# Environmental and Social Impact Assessment (ESIA)

Credit No. IDA-6778-NP

# Nepal Urban Governance and Infrastructure Project (NUGIP)

Upgradation of Pokharapali - Panditpur Road Project

Ramgram Municipality, Nawalparasi District, Lumbini Province

> June 2023 The World Bank

# ACRONYM

| ADB      | : Asian Development Bank   |
|----------|--|
| 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  |
| PCU      | : Passenger Car Unit   |
| 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  |
|          |  |

ESIA and ESMP of 'Upgradation of Pokharapali-Panditpur Road' - Ramgram Municipality, Nawalparasi

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# **EXECUTIVE SUMMARY**

#### Introduction

This environmental and social impact assessment report covers the road upgradation project connecting Pokharapali to Panditpur Chowk of Ramgram Municipality, Nawalparasi (West) district. The road passes through Ward no 6, 10, 14, 15 and 18 of Ramgram Municipality. 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 municipality. The package has 2 sections; Section I of the project is Pokharapali to Kuiya and is 4.657 km, and Section II start from Ch-2+300 of Section I and ends at Parasi Road (Nadawa) in the south and is 1.124 km long. Thus the total length is 5.781 km.

The geographical location of the starting point of Section I is 27°32'0.75"N, 83°39'24.48"E and end co-ordinate for the section is 27°32'32.74"N, 83°36'17.22"E and that of Section II is 27°32'27.18"N, 83°38'6.55"E at the start and end co-ordinate is 27°31'50.90"N, 83°38'6.76"E. The road alignment passes through settlements and agricultural land area.

Right of way of the proposed road project is 12.5 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 12 pipe culverts and 1 box culvert included in the design.

#### **Baseline Information**

The project area lies in the Terai plain. Altitude of the project area varies from 100 m to 130 m from sea level. In the proposed road alignment and Right of Way (RoW) there is no landslide prone area. The main rivers of the project municipality are Jharahi River, Turiya River and Ramkhanda River. The municipality has warm temperate to tropical climatic conditions, and it has an average annual temperature of 24.4°C. May and June are the warmest months with an average temperature above 29 °C and January are the coldest one with an average temperature of 15.7°C (max temp-22.8°C and min temp 8.7°C). The summers here have a good deal of rainfall compared to the winter season. The average annual rainfall is 1753 mm. There are water supply pipelines, handpumps and electric poles along RoW of the road alignment.

The project alignment has no major water supply network. As per the baseline study, the AQI of the nearest station - Butwal was taken for reference, and this shows that the PM<sub>2.5</sub> level is 34.2 µg/m<sup>3</sup> and the AQI is 97 (*Source: https://www.iqair.com/nepal/western-region/butwal, 20<sup>th</sup> April 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. The range of average noise levels in the project area was observed to be between 65 dBA and 69 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 are within the RoW of the road alignment.

As per the municipal profile of 2076 BS, the total population of the municipality is 59,831 and the household number is 11,407. The average family size of the district is 4.97, which is higher than that of the national average (4.88). The project area is inhabited by Brahmins, Chhetri, Kewat, Mushahar, Yadav, Dhobi, Muslims, Harijan, Kalwar, etc. communities. The project area is

inhabited by people of religions like Hindu, Muslim, Christian and Buddhist. Cultural festivals like Dashain, Tihar, Chhath, Ram Navami, Shivaratri, Maghi, Buddha Jayanti, Eid, Moharram, Christmas are celebrated in this region which is inhabited by different castes and religions. Tharu are the indigenous people of the project area. There are no schools, hospitals, temples or any public infrastructure along the RoW of proposed road alignment. The main occupations of the residents living within the project area are agriculture, animal husbandry, trade, government jobs and foreign employment. There is one elected women member in each of the wards 6, 10, 14, 15 and 18. This shows good activeness and participation of women in the project area. There are no registered cases regarding SEA/SH and GBV in the Women and Child Development Section of the municipality from the communities along the proposed road alignment.

There are around over 15 factories along the proposed road alignment. Similarly, there are 962 households and population of 4858 wihtin 500 m both sides from the edges of the proposed road alignment.

#### Legal and Regulatory Requirements

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 RoW (12.5 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 and land requirement
- River bank instability (at Turiya river)
- 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, 29 tree required to be felled

#### **Socio-economic and Cultural Impacts**

- Land requirement (384 land parcels in Section I, and 127 land parcels in Section II)
- Damage to public and private utilities This includes 170 electric poles, 14 handpumps, 280 m of water supply pipeline network, and 10 m of irrigation crossing pipeline
- 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 and CoVID
- 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
- Launching apron and gabion revetment
- 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 Turiya river
- 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

- Ramgram Municipality office will accomplish the process of transfer of deeds of the land parcels that are within RoW of the road sections
- Water supply pipelines, hand-pumps 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
- Road design and 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 2067/02/10 BS (May, 2010), the RoW 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.

#### 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 3,210,000 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 ther 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 नवलपरासी (पश्चिम) जिल्ला, रामग्राम नगरपालिकाको पोखरापालि देखि पण्डितपुर जोड्ने सडक खण्डको स्तरोन्नतीको काम समेट्ने छ, र यस आयोजनाले नवलपरासी (पश्चिम) जिल्ला, रामग्राम नगरपालिका, वडा नं. ६, १०, १४, १४ र १८ को क्षेत्रलाई प्रत्यक्ष रुपमा समेट्ने छ । यस आयोजनाको उरद्देश्य बाटोको वरिपरिका बस्तीका स्थानीयहरुको जीवनस्तर र जीविकोपार्जनमा सुधार ल्याउने हो । उपआयोजनाले नगरपालिका शहरी विकास योजना, पूर्वाधार विकास तथा संस्थागत विकास एवं नगरपालिकाको क्षमताको अभिवृद्धिमा योगदान पुऱ्याउने अपेक्षा गरिएको छ । यस आयोजनामा पोखरापालि चोक देखि शुरु भएर प्रगति टोल ( ननई चोक), तुरिया खोला, घिना चोक हुँदै कुइयासम्म सडकको ४.६४७ कि.मि. पहिलो खण्डले र प्रगति टोल (ननई चोक) देखि परासी सडक (नदवा) सम्म १.१२४ कि.मि. दोस्रो खण्डले समेट्ने छ । तसर्थ सडकको कूल लम्बाई ४.७८१ कि.मि. रहेको छ ।

यस उपआयोजनाको भौगोलिक स्थितिमा पहिलो खण्डको शुरुवात विन्दु २७°३२'०.७४'' उत्तर, ८३°३९'२४.४८'' पूर्व र २७°३२'३२.६८'' उत्तर, ८३°३७'२४.४४'' पूर्व (पोखरपाली चोकबाट शुरु भई तुरिया खोला हुदै कुइयासम्म) र दोस्रो खण्ड प्रगति टोल (ननई चोक) देखि २७°३२'२७.१८'' उत्तर, ८३°३८'६.४४'' पूर्व र २७°३१'४०.९०'' उत्तर, ८३°३८'६.७६'' पूर्व परासी सडक (नदवा) सम्म पर्दछ । यस सडक खण्डको वरपर बस्ती, कृषि जमिन र उद्योगहरु रहेका छन् ।

प्रस्तावित सडकको क्षेत्राधिकार (Right of Way) १२.४ मि. रहेको छ जसमा ७ मीटर Carriage Way रहने गरी दुई लेनको सडक (३.४ मीटर प्रति लेन), सडकको दुवै किनारामा नाली (Tick Drain) सहितको पानी ढल र १२ वटा पाईप कल्भर्ट र १ वटा वक्स कल्भर्ट रहने छन्।

#### विद्यमान अवस्थाः

यस उपआयोजना क्षेत्रको उचाई समुद्री सतहबाट १०० मी. देखी १३० मी. माथि रहेको छ । प्रस्तावित सडक रहेको स्थान वा सडक क्षेत्राधिकार भूस्खलन भैरहने क्षेत्र भित्र पर्दैन । उपआयोजना क्षेत्रमा मौसमी वाढी र डुवानको समस्या रहेको छ । उपआयोजना क्षेत्रका प्रमुख खोलाहरुमध्ये भरही खोला, तुरीया खोला तथा रामखण्ड खोला पर्दछन् । यस सडक उपआयोजना क्षेत्रमा वार्षिक औषत तापक्रम २४.४° रहेको र बार्षिक औषत वर्षा १७५३ मिलिमिटर हुने गरेको उल्लेख छ । सडक किनारामा पानी-पाइप लाइन र ह्याण्ड पम्पहरु रहेको छ भने विजुलीका खम्वाहरु पी छन् । सडक नजिक ठूलाखाले पानी प्रसारण संरचनाहरु रहेका छैनन् । आयोजना स्थलमा हावाको गुणस्तर मापन गर्न बुटवलको AQI Index आधार लिइएको छ । सो क्षेत्रको AQI Index ९७ रहेको छ र पिएम् २.५ (२.५ मा.मी भन्दा कम आकारका धूलोका कण) ३४.२ मि.ग्रा. प्रति घनमिटर रहेको छ । 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 । रामग्राम नगरपालिकाले वि.सं २०७६ मा तयार पारेको प्रोफाइलमा उल्लेख भए अनुसार यस नगरपालिकाको कूल जनसंख्या ४९,८३१ र घर परिवार ११,४०७ रहेको छ । औसत परिवार संख्या ४.९७ रहेको छ जुन राष्ट्रिय औसत (४.८८) भन्दा बढी हो । यस उपआयोजना क्षेत्रमा व्राम्हण, क्षेत्री, केवट, मुसहर, यादव, धोवी, मुस्लिम, हरिजन, कलवार, आदिको बसोबास छ र हिन्दु, मुस्लिम, किश्चियन, बौद्ध आदि धार्मिक समुदायको बसोबास रहेको छ । यस आयोजना क्षेत्रमा विभिन्न जाताजातिका सांस्कृतिक अभ्यासहरु पाइन्छन् । विभिन्न जनजाति तथा धर्म रहेको यस क्षेत्रमा दशै, तिहार, छठ, रामनवमी, शिवरात्री, माघि, बुद्ध जयन्ति, इद, क्रिसमस जस्ता सांस्कृतिक चाडपर्वहरु मानाइन्छ । यस उपआयोजनाको सडक किनारमा कुनै पनि मठ मन्दिर, गुम्बा, मस्जिद, चर्च, विद्यालय र सरकारी कार्यालय पर्दैनन् । यस आयोजना क्षेत्रमा छिमेकि जिल्लाहरुबाट आएका र सोही जिल्लाका मानिसहरुको बसोबास रहेको छ । आयोजना क्षेत्रमा बसोबास गरी रहेका मानिसको प्रमुख व्यवसाय कृषि, पशुपालन, व्यापार, सरकारी जागिर र वैदेशिक रोजगारी हुन् । वडा नं. ६, १०, १४, १४ र १८ सबैमा १-१ निर्वाचित महिला सदस्यहरु रहेका छन्, जसले समुदाय स्तरमा महिलाको क्रियाशिलता र सहभागिताको पुष्टि गर्दछ । रामग्राम नगरपालिकामा रहेको महिला तथा बालबालिका विकास शाखामा, यस नगरपालिकाको वडा नं. ६, १०, १४, १५ र १८ को पोखरापालि-पण्डितपुर सडक खण्डको ( सडकको क्षेत्राधिकारको किनारा देखि द्बै तर्फ ४०० मीटरसम्मका) बासिन्दाहरुबाट रामग्राम नगरपालिकाको महिला तथा बालबालिका विकास शाखामा महिला हिंसा र यौन दुर्व्यवहार सम्बन्धि कुनै घटना दर्ता हुन आएको रेकर्डमा देखिंदैन ।

