तरण तथा पुनर्स्थापना गर्ने, र कुनै बाधा व्यवधान / अवरोध नहुने गरी काम गर्ने-गराउने सहमत भयो।

६. सडक स्तरोन्नतीको कामका क्रममा सामाजिक सद्भाव, स्थानीय रितिरिवाज, लैङ्गिक संवेदनशीलता तथा सहभागितामूलक समावेशिता जस्ता पक्षहरु पनि गम्भिरतापूर्ण पालना गर्ने - गराउने विषयमा छलफल गरियो ।

७. आयोजना संचालनका क्रममा स्थानीय गुनासो सम्बोधनका लागि उचित संरचना र प्रक्रिया निर्माण हुने, तथा यस क्रममा स्थानीय बुद्धिजीवी, अगुवा तथा जनप्रतिनिधि समूहको विशेष सहयोगी रहिला। आवश्यक पर्ने विषयमा छलफल र सहमति भयो।

Meeting Minutes of Itahari Khanepani Upabhokta Sanstha



Meeting Minutes with Taltalaiya Management and Conservation Committee

आज मिति २०८०/०५/१८ गतेका दिन यस तालतलैया व्यवस्थापन तथा संरक्षण समितिका सचिव श्री कृष्ण प्र. दंगाल ज्यूको अध्यक्षतामा बसेको बैठकले निम्न उल्लेखित महानुभावहरुको उपस्थितिमा निम्न उल्लेखित विषयहरु उपर छलफल गरि सर्वसम्मतिले निर्णय गरियो ।

विषय:

१. सडक निर्माण र तालतलैया क्षेत्र सम्बन्धमा ।
२. विविध ।

उपस्थिति:

१. कृष्ण प्रसाद दंगाल तालतलैया कार्य समिति सचिव
२. माधव फैयला
३. धन माया डाँट कार्य समिति सदस्य
४. प्रिति माया सुनवार
५. कुमार चुन्दास
६. उमेश श्रेष्ठ
७. रवेन्द्र अन्नार्य

निर्णयहरु: रद्दु रवेन्द्र DSC

१. विश्व बैंकको आर्थिक सहयोगमा नेपाल शहरी शासकिय पूर्वाधार आयोजना अन्तर्गत इटहरी उप-महानगरपालिकाको वडा नं. २, ३ र ४ मा बर्गाछी चोक (कोशी राजमार्ग) देखि तालतलैया हुदै जुट विकास चोक (महेन्द्र राजमार्ग) सम्मको सडक खण्डको पुनःनिर्माण हुन लागेको सन्दर्भमा उक्त सडक खण्डको क्षेत्राधिकार तालतलैया व्यवस्थापन तथा संरक्षण समितिको क्षेत्र भन्दा बाहिर रहेकोले उक्त सडक निर्माणमा यस समितिको पूर्ण सहयोग र समर्थन रहने विषयमा विस्तृत छलफल गरि निर्णय गरियो ।

२. छलफलका क्रममा DSC Team का तर्फबाट सडक निर्माणका चरणमा यस तालतलैया क्षेत्रमा सकेसम्म ध्वनी एवं वायु प्रदुषण न्यून हुने गरि निर्माण कार्य गर्ने गराउने सम्बन्धमा छलफल गरियो ।

३. बर्गाछी चोक (कोशी राजमार्ग) देखि तालतलैया हुदै जुट विकास चोक (महेन्द्र राजमार्ग) सम्मको सडक खण्डको निर्माण पश्चात यस तालतलैया क्षेत्रमा पर्यटकको आवागनमा सहजता हुन गई पर्यटको संख्यामा उल्लेख्य वृद्धि हुन जाने र यस तालतलैया व्यवस्थापन तथा संरक्षण समिति लगायत यस क्षेत्रका समुदायको आयमा समेत वृद्धि हुन जाने सम्बन्धमा विस्तृत छलफल गरियो ।

Minutes of Meeting with Baukachap Bandh Jal Upabhokta Samuha

आज मिति २०८०/०५/१८ गतेका दिन यस बौकाचाप बाँध जल उपभोक्ता समुहका सचिव श्री शिव खतिवडा ज्यूको अध्यक्षतामा बसेको बैठकले निम्न उल्लेखित महानुभावहरुको उपस्थितिमा निम्न उल्लेखित विषयहरु उपर छलफल गरि सर्वसम्मतिले निर्णय गरियो ।

विषय:

१ सडक निर्माण र सिचाई कुलो सम्बन्धमा ।
२ विविध ।

उपस्थिति:

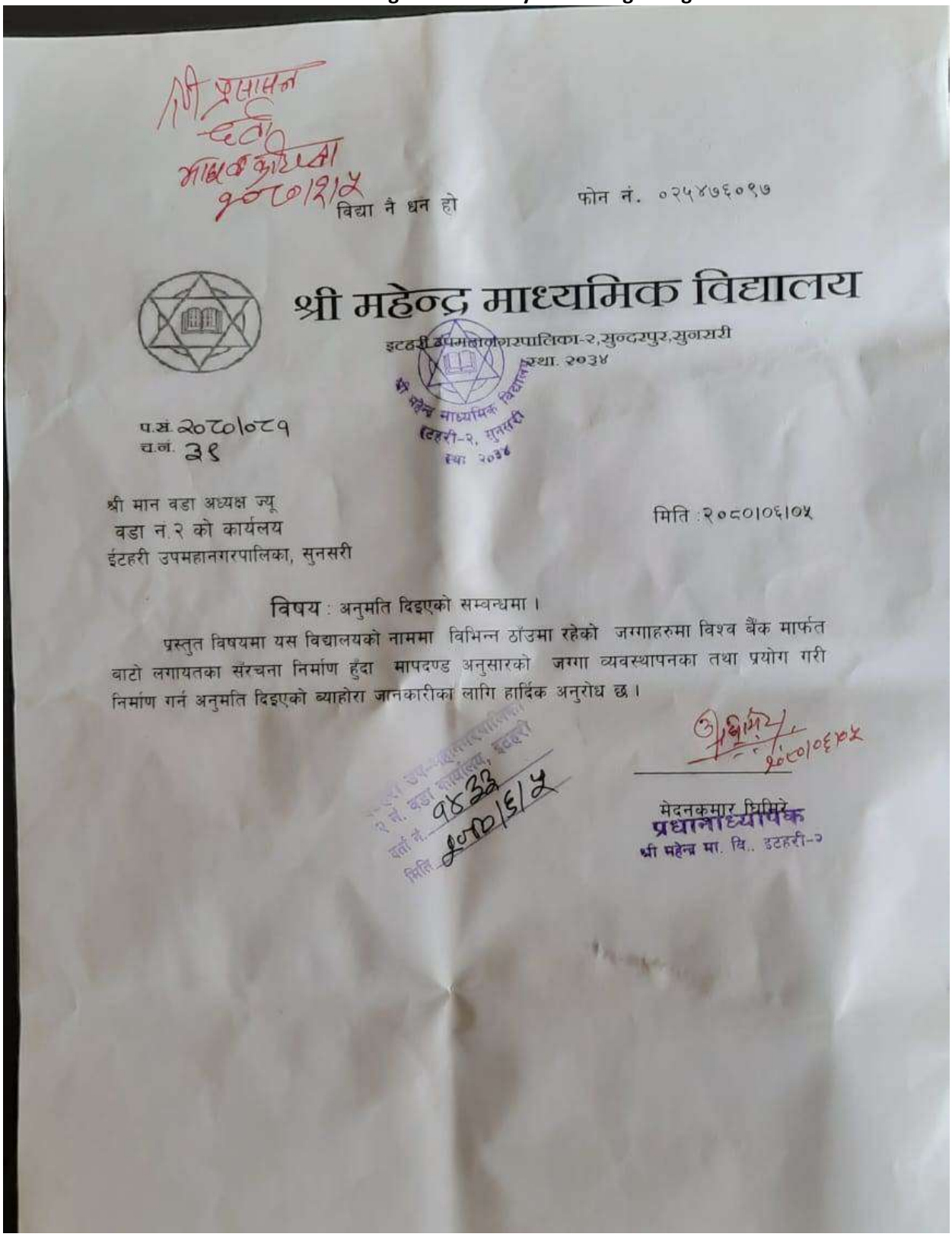
१ [illegible]
२ अनिता नेपाल
३ [illegible]
४ [illegible]
५ [illegible]
६ [illegible]
७ [illegible]

निर्णयहरु:

१ विश्व बैंकको आर्थिक सहयोगमा नेपाल शहरी शासकिय पूर्वाधार आयोजना अन्तंत इटहरी उप-महानगरपालिकाको वडा नं २ मा वर्गाछी चोक देखि तालतलैयासम्मको सडक खण्डको पुनःनिर्माण हुन लागेको सन्दर्भमा उक्त सडक खण्ड भित्र पर्ने सिचाई कुलोको उचित व्यवस्थापन गरि सडक निर्माण गर्न यस समितिको सहमति रहेको विषयमा विस्तृत छलफल गरि निर्णय गरियो ।

२ नेपाल शहरी शासकिय पूर्वाधार आयोजना अन्तंत इटहरी उपमहानगरपालिकाको वडा नं २ मा वर्गाछी चोक देखि तालतलैयासम्मको सडक खण्डको पुनःनिर्माणका क्रममा सिचाई कुलोको कारण कुनै विवाद उपन्न हुन आएमा यस सिचाई उपभोक्ता समितिले तत्काल साझिकरण गरि समस्याको समाधान गर्न सहमत रहेको सम्बन्धमा विस्तृत छलफल गरि निर्णय गरियो ।

Letter of Mahendra Higher Secondary School regarding Pond Protection



प्रशासन
दर्ता
माध्यमिक शिक्षा
२०८०।२।५

विद्या नै धन हो

फोन नं. ०२५४७६०९७

श्री महेन्द्र माध्यमिक विद्यालय

इटहरी उपमहानगरपालिका-२,सुन्दरपुर,सुनसरी
स्था. २०३४

श्री महेन्द्र माध्यमिक विद्यालय
इटहरी-२, सुनसरी
स्था: २०३४

प.सं.२०८०।८१
च.नं. ३९

श्री मान वडा अध्यक्ष ज्यू
वडा न.२ को कार्यलय
इटहरी उपमहानगरपालिका, सुनसरी

मिति :२०८०।०६।०५

विषय : अनुमति दिइएको सम्वन्धमा ।

प्रस्तुत विषयमा यस विद्यालयको नाममा विभिन्न ठाँउमा रहेको जग्गाहरुमा विश्व बैंक मार्फत बाटो लगायतका संरचना निर्माण हुंदा मापदण्ड अनुसारको जग्गा व्यवस्थापनका तथा प्रयोग गरी निर्माण गर्न अनुमति दिइएको व्याहोरा जानकारीका लागि हार्दिक अनुरोध छ ।