यस सडक उपआयोजनाको दुवै खण्डमा साना ठूला गरि भण्डै १४ वटा भन्दा बढि उद्योगहरु रहेका छन् । त्यसै गरी अप्रत्यक्ष प्रभावित क्षेत्र सडकको क्षेत्राधिकारको किनारा देखि दुबै तर्फ ४००/४०० मीटरसम्म भण्डै ९ सय ६२ घरधुरी र ४ हजार ८ सय ४८ जनसंख्या रहेको छ ।

# ऐन तथा नीति, नियमको आवश्यकताः

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 व्यवस्थापनः

आयोजनाको प्रत्यक्ष प्रभावित क्षेत्र यस उपआयोजनाको सडकको क्षेत्राधिकार चौडाइ (RoW) १२.४ मीटर मानिएको छ । प्रत्यक्ष प्रभावित क्षेत्रमा सडकको किनारको दुबै तर्फ ४००/४०० मिटर सम्मको क्षेत्रलाई लिइएको थियो । 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 प्रभावहरुः

- भू-उपयोग तथा जमीनको आवश्यकता
- खोला किनारमा हुने कटान वा क्षय (तुरिया खोला)
- निर्माण सामाग्री उत्खन्नन्
- निर्माण सामाग्री भण्डारण तथा कामदार शिविर
- वायु प्रदुषण, ध्वनी प्रदुषण तथा जल प्रदुषण
- फोहरमैला तथा ढुङ्गा-माटो व्यवस्थापन
- सडकको अवस्था र व्यवस्थापन

# जैविक प्रभावहरुः

• बोटविरुवाको क्षतीः २९ वटा रुख काट्नु पर्ने

# सामाजिक-आर्थिक तथा सांस्कृतिक प्रभावहरुः

- जमीनको आवश्यकता (सडक खण्ड १ मा ३८४ कित्ता, र सडक खण्ड २ मा १२७ कित्ता)
- सार्वजनिक तथा नीजि संरचनाहरुमा क्षती
   जम्मा १७० वटा बिजुलीको खम्वा, १४ वटा हाते पम्प, २८० मिटर खानेपानीको पाइप लाइनलाई तथा १० मिटर सिंचाईको पाईपलाईन
- घर-आँगन, पसल तथा नीजि क्षेत्रमा आवागमनमा 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
- खोला किनारको संरक्षणका लागि Launching apron and gabion revetment,
- 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 त्रीया 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 पर्ने जग्गा-जमीनको कित्ता-काट प्रक्रिया नगरपालिकाले सम्पन्न गर्ने
- खानेपानी पाईपलाईन, ट्यूबवेल 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 स्रक्षाका 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 कार्यकम संचालन गरिनेछ।
- यौन जन्य हिंसा (यौन दुराचार), मानव बेचविखन, HIV AIDS and CoVID सम्बन्धी जनचेतनामूलक कार्यक्रमहरु संचालन गरिनेछ।

# पुनःर्वास कार्ययोजनाः

नगरपालिकाले तोकेको सडक मापदण्ड अनुसार प्रस्तावित स्तरोन्नति उपआयोजनाले वाटोको रेखाङ्कन गरिएको क्षेत्राधिकर भित्र आंशिक रुपमा पर्ने संरचनाहरु हटाउने कार्य भैरहेको, खेतीबालीलाई नगरपालिकाको सुचना पश्ता स्वइच्छाले हटाउने तथा खाली गर्ने कार्य भैरहेको छ । नगरपालिकाले उपलब्ध गराएको निर्णय प्रतिलिपिमा उल्लेख भए बमोजिम बि.सं. २०६३ साल जेष्ठ १० गतेको निर्णयले बाटोको RoW तोकि कार्यान्वनमा समेत आएकोले ESMF मा उल्लेख भए अनुसार सडकको लागि आवश्यक पर्ने जग्गा प्राप्तिको प्रकृयामा गैरहन आवश्यक देखिंदैन । तसर्थ नगरपालिकाले तोकेको बाटो (Right of Way) भित्र पुनःर्वास गर्ने गरि कुनै संरचना वा व्यक्तिगत वा सार्वजनिक जग्गा प्राप्त गर्नु पर्ने नभएकोले पुनःर्वास कार्ययोजना आवश्यक पर्देन ।

# 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 सुफाएका कार्यहरुलाई पनि समावेश गरेको 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 । अभ 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. ३,२१०,००० 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 गरिने छ । उक्त गुनासो समितिलाई कुनै पनि प्रकारका संचारका माध्यम, चिट्टिपत्र 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 ।

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# 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 Pokharapali-Panditpur Road, Ramgram Municipality has been prepared as per the Contract between between Municipal Executive, Ramgram, 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-216356-CS-QCBS, into effect from 17<sup>th</sup> August 2022 to provide services on Detailed Engineering Design and Construction Supervision (DSC) covering the upgradation project connecting Pokharapali at Parasi to Kuiya which is Section I of the road project and is 4.657 km and Section II starts from Ch-2+300 of Section I and end at Parasi Road (Nadawa) in the south and is 1.124 km long. 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 Ramgram Municipality city of Nawalparasi District, Lumbini Province. Total length of Proposed Road Upgradation Project is 5.781 km and possess two section of alignment out of which Section I is 4.657 km long and Section II is 1.124 km long of with the geographical location of that starting point of Section I is 27°32'0.75"N, 83°39'24.48"E and end co-ordinate for the section is 27°32'32.74"N, 83°36'17.22"E and that of Section II is 27°32'27.18"N, 83°38'6.55"E at the start and end co-ordinate is 27°31'50.90"N, 83°38'6.76"E.

Salient features of Pokharapali-Panditpur road is provided in table below;

| Table 1.1: Details of Poknarapali-Panditpur Road Upgradation Project |                                       |  |  |  |  |  |  |
|--|---------------------------------------|--|--|--|--|--|--|
| SN   | Description                           | Description  |  |  |  |  |  |
| 1.   | Road Type                             | Urban/ Collector Road  |  |  |  |  |  |
| 2.   | Proposed road length                  | 5.781 km   |  |  |  |  |  |
| 3.   | Number of Lane                        | Double Lane  |  |  |  |  |  |
| 4.   | Right of Way                          | 12.5m wide throughout the road project   |  |  |  |  |  |
| 5.   | Carriageway Width                     | 7 m throughout the road project  |  |  |  |  |  |
| 6.   | Camber of Carriage way                | 2.5%   |  |  |  |  |  |
| 7.   | Pavement Surfacing                    | Asphalt concrete (Flexible pavement)   |  |  |  |  |  |
| 8.   | Terrain Type                          | Plain  |  |  |  |  |  |
| 9.   | Wards & Major settlements             | Ramgram - 6, 10, 14, 15 & 18<br>Pokharapali, Bedi, Nanai, Nadawa,<br>Digbal, Ghinaha, Bnjariya, Kuinya,<br>Panditpur |  |  |  |  |  |
|  | Design Parameters                     |  |  |  |  |  |  |
| 1.   | Design speed of Road                  | 30 km/hr   |  |  |  |  |  |
| 2.   | Minimum Radius of Vertical<br>Curve   | 15 m   |  |  |  |  |  |
| 3.   | Minimum Radius of<br>Horizontal Curve | 20 m   |  |  |  |  |  |
| 4.   | Maximum gradient                      | 4%   |  |  |  |  |  |
| 5.   | Minimum Gradient                      | 0.3%   |  |  |  |  |  |
| 6.   | Total cost of EMP                     | NPR. 3,210,000   |  |  |  |  |  |
| 7.   | Total Project cost in                 | NPR. 645,779,554.54 (including Vat<br>and contingency)   |  |  |  |  |  |
| 8.   | Cost per km in Nrs.                   | NPR. 111,707,240.02 (including Vat<br>and contingency)   |  |  |  |  |  |

#### Table 1.1: Details of Pokharapali-Panditpur Road Upgradation Project

#### 1.3. Overview of project Town Area

There are seven provinces of Nepal formed by grouping the existing districts of Nepal. Each of the 77 districts has local units. Nepal includes six metropolises, 11 sub-metropolises, 276 municipal councils and 460 rural councils. Ramgram municipality falls in Lumbini Province.

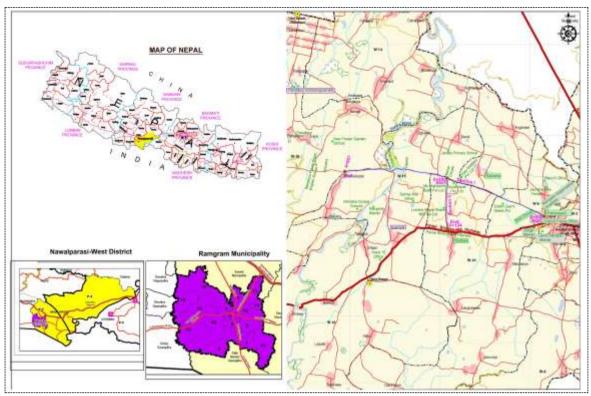


Figure 1.1: Index Map of the Project

Ramgram, established in 2053 BS as a municipality, is situated within Nawalparasi district of the western development region, now in Lumbini Province of federal Nepal. It is approximately 250 km south-west away from capital city Kathmandu and 9 km south from the Mahendra Highway. Nowadays, it is also connected through E-W highway, 5 km from Bhumahi, a small town connected to Mahendra Highway. The current Ramgram Municipality was formed by merging the then 13 wards of previous Ramgram municipality, and the then Sanai VDC (ward 4 & 5), Sukrauli, Hakui, Amraut, Banjaria and Deva Gaun VDCs.

#### 1.4. Road Network and Transportation

The municipality has 4.63 per square km of coverage of roads (MTMP-2017 & field observation). The road length per thousand populations is 6.2 km. Total road network within Ramgram Municipality is 130 km of which Strategic road network is 19 km. Other remaining are Feeder, DRCN, and municipal roads. Only 48.5 km is blacktopped The roads leading to major settlements like Dewa, Panditpur, Baikunthapur, Pathauli, Nadawa, Kunwar, Paratikar, Ujaini, Banjariya, Laxmipur, Tanahawa, Hakui, Phulbariya are mostly earthen and in poor condition. Ward wise, wards 8, 14, 17 and 18 do not have sufficient road networks as compared to other wards. Of total roads, the conditions of almost all roads mostly of ward 8, 14, 16, 17 and 18 are in poor condition and need upgrading and regular maintenance. A list of primary roads is given in table below;

| Road Name            | Total Length(km) | Ext. Width (m) | Metalled Road (km) |
|----------------------|------------------|----------------|--------------------|
| Parasi - Sunwal Road | 8.21             | 16             | 8.21               |
| Hulaki Sadak         | -                | 7              | -                  |
| Maheshpur Road       | 4.4              | 16             | 4.4                |

 Table 1.2: Road Infrastructure (Source: MTMP, 2017)

At present, there is road widening and upgrading by DUDBC division office and a list of which is given below;

- a) Manjariya Chowk to Ghodpali to Jarahi Khola road
- b) Buddha Chowk on the south to Nilo gate on the north of almost 1.5 km (Being upgraded to 4 lanes soon with the drain on both sides and solar light on both sides of the road. The agreement for the construction has already been done.
- c) The road from Manjhariya chowk to Jharai Khola in the east of almost 2-3 km (being upgraded to 2 lanes/the agreement for the construction of the road has already been done (10, 5, 3, 12).