२०८०।०६।०५

मेदनकुमार घिमिरे
प्रधानाध्यापक
श्री महेन्द्र मा. वि., इटहरी-२

उप-महानगरपालिका
२ नं. वडा कार्यालय, इटहरी
दर्ता नं. ९८३३
मिति २०८०।६।५

Formation of GRC (1st Level and 2nd Level)

इटहरी उप-महानगरपालिका

नगरकार्यपालिकाको कार्यालय

इटहरी, सुनसरी,

कोशी प्रदेश

प.स.:२०८०/०८१

च.नं.: ४ ९५६

मितिः-२०८०/०७/१४

श्री नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना
आयोजना समन्वय कार्यालय
ववरमहल, काठमाडौं ।

विषयः-गुनासो सुनुवाई समिति (GRC) गठन सम्वन्धमा

प्रस्तुत विषयमा विश्व वैंकको आर्थिक सहयोगमा नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना मार्फत यस उप-महानगरपालिका वडा नं. २ र वडा नं. ३,४ मा पर्ने वरगाछी – तालतलैया सडक खण्ड र जुट विकास चोक – तालतलैया खण्डको स्तर उन्नति हुने भएकोमा उक्त सडक खण्ड निर्माणमा आउने गुनासाहरु सुनुवाई गर्न तपशिल अनुसार गुनासो सुनुवाई समिति गठन भएको व्यहोरा अनुरोध गरिन्छ ।

राम चरित्र मेहता
प्रमुख प्रशासकीय [illegible]

तपशिल -

नगर स्तरीय गुनासो सुनुवाई समिति

१. श्री संगीता कुमारी चौधरी (उप-प्रमुख, इटहरी उ.म.न.पा.) – संयोजक
२. श्री राम चरित्र मेहता (प्रमुख प्रशासकीय अधिकृत) – सदस्य
३. श्री जीवन घिमिरे (इन्जिनियर (NUGIP Focal Person)) – सदस्य
४. श्री संगीता पोखेल (सामाजिक विकास शाखा) – सदस्य
५. श्री सुर्य प्रसाद ढकाल (DSC टोलि प्रमुख) – सदस्य सचिव

वरगाछी – तालतलैया सडक खण्ड इटहरी-२ स्तरीय गुनासो सुनुवाई समिति

१. श्री माधव कोईराला (वडा अध्यक्ष, इटहरी-२) – संयोजक
२. श्री चम्पा माया वी.क. (दलित महिला सदस्य, इटहरी-२) – सदस्य
३. श्री टंक पौडेल (प्रभात टोल विकास समिति, इटहरी-२) – सदस्य
४. श्री रीता सुव्वा (वडा सचिव, इटहरी-२) – सदस्य
५. श्री नारायण ढकाल (इन्जिनियर, DSC) – सदस्य सचिव

Deputation of Focal Person for Anti-Harrassment Cell

इटहरी उप-महानगरपालिका

नगरकार्यपालिकाको कार्यालय

इटहरी, सुनसरी, कोशी प्रदेश

प.सं. :- ०८०।८१
च.नं. :- १९५

मिति:- २०८०/०४/०९

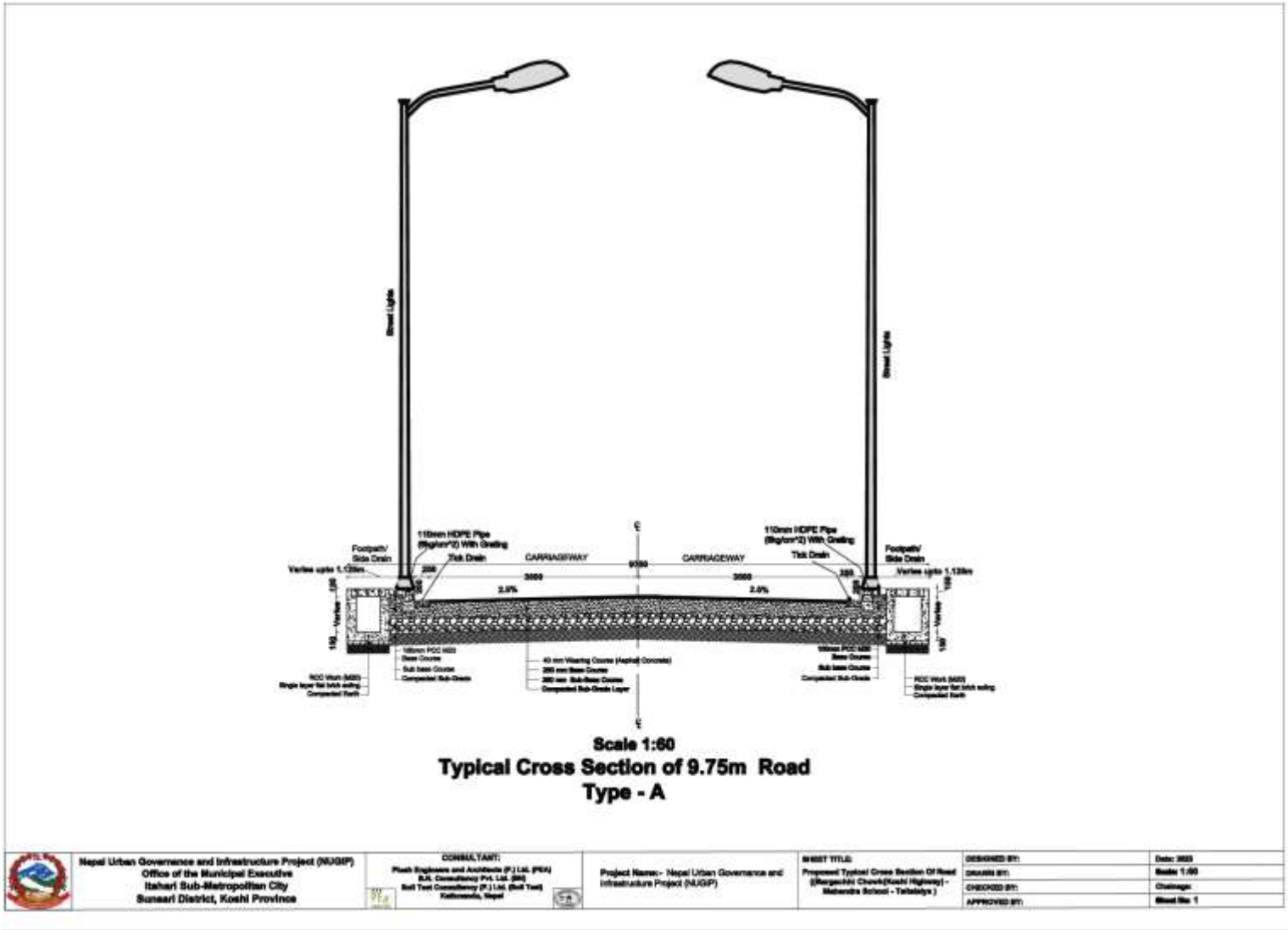
श्री शहरी विकास तथा भवन निर्माण विभाग
नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना
बबरमहल, काठमाण्डौ ।

विषय :- Anti-Harassment cell को जिम्मेवारी तोकिएको बारे ।

नेपाल शहरी शासकीय तथा पुर्वाधार आयोजनाबाट मिति २०८०/०३/१० को प.सं. ०७९/८० को चलानी नं. ३५१ को प्राप्त पत्र अनुसार.सडक आयोजनासंग सम्बन्धित लैङ्गिक हिंसा तथा यौन दुर्व्यवहार सम्बन्धी गुनासोहरुलाई अभिलेखिकरण तथा सहजीकरण गर्नका लागी यस उप महानगरपालिका सामाजिक विकास शाखाकी श्री संगीता पोखेल लाई Anti-Harassment cell को गुनासो समेत हेर्ने गरि जिम्मेवारी तोकिएको व्यहोरा अनुरोध छ ।

.....
राम चरित्र [illegible]
प्रमुख प्रशासकीय अधिकृत

Annex 2: Proposed Typical Cross Sections

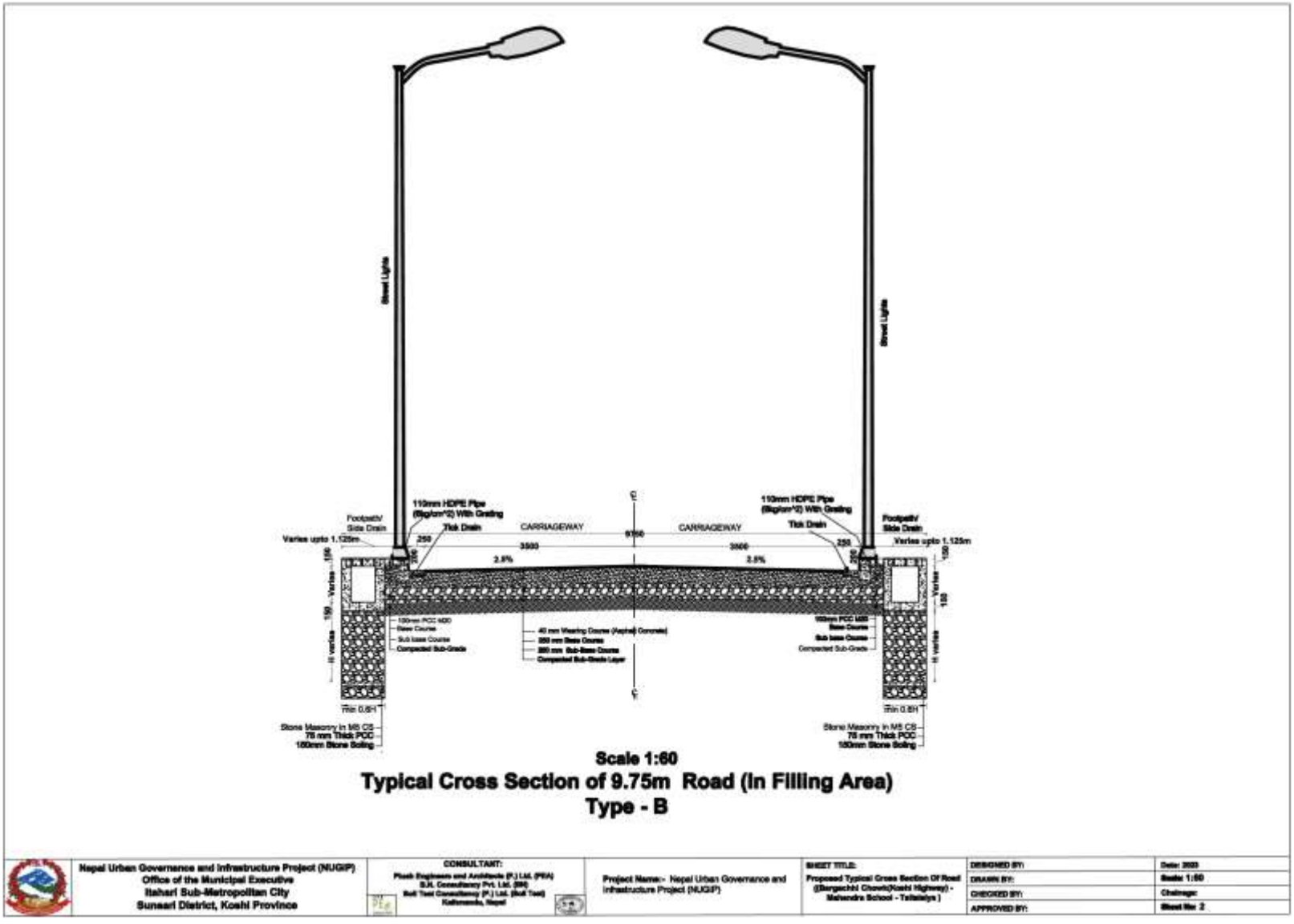


Scale 1:60

Typical Cross Section of 9.75m Road
Type - A

Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Itahari Sub-Metropolitan City Sunsari District, Koshi Province	CONSULTANT: Pinak Engineers and Architects (P.) Ltd. (PEA) B.H. Consultancy Pvt. Ltd. (BH) Bell Test Consultancy (P.) Ltd. (Bell Test) Kathmandu, Nepal	Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)	SHEET TITLE: Proposed Typical Cross Section Of Road ((Bargachhi Chowk(Koshi Highway) - Mahendra School - Tallabiya)	DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY:	Date: 2022 Scale: 1:60 Chainage: Sheet No: 1

Typical Cross section for 9.75 m road (Type A)



Scale 1:60

Typical Cross Section of 9.75m Road (In Filling Area)
Type - B

Nepal Urban Governance and Infrastructure Project (NUGIP) Office of the Municipal Executive Itahari Sub-Metropolitan City Sunsari District, Koshi Province	CONSULTANT: Plush Engineers and Architects (P.) Ltd. (PEA) D.H. Consultancy Pvt. Ltd. (DH) Sudi Tool Consultancy (P.) Ltd. (Sudi Tool) Kathmandu, Nepal	Project Name:- Nepal Urban Governance and Infrastructure Project (NUGIP)	SHEET TITLE: Proposed Typical Cross Section Of Road ((Bargachhi Chowk(Koshi Highway) - Mahendra School - Tellaiya)	DESIGNED BY:	Date: 2023