The intra-city transportation is limited within core area only. The main origin of buses is Buddha Chowk of Parasi and destinations are Sunwal, Bhumahi, Butwal, Bhairahawa, and Maheshpur. The main and intercity roads lack public facilities like bus stand, street light, and intercity Bus Park. While the population of wards 11, 12, 10, 2 has relatively easy access to public transportation service, ward no 8 suffers the most in terms of accessibility to public vehicles. Besides buses, the public mobility relies on the rickshaws and privately owned bicycles (73.91%).

#### 1.5. Need for the project

The proposed project connects the settlement area of Pokharapali, Parasi, Nanai, Sukrauli etc. Pokharapali is one of the core area of the Ramgram municipality where various industries such as Steel Factory, Beverage Industries, Noodle Factory, Gas Udhyog etc are avilable. The road provides a link between Pokharapali and Panditpur through Turiya Khola Bridge in the west and to Parasi Road in the south. Currently, the existing road width is 6 m in average without any pedestrian path on either side. The pavement condition of the road is poor. 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 municipalities on the region. The improvement of the road also provides better livelihood for the people living by the road side.

The proposed project involves rehabilitation of the 5.781 kilometers of two section of the Pokharapali-Panditpur Road in Ramgram Municipality of Nawalparasi district of Lumbini Province. The road starts from Pokharaphali in Parasi and ends at Turiya Khola in the west as Section I of the road whereas Section II starts at Nanai, somewhere at Ch-2+300 of the Section I of the Road Project and end at Parasi Road (Nadawa) to the south. The road passes through flat lands with almost plain slopes and passes through settlements, agricultural lands and industrial lands. The project road currently has a single lane operational paved 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 Pokharapali - Panditpur 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.

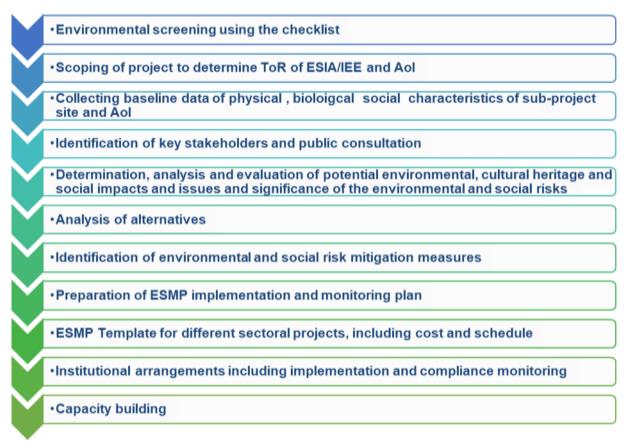


Figure 1.2: ESIA Process for all sub-projects

#### 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 interation with the Ramgram Municipality 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 (Ramgram Municipality 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
- 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

Every sub-project under the NUGIP is subject to an environmental and social screening process. The screening process establishes the level of environmental and social assessment required. The screening process intends to identify relevant possible environmental and social concerns as well as suggest any further investigation and assessment as necessary. Primarily, the environmental and social screening exercise is undertaken to determine the key environmental and social issues/concerns and the nature and magnitude of the potential impacts that are likely to arise on account of the proposed sub-projects. 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 results were used to determine the need for detailed assessment and the extent and type of environmental and social assessment.

#### 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.

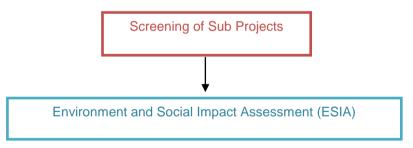


Figure 1.3: Flow of preparation of safeguard instruments for the project

#### 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 towards southwest from Kathmandu and towards southeast from the provincial capital Dekhuri of Lumbini Province, and has an area of 94.15 sq. kilometers. It lies between the latitudes 27°28'10" to 27°35'04" North and longitudes 83°35'19" to 83°43'14" East. The altitude varies from 100 m to 130 m from sea level. It covers an area of 93.9 square kilometers. Two main rivers, the Jharahi and the Ramsanda Rivers run through this municipality towards east and west respectively. The municipality is surrounded by Sarawal rural municipality in the east, Palhinandan and Rohini rural municipalities in the south, Omsatia rural municipality and Devdaha municipality in the west and Sunwal municipality in the north. (*Source: Municipal Profile of Ramgram Municipality, 2076*)

The area is consisting of very coarse to coarse sediments developing gently sloping surface toward south. Most of the south flowing rivers originated in the hinterland area manifest braided river pattern. Generally, debris flows, river bank erosion and river channel shifting are the major hazardous events in the zone.

#### 2.1.2 Climate

The municipality has warm temperate to tropical climatic conditions, and it has an average annual temperature of 24.4°C. May and June are the warmest months with an average temperature above 29 °C and January are the coldest one with an average temperature of 15.7°C (max temp-22.8°C and min temp 8.7°C). The summers here have a good deal of rainfall compared to the winter season. The average annual rainfall is 1753 mm. November, December, and February are the driest month and most precipitation falls in July, with an average of 510 mm (table below);

|                   | Jan  | Feb  | Mar  | Apr  | Мау  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Avg. Temp. (°C)   | 15.7 | 18.1 | 23   | 28.2 | 29.8 | 29.6 | 28.7 | 28.6 | 27.7 | 26.3 | 21.2 | 16.3 |
| Min. Temp. (°C)   | 8.7  | 10.4 | 14.5 | 20.2 | 23.4 | 24.8 | 25.1 | 24.9 | 23.6 | 21.5 | 14.3 | 9    |
| Max. Temp. (°C)   | 22.8 | 25.8 | 31.5 | 36.2 | 36.3 | 34.4 | 32.4 | 32.4 | 31.8 | 31.1 | 28.2 | 23.7 |
| Precipitation, mm | 17   | 3    | 11   | 18   | 58   | 310  | 510  | 466  | 274  | 83   | 2    | 1    |

Table 2.1: Weather data of the municipality

(Source: https://en.climate-data.org/location/422368/)

#### 2.1.3 Water Bodies

The main river system of the municipality is Jharahi River, Turiya River and Ramasanda River. However, these are intermittent rivers which flow only during the monsoon season. There are a number of ponds in the municipality which are suitable for aquaculture. Due to the flat terrain of the municipality and lack of proper drainage system, the core area of the municipality receives flood during monsoon season. About 25% of the households are always flooded during the monsoon. Furthermore, the adjacent settlement areas of Jharahi and Ramasanda rivers are at a risk of inundation due to the intersection of these rivers. Furthermore, groundwater of the municipality is also contaminated with Arsenic with concentration more than 50 ppb (KU, 2006).

#### 2.1.4 Land use pattern

The municipality has 87.23% agricultural land, 5.17% settlement area, 3.28% garden & 2.87% water bodies. The rest are barren land, forest area, industrial area and sand belt (*Source: Municipality profile, 2076 BS*). Built-up area, agricultural land, barren land and mixed land use pattern is found along proposed alignment. The proposed road would directly serve about 534 households i.e. about 2937 population of the municipality considering buffer of 500 m in either direction of proposed road alignment.

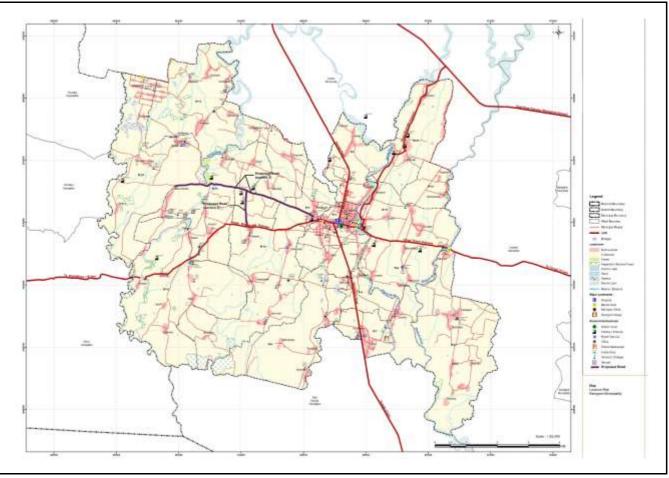


Figure 2.1: Landuse map of the project municipality



#### 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 the Butwal station is taken for reference, and this shows that the PM<sub>2.5</sub> level is 34.2  $\mu$ g/m<sup>3</sup> and the AQI is 97 (*Source: https://www.iqair.com/nepal/western-region/butwal, 20<sup>th</sup> April 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;

| SN | Time, hrs                     | Average Noise levels,  | Time                        | Average Noise levels,  |
|----|-------------------------------|------------------------|-----------------------------|------------------------|
|    | 31 <sup>st</sup> January 2023 | dBA                    | 31 <sup>st</sup> March 2023 | dBA                    |
| 1  | 9:30                          | 65 (Min. 47, Max. 92)  | 12:50                       | 69 (Min. 47, Max. 92)  |
| 2  | 10:05                         | 71 (Min. 40, Max. 90)  | 13:24                       | 68 (Min. 40, Max. 90)  |
| 3  | 10:37                         | 59 (Min. 52, Max. 95)  | 13:59                       | 64 (Min. 52, Max. 95)  |
| 4  | 11:10                         | 69 (Min. 45, Max. 89)  | 14:37                       | 68 (Min. 45, Max. 89)  |
| 5  | 11:45                         | 70 (Min. 52, Max. 102) | 15:14                       | 70 (Min. 52, Max. 102) |
| 6  | 13:50                         | 59 (Min. 56, Max. 92)  | 15:45                       | 67 (Min. 56, Max. 92)  |
| 7  | 14:15                         | 66 (Min. 58, Max. 95)  | 16:08                       | 74 (Min. 58, Max. 95)  |
| 8  | 14:47                         | 68 (Min. 51, Max. 104) | 16:41                       | 69 (Min. 51, Max. 104) |
| 9  |                               |                        | 17:11                       | 71 (Min. 54, Max. 97)  |
|    | Average                       | 65.8                   |                             | 68.9                   |

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

Source: Field study, 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 NDWQS 2022 (*Annex 7*). The report shows that although turbidity is slightly high, there is no foul taste and odour. Some of the sample values were Iron - 0.1 mg/L, and Total Hardness of 320 mg/L.

#### 2.1.6 Sanitation and Waste Management

Wards 1, 2, 3, 4, 5, 6 and 12 are urban wards. However, the municipality lacks any kind of systematic sewerage system. The households having septic tank is around 58.37% in the municipality (*Source: Municipal Profile, 2076 BS*). There is no fecal sludge treatment system in the municipality. Private companies collect septage from the septic tank when it is full, and the user's fee for this service ranges from NPR. 2,000 to NPR 3,000 for a single trip.