				DRAWN BY:	Scale: 1:60
				CHECKED BY:	Chainage:
				APPROVED BY:	Sheet No: 2

Typical Cross section for 9.75 m road (Type B)

Annex 3: GoN Permissible Environmental limits/standards

(A) Standards for Inland Surface waters from combined wastewater treatment

S. N.	Characteristics	Tolerance Limits
1.	Total Suspended solids, mg/l, *max*	50
2.	pH	5.5 to 9.0
3.	Biochemical oxygen demand (BOD) for 5 days at 20 degree C, mg/l, *max*	50
4.	Oils and grease, mg/l, *max*	10
5.	Phenolic compounds, mg/l, *max*	1
6.	Mercury (as Hg), mg/l, *max*	0.01
7.	Zinc (as Zn), mg/l, *max*	5
8.	Ammonical nitrogen, mg/l, *max*	50
9.	Chemical Oxygen Demand, mg/l, *max*	250

(B) National Drinking Water Quality Standard, 2079 BS

B-1: Mandatory Parameters to be tested

SN	Parameters	Unit	Limits	Remarks
	Physical			
1	Turbidity	NTU	5	
2	pH		6.5 - 8.5	
3	Colour	TCU	5	
4	Taste & odour		Unobjectionable	
5	Electrical Conductivity	µS/cm	1500	
	Chemical			
6	Iron	mg/L	0.3 (3)	
7	Manganese	mg/L	0.20	
8	Arsenic	mg/L	0.05	
9	Fluoride	mg/L	0.50 - 1.50 (Min. - Max.)	
10	Ammonia	mg/L	1.50	
11	Chloride	mg/L	250	
12	Sulphate	mg/L	250	
13	Nitrate	mg/L	50	
14	Copper	mg/L	1	
15	Zinc	mg/L	3	
16	Aluminum	mg/L	0.20	
17	Total Hardness	mg/L	500	
18	Residual Chlorine	mg/L	0.10 - 0.50 (Min. - Max.)	
	Microbiological			
19	E-Coli	(CFU/10 ml)	0	

B-2: Additional Parameters to be tested based on Risk and Requirement

SN	Parameters	Unit	Limits	Remarks
	Physical			
1	Total Dissolved Solids	mg/L	1000	
	Chemical			
2	Calcium	mg/L	200	
3	Lead	mg/L	0.01	
4	Cadmium	mg/L	0.003	
5	Chromium	mg/L	0.05	
6	Cyanide	mg/L	0.07	
7	Mercury	mg/L	0.001	
8	Nitrites	mg/L	3	
	Microbiological			
1	Total Coliform	(CFU/10 ml)	0 (In 95% samples)	

(C) National Ambient Air Quality Standard, 2069 BS

Parameters	Units	Averaging Time	Concentration in Ambient Air, Maximum
TSP	$\mu g/m^3$	24 - hours	230
PM_{10}	$\mu g/m^3$	24 - hours	120
$PM_{2.5}$	$\mu g/m^3$	24 - hours	40
Sulfur Dioxide	$\mu g/m^3$	Annual	50
		24-hours	70
Nitrogen Dioxide	$\mu g/m^3$	Annual	40
		24-hours	80
Carbon Monoxide	$\mu g/m^3$	8hours	10000
Lead	$\mu g/m^3$	Annual	0.5
Benzene	$\mu g/m^3$	Annual	5
Ozone	$\mu g/m^3$	8-hours	157

Ref.: Section 62, Number 19, Nepal Gazette, Part 5, 2069/04/29, Notice 2

(D) National Sound Pressure Level, 2069

Microenvironment	Sound Pressure Level, L_{eq}dB(A)	
	Daytime	Nighttime
Industrial Area	75	70
Commercial Area	65	55
Rural Settlement Area	45	40
Urban Settlement Area	55	50
Mixed Settlement Area	63	55
Pristine Area	50	40

Ref.: Section 62, Number 30, Nepal Gazette Part 5, 2069/7/13

(E) Diesel Powered Generator Emission Limits (g/kWh), 2069

Category, (kW)	CO	HC	NOx	PM
kW< 8	8	1.3	9.2	1
8 = kW < 19	6.6	1.3	9.2	0.85
19 = kW < 37	6.5	1.3	9.2	0.85
37 = kW < 75	6.5	1.3	9.2	0.85
75 = kW < 130	5	1.3	9.2	0.7
130 = kW < 560	5	1.3	9.2	0.54

Ref.: Section 62, Number 30, Nepal Gazette Part 5, 2069/7/13

The minimum height of the chimney should be maintained not less than 11m for the industrial boiler utilizing solid or liquid fuel.

Annex 4: Water Quality Reports

सफा र स्वच्छ पानी सबैका लागि संधैका लागि ।

इटहरी खानेपानी उपभोक्ता संस्था

इटहरी-४ सुनसरी

०२५-५८०७५८

रिपोर्ट कोड नं.	रिपोर्ट मिति	नमुना संकलन मिति	विश्लेषण मिति
२०८०/८१-२	२०८०/४/३	२०८०/४/३	२०८०/४/३
नमुनाको श्रोत	**नमुनाको प्रकार**	**नमुना संकलनकर्ता**	**ग्राहकको विवरण**
बोरिङ्ग	खानेपानी धारा	जोगीन्द्र	मुरारी अधिकारी, इटहरी-5, पचरुखी

Water Quality Report (खानेपानी गुणस्तर परिक्षण)

वर्ग (Category)	क्र.सं. (S.N.)	पारामिती (Parameters)	ईकाइ (Units)	अधिकतम संघनन् सीमा (Max. Concentration)		परिक्षण नतिजा (Observed Values)	परिक्षण विधी (Analyzed Methods)	अनुगमन आवृती (Frequency)
				WHO	NDWQS			
भौतिक (Physical)	१	धमिलोपना (Turbidity)	NTU (NTU)	5	5 (10)	2	Palintest photo meter	दैनिक
	२	हाईड्रोजन विभव (pH) (pH)	- (-)	6.5 - 8.5	6.5 - 8.5	7.69	pH meter	दैनिक
	३	कुल घुलित ठोस पदार्थ (TDS) (Total Disolved Solids (TDS))	मि.ग्रा/लि. (mg/l)	1000	1000	205	TDS meter	त्रैमासिक
	४	विद्युतिय संचाहकता (EC) (Electrical Conductivity (EC))	µS/cm (µS/cm)	-	1500	400	EC meter	मासिक
रसायनिक (Chemical)	५	क्लोरिन अवशेष (Residual Chlorine)	मि.ग्रा/लि. (mg/l)	0.1	0.1(0.2)	0.07	Palintest photo meter	दैनिक
	६	क्याल्सीयम (Calcium)	मि.ग्रा/लि. (mg/l)	200	200	72	Palintest photo meter	मासिक
कैफियत								

* पी मानहरुले न्यूनतम र अधिकतम सीमा जनाउँदछन ।
() अन्य कुनै विकल्प नभएको अवस्थामा मात्र मान्य हुने मानलाई कोष्ठभित्र राखिएको छ ।
WHO विश्व स्वास्थ संगठन
NDWQS राष्ट्रिय खानेपानी गुणस्तर मापदण्ड

(यो परिक्षण संस्थाको आन्तरीक गुणस्तर नियन्त्रणको लागि मात्र हो ।)

२०८०/४/३
पानी परिक्षण गर्ने

प्रमाणीत गर्ने

Government of Nepal
Ministry of Water Supply
Department of Water Supply and Sewerage Management
Federal Water Supply & Sewerage Management Project
Biratnagar
Water Quality Testing Laboratory
Itahari, Sunsari

WATER QUALITY TEST REPORT

Name of Client:- IDWASS
Sampled By:- IDWASS
Source of Sample:- Boring
Sampling Point:- Tap(Yug Priya Niraula)
Location:- Itahari -6 ,Sunsari
GPS:-

Sample Code:- S-40
Date of Collection:- 2080/04/21
Date of Analysis:- 2080/04/21
Date of Completion:- 2080/04/22

S.No.	Category	Parameters	Observed Values	NDWQS, 2079 BS	Methods Used
1	Microbiological	Faecal coliform *E.coli*(CFU/100 ml)	0	0	9222 D., APHA,21st EDITION

APHA: *American Public Health Association, Standard Methods for Examination of Water & Waste Water*
** These values show lower and upper limits.*
( ) Values in parentheses refer the acceptable values only when alternative is not available.
The entire test was conducted as per the National Drinking Water Quality Standard Guide Line, 2062BS
Note: 1. The above results refer only to the submitted sample and test performed.
2. This report cannot be used for any publicity or advertisement without the written consent of this lab.
3. Test report shall not be reproduced in full, without written approval of the laboratory.