Source of waste generation in Ramgram Municipality are residence, hotel, hospital, agricultural farms, and industries. From field observation, it is found that organic waste, plastics, paper, glass, metal, textiles, leather, and rubber are constituent of mixed waste generated within Ramgram Municipality. Currently, waste is being collected from roadside open piles of the major market area (near Municipality office, Buddha Chowk, Ghodapali, Pokaharapali, Parasi Bazaar) within municipality then disposed on the bank of Jharahi River in Santichaur. There is not any properly managed sanitary landfill site. The municipality collects the waste twice a week using municipal truck and dumps and burn them in an open landfill site near the bank of Jharahi River. As per the municipal profile, 32.63% of the HHs manage their waste partially within their compound by pit burial, and around 15.45% of the HHs practice composting of organic waste. However, a systematic approach for solid waste management is yet to be established in the municipality.

#### 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 Ramgram Municipal Profile, 2076 BS.

#### 2.2.1 Flora and Fauna

The major tree species of the project area, and near to the road alignment are Sissau (*Dalbergia sissoo*), Simal (*Bombax ceiba*), Jamun (*Syzygium cumini*), Kadam (*Anthocephalus chinensis*), Khayer (*Acacia catechu*), Bakaino (*Melia azedarach*), Teak (*Tectona grandis*), Masala (*Eucalyptus camaldulensis*), Bar (*Ficus benghalensis*), Peepal (*Ficus religiosa*), Aanp (*Mangifera indica*), Sarifa (*Annona squamosa*), Mewa (*Carica papita*), Katahar (*Artocarpus heterophyllus*), Litchi (*Litchi chinensis*), Nariwal (*Cocos nucifera*), Bayer (*Ziziphus jujuba*), Amba (*Psidium guajava*), Kera (*Musaceae banana*), Saaj (*Terminalia alata*) and Ashoka (*Saraca asoca*). 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 RoW 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 area doesn't have major faunal species. The faunal species were listed with reference to district level information and the municipal profile. The major fauna of the project municipality and the project district are Monkey (*Macaca, mulaata*), Common Langur (*Presbytes entellus*), Common Leopard (*Panthera pardus*), Wild boar (*Sus scrofa*), Jackal (*Canis aureus*), Fox (*Vulpes vulpes*), Jungle cat (*Felis chaus*), Porcupine (*Hystrix indica*), Malsapro (*Martes flavigula*), squirrel (*Ratufa bicolor*), etc. These faunas are likely to be spotted only in larger project vicinity. Since there are no actual wild habitats within the project's zone of influence, there is no frequent occurrence of these animals within the project vicinity. Likewise, the major avian species found in the project area include vulture (*Cathartes aura*), eagle (*Clanga hastata*), crow (*Corvus splendens*), myna (*Acridotheres tristis*), suga (*Psittacula himalayana*), owl (*Bubo bubo*), pigeon (*Columba livia*), dhukur (*Streptopelia orientalis*),

bhangera (*Passer domesticus*), bat (*Pipistrellus sp.*), bakula (*Ardea cinerea*), bulbul (*Pycnonotus jocosus*), and kalij (*Lophura leucomelanos*). Common krait (*Bungarus caeruleus*), Common cobra (*Naja naja*), Python (*Python molurus*) and Dhaman (*Ptyas mucosa*) are the common snakes found in the project area. Some of the locally found fish species in the project area are Suiya (*Gudusia chapra*), Patara (*Notopterus notopterus*), Naini (*Cirrhinus mrigula*), Garahi (*C.punctatus*), Bam (*Anguilla bengalensis*), Chuchche Bam/Kauwa (*Xenatodon Cancila*), Magur (*Clarius batrachus*), etc. However, the proposed project alignment is not located close to or within a national park and conservation area.

#### 2.2.2 Ethnobotany

Neem (*Azadirachta indica*), Tulasi (*Ocimum sanctum*), kumkum dhup, Ghodataapre (*Centella asiatica*), Bel (*Aegle marmelos*), Harro (*Terminalia chebula*), Barro (*Terminalia bellirica*), Amala (*Phyllanthus emblica*), Ghiukumari (*Aloe barbadensis*) and Kurilo (*Asparagus officinalis*) 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. This municipality is named after the ancient Ramgram Stupa where Gautam Buddha's Asthi Dhatu (Relic) has been placed. Hence, the project area has religious significance as well. So, connectivity improvement is very significant for the proposed project area. Pokharpali chowk, Bedi chowk, Nanai chowk, Nanai, Nadawa, Digbal, Ghinaha, Banjariya, Kuinya and Panditpur are the major settlements of the project area. The proposed road also connects Parasi Highway, and the Parasi Highway further connects to the Mahendra Highway and Postal Highway.

#### 2.3.2 Details of settlements within the project area

Followings are the settlements falling within the project area that comes within wards 6, 10, 14, 15 and 18 of Ramgram Municipality, and starting at Pokharapali (WN 6) and ending at Kuiya, Panditpur Chowk (WN 18);

| Ward         | d No.      | Description                   |
|--------------|------------|-------------------------------|
| Ramgram      | Ward No. 6 | Pokharapali chwok, Bedi chowk |
| Municipality | Ward No.10 | Nanai chwok, Nadawa chowk     |
|              | Ward No.14 | Nanai                         |
| Ward No.15   |            | Nadawa, Digbal, Ghinaha       |
|              | Ward No.18 | Banjariya, Kuinya, Panditpur  |

Table 2.3: Details of settlements within the project area

\* Note: Proposed road alignment passes through boarders of wards 10 & 14, & wards 15 & 18

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 962, and the total population is 4858.



Figure 2.2: Settlements and facilities along the road Pokharapali-Panditpur Road Alignments

#### 2.3.3 Existing Road Condition and Road Side Drains

In case of Section I, 3.3 km is black-top surface, 1.02 km of earthen road and 0.337 km of gravel road; while in case of Section II all 1.124 km is gravel road. The existing road width varies from 4.5 m to about 7 m, and this includes carriageway, shoulder and side drain where existing. At site, there is availability of 12.5 m or extendable road width throughout the road alignment. Total length of side drain in the whole road section is 190 m of which 120 m fall in Section I of the road project. The existing side drain network in the road alignment is summarized as given in table below;

#### Table 2.4: Existing side drain structure along the proposed road project (Section I)

| SN | Chainage, km        |          | Side (from Central line) | Length (m) | Remark     |
|----|---------------------|----------|--------------------------|------------|------------|
| 1  | From 0+000 To 0+120 |          | Left                     | 120        | within RoW |
| 2  | From 0+000          | To 0+070 | Right                    | 70         | within RoW |

#### 2.3.4 Culverts along the road alignment

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

|             |                  | No. : Pokh<br>of Survey:   | araphali F                      | Panditpur R                | oad                 | -                                  |  |               |  |              |                     |                     |                              |  |                    |                             |                                 |        |
|-------------|------------------|--|---------------------------------|----------------------------|---------------------|------------------------------------|--|---------------|--|--------------|---------------------|---------------------|------------------------------|--|--------------------|-----------------------------|---------------------------------|--------|
| S<br>N<br>o | Location<br>(km) | Type<br>of<br>Structu<br>res<br>(Pipe,<br>Slab,<br>Box,<br>Arch) | Thickn<br>ess of<br>Slab<br>(m) | Span<br>Arrange            | Carri<br>age        | Widt<br>h of<br>Culv<br>ert<br>(m) | Details of<br>Protection Works           |               | Condition of various features of Culvert |              |                     |                     |                              | Height<br>above<br>Crown level<br>of Structure |                    | Prese<br>nce<br>of<br>Scour | Adequac<br>y of<br>Water<br>way | Remark |
|             |                  |  |                                 | ment<br>(No. x<br>Dia) (m) | way<br>Width<br>(m) |                                    | Туре                                     | Condit<br>ion | Slab/<br>Pipe/<br>Box/<br>Arch           | Head<br>wall | Wing<br>wall        | Retur<br>n wall     | Parap<br>et/<br>Handr<br>all | U/S<br>Side<br>(m)                             | D/S<br>Side<br>(m) |                             |                                 |        |
| 1           | 0+257.8          | Hume<br>Pipe<br>Culvert  | -                               | 1*0.45                     | 5.1                 | 5                                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | Fair         | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on          | 0.4  | 0.45               | No                          | Blocked                         |        |

|        | Date c   | of Survey:   |                                 |   |                     | -                  |  |               |  |                     |                     |                     |                              |  |                    |                             |                                 |        |
|--------|----------|--|---------------------------------|---|---------------------|--------------------|--|---------------|--|---------------------|---------------------|---------------------|------------------------------|--|--------------------|-----------------------------|---------------------------------|--------|
| S      | Location | Type<br>of<br>Structu<br>res<br>(Pipe,<br>Slab,<br>Box,<br>Arch) | Thickn<br>ess of<br>Slab<br>(m) | Span<br>Arrange<br>ment<br>(No. x<br>Dia) (m) | Carri<br>age        | Widt<br>h of       | Detai<br>Protectior                      |               | Condition of various features of Culvert |                     |                     |                     |                              | Height<br>above<br>Crown level<br>of Structure |                    | Prese<br>nce<br>of<br>Scour | Adequac<br>y of<br>Water<br>way | Remark |
| N<br>O | (km)     |  |                                 |   | way<br>Width<br>(m) | Culv<br>ert<br>(m) | Туре                                     | Condit<br>ion | Slab/<br>Pipe/<br>Box/<br>Arch           | Head<br>wall        | Wing<br>wall        | Retur<br>n wall     | Parap<br>et/<br>Handr<br>all | U/S<br>Side<br>(m)                             | D/S<br>Side<br>(m) |                             |                                 |        |
| 2      | 0+344.5  | Hume<br>Pipe<br>Culvert  | -                               | 1*0.6   | 5                   | 6                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Р             | Fair                                     | Fair                | No<br>provisi<br>on | No<br>provisi<br>on | N/A                          | 0.65   | 0.7                | No                          | Yes                             |        |
| 3      | 0+375    | Hume<br>Pipe<br>Culvert  | -                               | 1*0.6   | 4                   | 5                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | Fair                | Fair                | No<br>provisi<br>on | N/A                          | 0.65   | 0.7                | No                          | Partially<br>Blocked            |        |
| 4      | 0+579.4  | Hume<br>Pipe<br>Culvert  | -                               | 1*0.6   | 5                   | 6                  | Brick<br>Masona<br>ry<br>&Plaster        | Р             | Fair                                     | Fair                | Fair                | No<br>provisi<br>on | N/A                          | 0.6  | 0.65               | No                          | Yes                             |        |
| 5      | 0+829.5  | Hume<br>Pipe<br>Culvert  | -                               | 1*0.45  | 5                   | 6                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | No<br>provisi<br>on | Fair                | No<br>provisi<br>on | Fair                         | 0.5  | 0.6                | No                          | Blocked                         |        |