Analyzed by
Shiva Kumar Poudyal
Assistant Chemist

Approved by
Ramesh Kumar Yadav
Chemist

Annex 5: List of Trees to be cut, List of Private Trees, and Compensatory Plantation Plan

List of Trees to be Cut

SN	Trees	Number	Chainage (km)	Remarks
1	Kapur (*Cinnamomum camphora*)	2	0+090 to 0+095	
2	Betlenut (*Saraca asoca*)	5	0+170 to 0+190	
3	Betlenut (*Saraca asoca*)	3	1+670 to 1+690	
4	Coconut (*Cocus nucifera*)	1	0+885	
5	Coconut (*Cocus nucifera*)	1	1+170	
6	Coconut (*Cocus nucifera*)	1	1+690	
7	Mango (*Magnifera indica*)	1	0+890	
8	Mango (*Magnifera indica*)	1	0+920	
9	Mango (*Magnifera indica*)	1	1+830	
10	Neem (*Melia azadirach*)	1	0+390	
11	Neem (*Melia azadirach*)	1	1+070	
12	Amba (*Psidium guavaja*)	1	1+270	
13	Kadam (*Anthocephalus kadamba*)	1	1+285	
14	Amba (*Psidium guavaja*)	1	1+880	
15	Pithari (*Stereospermum suaveolens*)	2	2+400 to 2+405	
16	Ashoka (*Saraca asoca*)	3	2+630 to 2+650	
	Total	**26**		

Compensatory Plantation Plan

SN	Activities and items	Description	Remarks
1	Number of trees to be planted under compensatory plantation	260 trees to be planted; Proposed trees like Kapur, Neem, Mango and guava trees	@10 trees per tree cut
2	Time of plantation	During June - July - August time period	Year 1 and Year 2
3	Area for plantation	Open space / public land towards Budhi khola from Tribeni chowk	
4	Cost of plantation works	NPR 390,000	@1500 per tree including seedling, bed-preparation, transportation and care taking of 12 years

List of Private Trees

आज मिति २०८०/०८/२५ गतेका दिन यस इटहरी उप-महानगरपालिकाको नगर प्रमुखज्यूको उपस्थितिमा निम्न उल्लेखित साक्षीहरुको रोहवरमा भएको छलफलमा वडा नं. २ मा पर्ने बरगाछी चोक कोशी गजमार्ग - महेन्द्र स्कुल - तालतलैया सडक खण्डको डिजाइन अनुसारको सडक चौडाइ भित्र पर्ने निजी फलफूलका रुखका लागि प्रति रुख रु. ३५०० का दरले आवश्यकता अनुसार क्षतिपूर्ति रकम प्रदान गरी हटाउने विषयमा सहमति भयो । रुख धनि एवं बिरुवाहरुको विवरण यस प्रकार रहेको छ ।

क.स	रुख धनिको नाम	रुखको विवरण		चेनेज (कि.मि.)	दस्तखत
		रुख	संख्या		
१	सुकुरलाल थामी	सुपारी [illegible]	५	०+१६०-०+१८०	
२	हेमु थामी	सुपारी [illegible]	३	१+६६०-१+६९०	
३	[illegible] थमला	नरिवल	१	०+८८४	
४	शालिन्द्र खनाल	नरिवल	१	१+१६०	
५	राजेन्द्र [illegible]	नरिवल	१	१+६६०	
६	एक राज थमला	आंप	१	०+८९०	
७	कुल चन्द्र गजुराई	आंप	१	०+६२०	
८	गणेश कु. श्रेष्ठ	अम्बा	१	१+२६०	
९	श्री [illegible] भट्टराई	अम्बा	१	१+८८०	

साक्षी :

१. हेमकर्ण पौडेल- प्रमुख, इटहरी उ.म.न.पा.,

२. संगिता कुमारी चौधरी- उप-प्रमुख, इटहरी उ.म.न.पा.,

३. माधव कोइराला- अध्यक्ष, वडा नं. २,

४. जिवन घिमिरे- इन्जिनियर (Focal Person NUGIP),

इटहरी उपमहानगरपालिका नगर कार्यपालिकाको कार्यालय इटहरी, सुनसरी कोशी प्रदेश, नेपाल

Annex 6: Code of Conduct (CoC) for GBV

World Bank Approved Code of Conduct (CoC) for the Project

नेपाल शहरी शासकीय तथा पुर्वाधार आयोजना

कार्य स्थलमा हुने यौनजन्य तथा महिला हिंसा सम्बन्धी आचार सहिता

व्याक्तिगत आचार सहिता

म, ...यो आचार सहिता पालना गर्नु मेरो दाहित्व हो भनी स्वीकार गर्दछु ।म कुनै पनि यौनजन्य तथा महिला हिसा जस्ता कार्यमा सँलग्न हुने छैन । परियोजना को काम को शिलसिलामा यो आचार सहिता पालना गर्न सहमत छु ।