Road No. : Pokharaphali Panditpur Road

|        | Date o   | of Survey:   |                                 | •   |                     | -                  |  |               |  |              |                     |                     |                              |                    |  |    |                                 |        |
|--------|----------|--|---------------------------------|---|---------------------|--------------------|--|---------------|--|--------------|---------------------|---------------------|------------------------------|--------------------|--|----|---------------------------------|--------|
| S      | Location | Type<br>of<br>Structu<br>res<br>(Pipe,<br>Slab,<br>Box,<br>Arch) | Thickn<br>ess of<br>Slab<br>(m) | Span<br>Arrange<br>ment<br>(No. x<br>Dia) (m) | Carri<br>age        | Widt<br>h of       | Detail<br>Protectior                     |               | Condition of various features of Culvert |              |                     |                     |                              |                    | Height<br>above<br>Crown level<br>of Structure |    | Adequac<br>y of<br>Water<br>way | Remark |
| N<br>O | (km)     |  |                                 |   | way<br>Width<br>(m) | Culv<br>ert<br>(m) | Туре                                     | Condit<br>ion | Slab/<br>Pipe/<br>Box/<br>Arch           | Head<br>wall | Wing<br>wall        | Retur<br>n wall     | Parap<br>et/<br>Handr<br>all | U/S<br>Side<br>(m) | D/S<br>Side<br>(m)                             |    |                                 |        |
| 6      | 1+058    | Hume<br>Pipe<br>Culvert  | -                               | 2*0.9   | 5                   | 6                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | Fair         | Fair                | No<br>provisi<br>on | N/A                          | 0.6                | 0.65   | No | Yes                             |        |
| 7      | 1+129    | Hume<br>Pipe<br>Culvert  | -                               | 1*0.9   | 5                   | 6                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | Fair         | Fair                | No<br>provisi<br>on | N/A                          | 0.55               | 0.6  | No | Yes                             |        |
| 8      | 1+665.7  | Hume<br>Pipe<br>Culvert  | -                               | 1*0.6   | 4                   | 5                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | Fair         | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on          | 0.5                | 0.55   | No | Yes                             |        |
| 9      | 1+782    | Hume<br>Pipe<br>Culvert  | -                               | 1*0.6   | 5                   | 5                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Ρ             | Fair                                     | Fair         | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on          | 0.55               | 0.6  | No | Yes                             |        |

Road No. : Pokharaphali Panditpur Road

|     | Date o   | of Survey:                       |                                 |                            |                     | -                  |  |               |                                |                     |                     |                     |  |                    |                             |                                 |        |  |
|-----|----------|----------------------------------|---------------------------------|----------------------------|---------------------|--------------------|--|---------------|--------------------------------|---------------------|---------------------|---------------------|--|--------------------|-----------------------------|---------------------------------|--------|--|
| S   | Location | Type<br>of<br>Structu<br>res     | Thickn<br>ess of<br>Slab<br>(m) | Span<br>Arrange            | Carri<br>age        | Widt<br>h of       | Detai<br>Protectior                      | Cond          | ition of va                    | arious fea          | atures of (         | Culvert             | Height<br>above<br>Crown level<br>of Structure |                    | Prese<br>nce<br>of<br>Scour | Adequac<br>y of<br>Water<br>way | Remark |  |
| N - | (km)     | (Pipe,<br>Slab,<br>Box,<br>Arch) |                                 | ment<br>(No. x<br>Dia) (m) | way<br>Width<br>(m) | Culv<br>ert<br>(m) | Туре                                     | Condit<br>ion | Slab/<br>Pipe/<br>Box/<br>Arch | Head<br>wall        | Wing<br>wall        | Retur<br>n wall     | Parap<br>et/<br>Handr<br>all                   | U/S<br>Side<br>(m) | D/S<br>Side<br>(m)          |                                 |        |  |
| 10  | 2+020    | Minor<br>Pipe<br>Crossi<br>ng    | -                               | 1*0.45                     | 5                   | 6                  | No                                       | Р             | No<br>provisi<br>on            | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on | N/A  | 0.6                | 0.65                        | No                              | yes    |  |
| 11  | 2+046    | Minor<br>Pipe<br>crossin<br>g    | 1                               | 1*0.45                     | 5                   | 6                  | No                                       | Р             | No<br>provisi<br>on            | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on | N/A  | 0.6                | 0.6                         | No                              | yes    |  |
| 12  | 2+382    | Hume<br>Pipe<br>Culvert          | -                               | 1*0.6                      | 4                   | 5                  | Brick<br>Masona<br>ry<br>&Plaster<br>ing | Р             | Fair                           | Fair                | Fair                | No<br>provisi<br>on | N/A  | 0.5                | 0.65                        | No                              | Yes    |  |
| 13  | 2+899    | Hume<br>Pipe<br>Culvert          | -                               | 1*0.6                      | 4.5                 | 6                  | No                                       | Р             | No<br>provisi<br>on            | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on | N/A  | 0.35               | 0.4                         | No                              | yes    |  |
| 14  | 3+291    | Hume<br>Pipe<br>Culvert          | -                               | 1*0.6                      | 4.5                 | 6                  | No                                       | Р             | No<br>provisi<br>on            | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on | N/A  | 0.35               | 0.35                        | No                              | yes    |  |

Road No. : Pokharaphali Panditpur Road

|        | Road I           | No. : Pokh                       | araphali I       | Panditpur R     | oad                 | ]                  |                                |               |  |                     |                     |                     |                              |  |                    |                             |                                 |        |
|--------|------------------|----------------------------------|------------------|-----------------|---------------------|--------------------|--------------------------------|---------------|--|---------------------|---------------------|---------------------|------------------------------|--|--------------------|-----------------------------|---------------------------------|--------|
|        | Date o           | f Survey:                        |                  |                 |                     |                    |                                |               |  |                     |                     |                     |                              |  |                    |                             |                                 |        |
| S      | Location<br>(km) | Type<br>of<br>Structu<br>res     | Thickn<br>ess of | Span<br>Arrange | Carri<br>age        | Widt<br>h of       | Details of<br>Protection Works |               | Condition of various features of Culvert |                     |                     |                     |                              | Height<br>above<br>Crown level<br>of Structure |                    | Prese<br>nce<br>of<br>Scour | Adequac<br>y of<br>Water<br>way | Remark |
| N<br>O |                  | (Pipe,<br>Slab,<br>Box,<br>Arch) | Slab<br>(m)      | ment            | way<br>Width<br>(m) | Culv<br>ert<br>(m) | Туре                           | Condit<br>ion | Slab/<br>Pipe/<br>Box/<br>Arch           | Head<br>wall        | Wing<br>wall        | Retur<br>n wall     | Parap<br>et/<br>Handr<br>all | U/S<br>Side<br>(m)                             | D/S<br>Side<br>(m) |                             |                                 |        |
| 15     | 4+640.7          | Hume<br>Pipe<br>Culvert          | -                | 1*0.3           | 4.5                 | -                  | No                             | Р             | No<br>provisi<br>on                      | No<br>provisi<br>on | No<br>provisi<br>on | No<br>provisi<br>on | N/A                          | 0.18   | 0.20               | No                          | yes                             |        |

# 2.3.5 Existing Structures along the road alignment

The road upgradation works at the starting stretch of the Pokharapali road section (section I) will require reinstatement of around 280 m of water supply pipelines and 14 hand-pumps. In addition to this, following structures lie within the RoW and need to be addressed as per;

| SN | Structures      | Qty./Number                  | Remarks                           |
|----|-----------------|------------------------------|-----------------------------------|
| 1  | Water supply    | 280 m                        | Around 20 mm dia.                 |
|    | pipeline        | (From the starting point)    |                                   |
| 2  | Hand-pumps      | 14 nos.                      | Reinstatement will be carried out |
|    |                 | (Private hand pumps; and     |                                   |
|    |                 | list is provided in Annex 4) |                                   |
| 3  | Electric poles  | 109 nos. in section I, and   | Relocation will be carried out    |
|    |                 | 61 nos. in section II        |                                   |
| 4  | Drainage pipe   | 531 m in section II (Ch.     | Around 150 mm dia. waste pipes    |
|    |                 | 0+593 km to Ch. 1+124 km)    | of the industry area along road   |
|    |                 |                              | alignment                         |
| 5  | Irrigation pipe | 10 m of CI pipeline          | 150 mm dia                        |
|    |                 | (Ch. 0+375 of Section I)     |                                   |

| Table 2.6: Existing structures along the roa | d alignment |
|--|-------------|
|  |             |

Source: DPR - Pokharapali Panditpur Road Upgradation, 2023

# 2.3.6 Population and Demography

The proposed project lies in Ramgram Municipality of Nawalparasi District (West) in the Lumbini Provience of Nepal. The total population of the district, is 385,515 with male population of 188,076 & female population of 197,439 and household number of 83,808. (*Source: NPHC, CBS - 2021*). The average family size of the district is 4.60, which is higher than that of the national average (4.32). The total population of Ramgram Municipality is 59,831 and total household is 12,063. The average household size of the municipality is 4.96 which is greater than that of district household size of 4.60. The total number of households in ward no. 6, 10, 14, 15 and 18 of Ramgram Municipality is 4267 and average household size is 5.05 (*Source: Municipal Profile, Ramgram - 2076 BS*). Please refer to table number 2.4 below;

| Table 2.7: Total number of households, average households size of ward level within the |
|---|
| project area  |

|                      | p. • J• •   |                 |                    |
|----------------------|-------------|-----------------|--------------------|
| Local Level          | Ward No.    | Total Household | Average Households |
|                      |             |                 | size               |
| Ramgram Municipality | Ward No. 6  | 334             | 5.13               |
|                      | Ward No. 10 | 772             | 5.13               |
|                      | Ward No. 14 | 993             | 4.91               |
|                      | Ward No. 15 | 907             | 5.49               |
|                      | Ward No. 18 | 1261            | 4.77               |
| Tot                  | al          | 4267            | 5.05               |

Source: Municipal Profile of Ramgram, 2076 BS

The total male population is 10,608 and the total female population is 10,930 which gives sex ratio of 0.97 as shown in table 2.5 below;

|    | 14610 210 |       | male and remaie | population of |            |       |
|----|-----------|-------|-----------------|---------------|------------|-------|
| SN | Ward No.  | Male  | Percentage      | Female        | Percentage | Total |
| 1  | 6         | 837   | 48.86           | 876           | 51.14      | 1713  |
| 2  | 10        | 1949  | 49.17           | 2015          | 50.83      | 3964  |
| 3  | 14        | 2432  | 49.92           | 2440          | 50.08      | 4872  |
| 4  | 15        | 2502  | 50.25           | 2477          | 49.75      | 4979  |
| 5  | 18        | 2888  | 48.05           | 3122          | 51.95      | 6010  |
|    | Total     | 10608 | 49.25           | 10930         | 50.75      | 21538 |

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

Source: Municipal Profile of Ramgram, 2076 BS

The economically active population (15 years to 59 years age group) of the project area is 13,809 which is around 64.1% of the total population of the project area. The population of children is 5,672 and is around 26.3%, and the population of elderly people is 2057 which is around 9.6% of the total population of the project area as shown in table 2.6 below;

|        |            | <u></u>    |      |             |       |             |       |             |       |             |       |       |        |
|--------|------------|------------|------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------|--------|
| S<br>N | Age, years | Ward No. 6 |      | Ward No. 10 |       | Ward No. 14 |       | Ward No. 15 |       | Ward No. 18 |       | Total |        |
| N      | 3.,,,      | Рор        | %    | Рор         | %     | Рор         | %     | Рор         | %     | Рор         | %     | Рор   | %      |
| 1      | 0 - 14     | 448        | 7.90 | 947         | 16.70 | 1170        | 20.63 | 1431        | 25.23 | 1676        | 29.55 | 5672  | 26.33  |
| 2      | 15 - 59    | 1118       | 8.10 | 2633        | 19.07 | 3218        | 23.30 | 3101        | 22.46 | 3739        | 27.08 | 13809 | 64.11  |
| 3      | > 60       | 147        | 7.15 | 384         | 18.67 | 484         | 23.53 | 447         | 21.73 | 595         | 28.93 | 2057  | 9.55   |
|        | Total      | 1713       | 7.95 | 3964        | 18.40 | 4872        | 22.62 | 4979        | 23.12 | 6010        | 27.90 | 21538 | 100.00 |