१. म जातजाति धर्म, भाषा, लिङ्ग, उमेर, राजनितीक वा सामाजिक हैसियत, भौगोलिकता, पहुच, वैवाहिक स्थीती वा अन्य कुनै पनि आधारमा भेदभाव नगरी सबैलाई सम्मानजनक र समान रुपमा व्यवहार गर्नेछु ।

२. सामाजिक सन्जालको प्रयोग गरी अश्लील शब्द, दृष्य सामाग्री वा कार्यलय समय अघिपछी वार्तालाप मार्फत सहकर्मि/कामदार लाई यौन दुर्व्याहार गर्ने छैन ।

३. कार्यस्थलमा सिट्टी बजाउने, चुम्बन गर्ने ,व्यक्तिगत उपहार दिने आदि जस्ता कार्य गरी कर्मचारी, सहकर्मि/कामदार लाई यौन दुर्व्याहार गर्ने छैन ।

४. कुनै पनि प्रलोभन/ धम्की देखाई (जस्तै पदोन्नती लोभ देखाएर,जागीर नदिने धम्की दिएर शोषण गरेर आदि) यौन दुर्व्याहार पक्षमा सलग्न हुने छैन

५. कार्य समयावधि भित्र कुनैपनि मादराजन्य तथा लागुपदार्थको सेवन गर्ने छैन ।

६. परियोजका सरोकारवाला वा वरपरका समुदायका सदस्यहरुलाई कुनैपनि म लैङ्गिक हिसा तथा यौनजन्य दुर्व्याहार गर्ने छैन ।

७. कुनै पनि कर्मचारी/श्रमिक विरुद्ध हिंसा गरिएको दोषी ठहरिएमा प्रचलित संघिय, प्रादेशिक, स्थानीय सरकार वल्र्ड वैक को कानुन , निती नियम अनुसार सजाय/ दण्डित जरिवाना तिर्न तयार हुनेछु ।

८. कार्य गर्ने शिलशिलामा सम्मानजनक निर्देशनहरुको पालना गर्दछु (वातावरणीय + सामाजिक)

९. मेरो जिम्मेवारी कुशलता र लगनशीलता पुर्वक पुरा गर्नेछु ।

१०. सम्बाधित कार्यलय /कम्पनीले सन्चालन गरेको विभीन्न प्रशिक्षण कार्यक्रममा सक्रिय रुपमा भाग लिनेछु ।

११. परियोजनाका प्रत्यक्ष लाभदायक सदस्य/समुदायमा यौन दुर्व्याहार/शोषण गर्ने छैन ।

१२. विश्वासनीयता नैतिक उल्लघनको रिपोर्ट गरेमा कुनै कामदार विरुद्व बदला लिने छैन ।

१३. कार्य स्थलमा लैङ्गिक सम्वेदनशिल भाषाको प्रयोग गर्दछु

१४. कार्यस्थलमा महिला हिसा तथा यौनजन्य कियाकलाप लाई प्रोत्साहन गर्ने खालका गतिविधी गर्न दिने छैन ।

१५. कार्यस्थलमा महिला तथा यौन हिसा गतिविधीहरुलाई प्रोत्साहन गर्ने छैन ।

१६. १८ वर्षभन्दा मुनिका बालिकाहरुमा कुनै डिजीटल मिडीया मार्फत वा कुनै माध्यमबाट /स्वीकृती लिई वा नलिई यौनजन्य कियाकलापमा सहभागी हुनेछैन, यदि नाबालिका स्वीकृती लिई यौनजन्य कियाकलापमा गरेमा क्षमा हुदैन ।

१७. परियोजना कार्यन्वयन को वेलामा यौनजन्य दुर्व्याहार /यौन शोषण भएमा वा आचार सहिता उल्लघन गरेमा वडा/ नगरपालिका स्तरमा रहेको गुनासो सुनवाई सयन्त्रमा तुरुन्त निवेदन/जानकारी दिनेछु ।

१८. कार्यस्थलमा कसैले यौनजन्य दुर्व्याहार सम्वन्धी शख्कापद व्यावहार गरेमा वा शख्कापद कार्य गरेमा तुरुन्त टोली प्रमुख /प्रवन्धकलाई जानकारी/निवेदन दिनेछु ।

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

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व्यवस्थापक/टोली प्रमुख कर्मचारी/कामदार

Annex 7: Photographs

Photo 1: Consultation meeting with stakeholders in Itahari Sub-Metropolitan City, September 2023

Photo 2: Consultation meeting with stakeholders in Itahari Sub-Metropolitan City, June 2023

Photo 3: Mass Consultation Meeting with Municipal Authority, Ward Representative and Community Members (ward no. 2), September 2023

Photo 4: Mass Consultation Meeting with Municipal Authority, Ward Representative and Community Members (ward no. 2), September 2023

Photo 5: Meeting with Municipal Authority, Ward Representative and Community Members, June 2023

Photo 6: Meeting with Municipal Authority, Ward Representative and Indigenous People of the Community, September 2023

Photo 7: Meeting with Municipal Authority, Ward Representative and Women of the Road Alignment, September 2023

Photo 8: Meeting with Itahari Khanepani Upabhokta Sanstha, June 2023

Photo 9: Meeting with Ward Chairperson and ward members of Ward 2, and School Management Committee of Mahendra Secondary School - Itahari Sept 2023

Photo 10: Meeting with Nepal Electricity Authority Officials – Itahari Branch, June 2023

Photo 11: Meeting with Taltalaiya Management and Conservation Committee, September, 2023

Photo 12: Proposed Campsite and Stockpile area, Budhasubba, WN 2