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

Source: Municipal Profile of Ramgram, 2076

Total male population in the age group of 15 years to 59 years is 6567, and total female population in the same age group is 7242 as shown in table 2.7 below;

| Table 2.10: Age wise Male (M) & Fe | male (F) Population Distribution in Ward Level |
|------------------------------------|--|
|                                    |  |

| S     |          | Wa      | rd 6 | Ward 10 |      | Ward 14 |      | War  | d 15 | Ward 18 |      | Total |       |
|-------|----------|---------|------|---------|------|---------|------|------|------|---------|------|-------|-------|
| Ν     | Age, yrs | Μ       | F    | М       | F    | М       | F    | М    | F    | М       | F    | М     | F     |
| 1     | 0 - 14   | 23<br>1 | 217  | 488     | 459  | 615     | 554  | 728  | 702  | 878     | 798  | 2940  | 2730  |
| 2     | 15 - 59  | 53<br>1 | 587  | 1254    | 1379 | 1557    | 1661 | 1533 | 1568 | 1692    | 2047 | 6567  | 7242  |
| 3     | > 60     | 75      | 72   | 207     | 177  | 260     | 225  | 241  | 207  | 318     | 277  | 1101  | 958   |
| Total |          | 83<br>7 | 876  | 1949    | 2015 | 2432    | 2440 | 2502 | 2477 | 2888    | 3122 | 10608 | 10930 |

Source: Municipal Profile of Ramgram, 2076

# 2.3.7 Ethnicity

The project area has heterogeneous community in terms of caste and ethnicity. In these wards, there are 30% Tharu, 11% Yadav, 9% Kewat, 7% Chamar/Harijan/Ram, 5% Muslim, 3% Brahman (hill), and others include Teli, Dusadh, Rajbhar, Kurmi, Kahar, Panta, Dhobi, Kurmi, Sanahi, etc. Thaur, Yadav and Kewat are the indigenous/*Adibasi* people of this region. In the proposed subproject area there are 1291 household of indigenous peoples of Tharu, who are indigenous to the Terai.

| Caste/Ethnicit          |      | Ward No.<br>6 |      | Ward No. 10 |      | No. 14 | Ward | No. 15 | Ward | No. 18 | Grand Total |       |
|-------------------------|------|---------------|------|-------------|------|--------|------|--------|------|--------|-------------|-------|
| y Ward No.              | Pop. | %             | Pop. | %           | Pop. | %      | Pop. | %      | Pop. | %      | Рор.        | %     |
| Tharu                   | 77   | 4.50          | 1727 | 43.57       | 1812 | 37.19  | 578  | 11.61  | 2323 | 38.65  | 6517        | 30.26 |
| Yadav                   | 73   | 4.26          | 289  | 7.29        | 627  | 12.87  | 956  | 19.20  | 367  | 6.11   | 2312        | 10.73 |
| Chamar/<br>Harijan/Ram  | 124  | 7.24          | 425  | 10.72       | 338  | 6.94   | 205  | 4.12   | 454  | 7.55   | 1546        | 7.18  |
| Kewat                   | 678  | 39.58         | 357  | 9.01        | 149  | 3.06   | 706  | 14.18  | 64   | 1.06   | 1954        | 9.07  |
| Musalman                | 89   | 5.20          | 150  | 3.78        | 198  | 4.06   | 646  | 12.97  | 61   | 1.01   | 1144        | 5.31  |
| Teli                    | 77   | 4.50          | 154  | 3.88        | 39   | 0.80   | 183  | 3.68   | 0    | 0.00   | 453         | 2.10  |
| Brahmin (Hill)          | 49   | 2.86          | 34   | 0.86        | 151  | 3.10   | 16   | 0.32   | 397  | 6.61   | 647         | 3.00  |
| Dusadh/<br>Pasawan/Pasi | 0    | 0.00          | 56   | 1.41        | 150  | 3.08   | 180  | 3.62   | 274  | 4.56   | 660         | 3.06  |
| Rajbhar                 | 5    | 0.29          | 97   | 2.45        | 52   | 1.07   | 171  | 3.43   | 166  | 2.76   | 491         | 2.28  |
| Not coated              | 180  | 10.51         | 34   | 0.86        | 53   | 1.09   | 1    | 0.02   | 4    | 0.07   | 272         | 1.26  |
| Kurmi                   | 0    | 0.00          | 57   | 1.44        | 0    | 0.00   | 225  | 4.52   | 0    | 0.00   | 282         | 1.31  |
| Kahar                   | 33   | 1.93          | 0    | 0.00        | 94   | 1.93   | 186  | 3.74   | 54   | 0.90   | 367         | 1.70  |
| Others Terai            | 25   | 1.46          | 0    | 0.00        | 0    | 0.00   | 117  | 2.35   | 40   | 0.67   | 182         | 0.85  |
| Others                  | 303  | 17.69         | 3964 | 14.73       | 1209 | 24.82  | 809  | 16.25  | 1806 | 30.05  | 4711        | 21.87 |
| Total                   | 1713 | 100           | 3964 | 100         | 4872 | 100    | 4979 | 100    | 6010 | 100    | 21538       | 100   |

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

Source: Municipal Profile of Ramgram, 2076

#### 2.3.8 Religion

The project area has majority of Hindu religion. In these wards, there are 93.06% Hindu, 5% Islam, 1.2% Christian, 0.7% Buddhist, and remaining of other religious group as shown in Table 2.9 below;

| S. | Poligiono | Ward | No. 6 | Ward | No. 10 | Ward | No. 14 | Ward | No. 15 | Ward No. 18 |       | Total |       |
|----|-----------|------|-------|------|--------|------|--------|------|--------|-------------|-------|-------|-------|
| N. | Religions | Pop. | %     | Pop. | %      | Pop. | %      | Pop. | %      | Pop.        | %     | Pop.  | %     |
| 1  | Hindu     | 1636 | 95.50 | 3793 | 95.69  | 4664 | 95.73  | 4330 | 86.97  | 5621        | 93.53 | 20044 | 93.06 |
| 2  | Islam     | 77   | 4.5   | 143  | 3.6    | 190  | 3.9    | 606  | 12.2   | 59          | 0.98  | 1075  | 5.0   |
| 3  | Christian | 0    | 0.0   | 13   | 0.3    | 10   | 0.2    | 31   | 0.6    | 209         | 3.48  | 263   | 1.2   |
| 4  | Buddhist  | 0    | 0.0   | 12   | 0.3    | 1    | 0.0    | 11   | 0.2    | 119         | 1.98  | 143   | 0.7   |

Table 2.12: Religion-wise ward level population distribution

| 5 | Others | 0    | 0.0 | 3    | 0.1 | 7    | 0.1 | 1    | 0.0 | 2    | 0.03 | 13    | 0.1 |
|---|--------|------|-----|------|-----|------|-----|------|-----|------|------|-------|-----|
|   | Total  | 1713 | 100 | 3964 | 100 | 4872 | 100 | 4979 | 100 | 6010 | 100  | 21538 | 100 |

Source: Municipal Profile of Ramgram, 2076

# 2.3.9 Education & Literacy

The total population having received early education or up to higher level of education is 16,010, and the overall literacy rate of the project area is 74.33%. However, only 10.73% of the population have received education degree above SLC/SEE up to post graduate levels as stated in the Table 2.10 below;

|                   |      | DIE 2.1 | 0 44 | - anon |      |        |      | •••••• |      | l'ul ou |       |       |
|-------------------|------|---------|------|--------|------|--------|------|--------|------|---------|-------|-------|
| Education         | Ward | No. 6   | Ward | No. 10 | Ward | No. 14 | Ward | No. 15 | Ward | No. 18  | То    | tal   |
| Level             | Pop. | %       | Pop. | %      | Pop. | %      | Pop. | %      | Pop. | %       | Рор.  | %     |
| Illiterate        | 340  | 19.85   | 912  | 23.01  | 1284 | 26.35  | 1746 | 35.07  | 1246 | 20.73   | 5528  | 25.67 |
| Literate          | 287  | 16.75   | 294  | 7.42   | 616  | 12.64  | 434  | 8.72   | 779  | 12.96   | 2410  | 11.19 |
| Pre-primary       | 44   | 2.57    | 94   | 2.37   | 105  | 2.16   | 184  | 3.70   | 190  | 3.16    | 617   | 2.86  |
| Class 1 - 5       | 324  | 18.91   | 720  | 18.16  | 846  | 17.36  | 939  | 18.86  | 1332 | 22.16   | 4161  | 19.32 |
| Class 6 - 8       | 276  | 16.11   | 739  | 18.64  | 877  | 18.00  | 767  | 15.40  | 1140 | 18.97   | 3799  | 17.64 |
| Class 9 –<br>10   | 169  | 9.87    | 616  | 15.54  | 636  | 13.05  | 552  | 11.09  | 738  | 12.28   | 2711  | 12.59 |
| SLC/SEE           | 68   | 3.97    | 134  | 3.38   | 140  | 2.87   | 108  | 2.17   | 175  | 2.91    | 625   | 2.90  |
| Level +12         | 140  | 8.17    | 336  | 8.48   | 282  | 5.79   | 196  | 3.94   | 317  | 5.27    | 1271  | 5.90  |
| B.A.              | 50   | 2.92    | 96   | 2.42   | 69   | 1.42   | 47   | 0.94   | 70   | 1.16    | 332   | 1.54  |
| M. A. or<br>Above | 15   | 0.88    | 23   | 0.58   | 17   | 0.35   | 6    | 0.12   | 23   | 0.38    | 84    | 0.39  |
| Total             | 1713 | 100     | 3964 | 100    | 4872 | 100    | 4979 | 100    | 6010 | 100     | 21538 | 100   |

Table 2.13: Education Level in Ward Level of the Project area

Source: Municipal Profile of Ramgram, 2076

# 2.3.10 Occupation

In the project area, agriculture is the major occupation with 42.88% of the households having agriculture as primary source of income. Other primary sectors of occupation are daily wagebased works, foreign employment, private business, and service. House renting, pension, industry and vehicle renting are other sources of income of the households of the project area as shown in table 2.11 below;

| Occupation  | Ward<br>No. 6 | %     | Ward<br>No.<br>10 | %     | Ward<br>No.<br>14 | %     | Ward<br>No.<br>15 | %     | Ward<br>No.<br>18 | %     | Total | %     |
|-------------|---------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------|-------|
| Agriculture | 194           | 37.45 | 365               | 33.49 | 861               | 46.44 | 843               | 46.70 | 1074              | 42.69 | 3337  | 42.88 |
| Industry    | 4             | 0.77  | 5                 | 0.46  | 3                 | 0.16  | 2                 | 0.11  | 4                 | 0.16  | 18    | 0.23  |
| Business    | 93            | 17.95 | 110               | 10.09 | 73                | 3.94  | 115               | 6.37  | 149               | 5.92  | 540   | 6.94  |

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

| Service             | 72  | 13.90 | 69   | 6.33  | 115  | 6.20  | 86   | 4.76  | 103  | 4.09  | 445  | 5.72  |
|---------------------|-----|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| Pension             | 8   | 1.54  | 18   | 1.65  | 27   | 1.46  | 27   | 1.50  | 23   | 0.91  | 103  | 1.32  |
| House Rent          | 2   | 0.39  | 14   | 1.28  | 2    | 0.11  | 2    | 0.11  | 15   | 0.60  | 35   | 0.45  |
| Vehicle Rent        | 3   | 0.58  | 69   | 6.33  | 37   | 2.00  | 19   | 1.05  | 14   | 0.56  | 142  | 1.82  |
| Foreign<br>Employee | 47  | 9.07  | 6    | 0.55  | 167  | 9.01  | 118  | 6.54  | 402  | 15.98 | 740  | 9.51  |
| Daily Wages         | 77  | 14.86 | 412  | 37.80 | 557  | 30.04 | 587  | 32.52 | 686  | 27.27 | 2319 | 29.80 |
| Others              | 18  | 3.47  | 22   | 2.02  | 12   | 0.65  | 6    | 0.33  | 46   | 1.83  | 104  | 1.34  |
| Total               | 518 | 100   | 1090 | 100   | 1854 | 100   | 1805 | 100   | 2516 | 100   | 7783 | 100   |

Source: Municipal Profile of Ramgram, 2076

# 2.3.11 Food sufficiency

About 82.61% of the households have annual food sufficiency for their family. Around 2.27% of the households have food sufficiency for 3 months or less; 5.11% of the households have food sufficiency for only 4 to 6 months; 5.11% of the households have food sufficiency for only 7 to 9 months, and 4.9% of the households have food sufficiency for 10 to 11 months.

| Food<br>Sufficienc<br>y in<br>Months | Ward 6 | %     | Ward 10 | %     | Ward 14 | %     | Ward 15 | %     | Ward 18 | %    | Total | %     |
|--------------------------------------|--------|-------|---------|-------|---------|-------|---------|-------|---------|------|-------|-------|
| 0 - 3<br>Months                      | 0      | 0     | 43      | 5.57  | 30      | 3.02  | 12      | 1.32  | 12      | 0.95 | 97    | 2.27  |
| 4 - 6                                | 2      | 0.60  | 106     | 13.73 | 47      | 4.73  | 30      | 3.31  | 33      | 2.62 | 218   | 5.11  |
| 7 – 9                                | 7      | 2.10  | 41      | 5.31  | 62      | 6.24  | 72      | 7.94  | 36      | 2.85 | 218   | 5.11  |
| 10 - 11                              | 5      | 1.50  | 6       | 0.78  | 28      | 2.82  | 135     | 14.88 | 35      | 2.78 | 209   | 4.90  |
| 12 Month<br>or Above                 | 320    | 95.81 | 576     | 74.61 | 826     | 83.18 | 658     | 72.55 | 1145    | 90.8 | 3525  | 82.61 |
| Total                                | 334    | 100   | 772     | 100   | 993     | 100   | 907     | 100   | 1261    | 100  | 4267  | 100   |

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

Source: Municipal Profile of Ramgram, 2076

# 2.3.12 Agriculture

Food grains like paddy, wheat, maize, barley etc.; lentel like mustard, alas, gram, etc.; oil giving plants; vegetables like cauliflower, cabbage, potato, etc.; spcies like cumin seeds, coriander, etc.; fruits mango, litchi, etc.; and other crops are grown in the project area. The total amount of these agricultural products in the service wards is estimated to be food grains grown by 3449 HHs, lentel products grown by 1806 HHs, oil giving plants grown by 2182 HHs, vegetables grown by 1748 HHs, spices grown by 863 HHs, and fruits grown by 60 HHs. (Source: *Source: Municipal Profile of Ramgram, 2076*)

# 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. Now most of the households have a

male out-migration for employment. In the project area, most of the inhabitants are local and migrants from neighbors district i.e. Rupahandehi, Chitwan, Palpa and Tanahu.

### 2.3.14 Gender Based Violence Current Prevalence Status

Alcoholism and gender-based violence is one of the major social issues in the project area. No women trafficking data and issues were raised during the consultations. No such GBV, SEA/SH related incident are recorded in the Municipality office. The presence of early marriage including child marriage is present in the project area.

#### 2.3.15 Financial Institution

There are various types of commercial bank, Agricultural Development Bank, finance and money transfer service and many saving and credit cooperatives as financial institutions available within 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, Eid, Ramjan, Christmas etc. Durga temple, Samai mai temple, Chhatimai Ghat and Masjid are present in the project area. One of the significant public places of the project area is Jayagurudev Ashram where on the 5<sup>th</sup> of every month, 2,000 to 5,000 devotees gather to visit the Guru Ashram.

The economic vibrancy of the project area is also due to the presence of cottage industries, factories and large industries like Laxmi Paper Mills Pvt. Ltd., Barun Beverage Pvt. Ltd. of ward number 10; Om Nature Pvt. Ltd. of ward number 14; Siddhi Binayak Noodles, Ten Steel Pvt. Ltd. and MS Hitech of ward number 15.

#### 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 zone of influence. Settlements located within ZOI were identified for the socio-economy information. Local key informants and knowledgeable persons were consulted to gather the socio-economic information of the area.

According to consultation meetings and google earth map reference, a total of 962 HHs with 4858 population have been found to fall within the Zone of Influence. The percentage of male population along the proposed road alignment is 49.08% and the female population is 50.92%, which gives the sex ratio of 0.96. The average household size along the road alignment is 4.81. Likewise, male literacy rate of 5 years and above population is 86.82 percentage and female literacy rate is sharply low with value of only 66.51 percentage. The percentage of economically active population along the road alignment is 41.06%. (*Source: NPHC, 2021; CBS*)

# **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 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)
- 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.

| World Bank OP                                  | Objective & Brief Description   |
|--|---|
| Environmental<br>Assessment (EA)<br>OP/BP 4.01 | An Environmental Assessment is conducted to ensure that Bank-financed<br>projects are environmentally sound and sustainable, and that decision-<br>making is improved through appropriate analysis of actions and of their<br>likely environmental impacts. Any World Bank project that is likely to have<br>potential adverse environmental risks and impacts in its area of influence<br>requires an EA indicating the potential risks, mitigation measures and<br>environmental management framework or plan.  |
| Natural Habitats<br>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<br>interventions, which have the potential to impact significantly upon forested<br>areas. The Bank does not finance commercial logging operations but aims<br>to reduce deforestation, enhance the environmental contribution of forested<br>areas, promote afforestation, reduce poverty and encourage economic<br>development  |
| Physical Cultural<br>Resources OP/BP<br>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<br>Resettlement OP/BP<br>4.12      | Key objectives of the World Bank's policy on involuntary land acquisition are<br>to avoid or minimize involuntary resettlement where feasible, exploring all<br>viable alternative project designs; assist displaced persons in improving<br>their former living standards, income earning capacity, and production level,<br>or at least in restoring them; encourage community participation in planning<br>and implementing resettlement; and provide assistance to affected people<br>regardless of the legality of land tenure. The policy covers not only physical<br>relocation, but any loss of land or other assets resulting in relocation or loss<br>of shelter; loss of assets or access to assets; loss of income sources or<br>means of livelihood whether or not the affected people must move to<br>another location. When the policy is triggered, a Resettlement Action Plan<br>must be prepared. An abbreviated plan may be developed when less than<br>200 people are affected by the project. In situations, where all the precise<br>impacts cannot be assessed during project preparation, provision is made<br>for preparing a Resettlement Policy Framework must ensure that all the Bank's policy |

#### Table 3.1: World Bank Safeguard Policies relevant to Project

| Objective & Brief Description  |
|--|
| 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.

# Zone of Influence of the Project

Direct Impact area of the project is considered as RoW of the Road. Similarly, the Indirect Impact Zone is within 500 meters from both edges of the road.

# 4.1 Environmental and Social Screening Checklist

|    | Table 4.1: Checklist for Enviro  |     | 1  |  |
|----|--|-----|----|--|
| SN | Particulars  | Yes | No | Remarks  |
| 1  | Is the site vulnerable to major natural or induced<br>hazards such as landslides flooding storm<br>surge, Severe wind damage, earthquakes, fire,<br>explosion, others (specify)  | Yes |    | Possibility of Earthquake;<br>and during heavy rain,<br>flooding is likely   |
| 2  | Is the project area adjacent to or within any of<br>the following environmentally sensitive areas?<br>Cultural heritage site historical religious<br>traditional or cultural significance<br>Protected areas national parks wildlife reserves<br>hunting reserve conservation areas buffer zone<br>etc.<br>Wetland/Ramsar site/Simsar<br>Forest<br>Special areas for protecting biodiversity<br>Breeding/ nesting ground of wildlife occurrence<br>of migratory species<br>Migration route Wildlife Corridor<br>Any site of national or International Importance |     | No | There are no<br>environmentally sensitive<br>sites, and archaeologically<br>& culturally significant<br>areas within the RoW, but<br>temples and Masjids are<br>present in the project<br>influence area |
| 3  | Likely impacts on trees including Timber and fruit bearing and vegetable cover   |     | No | Need of felling 29 trees<br>within the RoW<br>Design considerations are<br>considered to avoid any<br>unrequired felling of the<br>trees   |
| 4  | Possibility of degradation of land and ecosystem of surroundings   |     | No | The project area is urban<br>area, and has no<br>ecologically sensitive<br>concerns  |
| 5  | Is the project area densely populated?   |     | No | It is moderately populated area  |

### Table 4.1: Checklist for Environment Screening

| SN | Particulars   | Yes | No | Remarks   |
|----|---|-----|----|---|
| 6  | Big Industries nearby and Type  | Yes | N  | Steel industries, brewery<br>and paper mills are among<br>the significant industries of<br>the project area               |
| 7  | Alteration of surface water hydrology of<br>waterways due to the project resulting in<br>increased sediment in streams affected by<br>increase soil erosion at construction site?                                       |     | No | The road crosses only 1<br>major water course - Turiya<br>khola, and there are no<br>major issues of hydrology            |
| 8  | Chance of deterioration of surface water due to<br>silt runoff and sanitary waste from worker base<br>camps and chemicals used  | Yes |    | ESMP measures applicable  |
| 9  | Does the sub project require significant extraction of surface or groundwater   |     | No |   |
| 10 | Increased risk of water pollution from Oil grease fuel spills and other materials   |     | No | The stockpile site / campsite is not close to the water bodies  |
| 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 construction and operation phase  | Yes |    | ESMP measures applicable  |
| 14 | Other pollution concerns relating to the inconveniences in living conditions that may trigger cases of Upper respiratory problems?  |     | No | ESMP measures applicable  |
| 15 | Risk and Vulnerabilities related to occupational<br>health and safety due to physical chemical<br>biological hazards during project construction<br>and operation   | Yes |    | ESMP measures<br>applicable;<br>no Biological hazards   |
| 16 | Noise and vibration due to Civil works  | Yes |    | ESMP measures applicable  |
| 17 | Possibility of poor sanitation and solid waste disposal   | Yes |    | Provision of labour camp<br>and toilets for labourers is<br>likely to rise these<br>concerns;<br>ESMP measures applicable |
| 18 | Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents  |     | No |   |
| 19 | Accident risk associated with pre construction and operation phases   | Yes |    | ESMP measures applicable.   |
| 20 | Large population influx during project<br>construction and operation that causes<br>increased burden on social infrastructure and<br>services such as water supply and sanitation<br>systems                            |     | No | Only around 75 to 100<br>workers are expected to be<br>working every day at the<br>active sites                           |
| 21 | Risks to community health and safety due to<br>transport storage and use of construction<br>materials such as gravel and sand and all other<br>disposable Fuel and other chemicals during<br>construction and operation | Yes |    | ESMP measures applicable.   |
| 22 | Interference with other utilities and blocking of access to resource utility and households with entrances in the ROW   | Yes |    | This is temporary issues;<br>ESMP measures<br>applicable.   |
| 23 | Conduct of medical health screening and testing<br>to identify the presence of suspected covid-19<br>positive individuals among the construction  |     | No | However, in wake of any<br>possibility of such<br>possibility, this will be   |

| SN | Particulars   | Yes | No | Remarks  |
|----|---|-----|----|--|
|    | workers in the workers' labor camps or among<br>the community members that might infect the<br>construction workers |     |    | included under emergency<br>response plan of the<br>contractor |

| SN |         | Particulars  | Details  |  |  |  |
|----|---------|--|--|--|--|--|
| 1  | Propose | ed Site Location-  | Ramgram Municipality Ward no. 6, 10, 14, 15 & 18   |  |  |  |
|    | 1.1     | Land requirement for the project   | It is an up-gradation of existing road,<br>hence there will be no land<br>requirement  |  |  |  |
|    | 1.2     | Land ownership of the project area:<br>Govt. / Private lands   | Government   |  |  |  |
|    | 1.3     | Does the project require acquisition of Govt. land/structures?   | No   |  |  |  |
|    | 1.4     | Present use of Govt. Land that will be<br>used for the project activities with<br>Persons/Households using for<br>agriculture, residential, commercial and<br>other purposes   | No   |  |  |  |
|    | 1.5     | Does the project require acquisition of private land/structures?   | No. The existing road width in use is<br>6 m in average, however there is<br>enough space on both sides of the<br>existing road for the design width and<br>upgradtion up to 12.5 m<br>The RoW was declared on<br>2067/02/10 BS, however, ownership<br>of private land strips (Listed in Annex<br>2) are yet to be transferred to the<br>municipality. Ramgram Municipality<br>will conduct the process of transfer of<br>deeds of these land parcels. |  |  |  |
|    | 1.6     | Present use of Govt. Land that will be<br>used for the project activities with<br>Persons/Households using   | The land will be used for the road construction purpose only   |  |  |  |
|    | 1.7     | Does the project require relocation of encroachers/squatters   | No   |  |  |  |
|    | 1.8     | Does the project require relocation of<br>community facilities/Govt. establishment<br>or any objects that are of religious,<br>cultural and historical significance  | No   |  |  |  |
|    | 1.9     | <ul> <li>Proposed project located in an area where residents are-</li> <li>All Mainstream</li> <li>All Indigenous peoples</li> <li>Majority Mainstream or Non-indigenous peoples</li> <li>Majority Indigenous peoples</li> </ul> | Majority Mainstream or Non-<br>indigenous people<br>Though ward level data of the project<br>area shows that Tharus make up to<br>30.26%, in case of ethnicity of<br>residents along the road alignment,<br>there is mixed community of  |  |  |  |

# Table 4.2: Checklist for Social Screening

| SN |          | Particulars   | Details  |
|----|----------|---|--|
|    |          |   | Brahman, Kshatri, Tharu, Chaudhari,<br>Muslim, Teli, Harizan Yadav, Kewat,<br>Rajbhar, Kahar, Kurmi, Dusad,<br>Pasawan people with majority of<br>mainstream or non indigenous people  |
| 2  | Potentia | al Social Impacts- Will the Project cause   |  |
|    | 2.1      | Involuntary resettlement of people?<br>(physical displacement and/or economic<br>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, 170 electric will need to be<br>shifted from the existing road section.<br>A short stretch of 280 m of water<br>pipelines and 14 private hand-pumps<br>will need to be relocated at<br>Pokharapali chowk. Water supply<br>facilities will be restored before the<br>civil works start. |
|    |          |   | Additionally, 531 m of drainage pipes<br>from industries along the road<br>alignment. And 10 m of CI pipe<br>crossing for irrigation will need to be<br>relocated  |
|    | 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<br>such communicable diseases but<br>labourers' understanding may be low<br>about possible transmission of<br>communicable diseases  |
|    | 2.7      | Large population influx during project<br>construction and operation that causes<br>increased burden on social infrastructure<br>and services (such as water supply and<br>sanitation systems)? | No, the up-gradation is a small scale<br>intervention, and there will be only<br>around 75 to 100 workers at a<br>particular time.   |
|    | 2.8      | Social conflicts relating to<br>inconveniences in living conditions<br>where construction interferes with<br>preexisting roads  | No.<br>But there will be temporary<br>disturbances to locals during<br>construction works. Traffic<br>management plan will be prepared by<br>the contractor and will be included in<br>Contractor's Site specific ESMP.  |

| SN |      | Particulars  | Details   |
|----|------|--|---|
|    | 2.9  | Describe any other impacts that have<br>not been covered in this screening form                      | Gender-based violence and GESI<br>aspects;<br>These aspects will be incorporated in<br>ESMP |
|    | 2.10 | Describe alternatives, if any, to avoid or<br>minimize displacement from private and<br>public lands | No such concerns  |
|    | 2.11 | RAP/ARAP Requirement   | RAP/ARAP is not required  |

# 4.2 Impact Summary

|  | Table 4.3: Overall Impact Summary   |
|--|---|
| Assessment   | Summary of Potential Impacts  |
| Aspects  | for the Proposed Road Upgradation   |
| The main<br>potential<br>environment<br>and social<br>issues/ risks<br>/impacts/<br>concerns and/or<br>potential<br>positive impacts | The major positive aspects of this Pokharapali-Panditpur Road Upgradation<br>project include easier transportation facility, decreased travel time,<br>decreased travel cost, increased employment opportunities, increased land<br>value, and fostering the overall economic development of the project area.<br>The sub project component will most likely create the opportunities for local<br>contractors and suppliers of the construction materials therefore stimulating<br>income generation opportunities for local and employment for the low-skilled<br>local workers. The subproject provides accessibility to schools, health post,<br>ward offices, temples, and connectivity to other urban settlements.  |
|  | The proposed road project shows limited adverse environmental and social impacts in comparison to the benefits. Pokharapali - Panditpur (upgradation up to 5.781 km). Problems likely to be created during the construction stage can be minimized or mitigated with the proper precaution and implementing the measures recommended in ESMP.   |
|  | Some trees (29 in total) need to be cut within the design width of the proposed road.<br>The environmental impacts like ambient air pollution, water pollution, and noise nuisance, issues of solid waste, issues related to health and safety of workers (accidents), obstruction of natural drainage, issues related to management of traffic, labor camp, spoil disposal area (specific impacts are also spelled out in impact section of report). The site-specific project foot prints like spoil disposal areas, camp sites, quarry sites, transportation route and number /type of vehicles; labour camps etc. will be included during the preparation of Construction Environment and Social Management Plan (CESMP) by the contractor. The CESMP will be prepared by Contractor within 45 days of commencement of works and submit to the PIU for approval. The contractor will follow ESMP of ESIA and CESMP. Such site-specific details, likely impacts and mitigation measures could be used for compliance monitoring and reporting. |

| Expected         | The improved economic access to the areas will potentially make them more    |
|------------------|--|
| positive         | attractive for business and investments thus stimulating economic growth     |
| impacts/benefits | and employment opportunities. The proposed sub project will help to provide  |
| to the local     | in easy road access, reduce travel time, provide travel and transportation   |
| communities      | cost saving, promote employment generation, provide easy access to social    |
|                  | service facilities, promote market creation for local product, increase land |
|                  | values as beneficial impacts related with the road improvement project.      |
|                  | Other positive impacts of this sub-project include socio-economic benefits,  |
|                  | environmental benefits, disaster risk management, climate resilience.        |
| Options          | The road already exists and only upgrading work is required. The RoW is      |
| Analysis         | clear, minor issues can be mitigated and managed through proper mitigation   |
|                  | measures outlined in ESMP. No alternative road can be analysed as there is   |
|                  | no alternative road.   |
|                  | There are existing routes joining the junctions which can be used during     |
|                  | construction phase as alternative routes by the public.                      |

#### 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  |  |  |

#### **Table 4.4: Impact Quantification**

Source: National EIA Guidelines, 1993

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

#### 4.3.1.1 Land use and land requirement

The proposed RoW of the road was declared by the municipality on 2067/02/10 BS (May, 2010). This is an up-gradation of an existing road, and the width of 12.5 m is available in site. Hence, land acquisition is not required. The indirect area of influence adjacent to RoW contains built structures and cultivated lands. Since site clearance and excavation works are required, topsoil loss is a likely issue.

#### 4.3.1.2 River bank instability

Since the road crosses Turiya river at chainage 3+500 km, there will be concerns of river bank instability. However, the bridge is already under construction. So, with a few years of stabilization, the impact is expected to be local and of low magnitude and medium term.

#### 4.3.1.3 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. Hence, impacts associated to over exploitation and environmental compliances are out of the scope of this sub-project package. Sand and aggregates can be obtained from Sunwal and Dumkibas at a distance of 15 km and 35 km respectively. Subbase and base can be obtained from Sunwal and Rupauliya at a distance of 13 km and 30 km respectively. Likewise, reinnforcement, bricks and cement can be obtained from Parasi (local market at a

distance of 5 km. 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.



Figure 4.1: Proposed secondary source of quarry materials at Sunwal

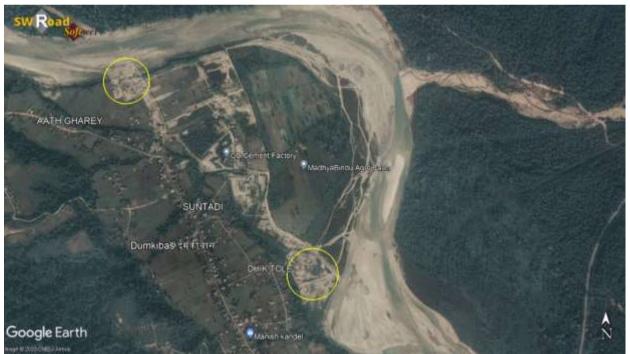


Figure 4.2: Proposed secondary source of quarry materials at Dumkibas



Figure 4.3: Proposed secondary source of quarry materials at Rupauliya

| SN | ltem                 | Estimated Qty. (m <sup>3</sup> ) | Remarks   |
|----|----------------------|----------------------------------|---|
| 1  | Granular Sub-Base    | 11,581.45                        |   |
| 2  | Cruser run Base      | 11,542.45                        |   |
| 3  | Borrow pit materials | 24,233.51                        | Locations will be identified by contractor and presented in CESMP |

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

# 4.3.1.4 Stockpiling area and construction labour campsite

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. An area of around 0.75 bigha (5,087 sq. meters) will be required for a campsite with stockpile site. Campsite area has beeb proposed at an open land located around 450 m North from Ch. 2+540 of Section I, towards Nanai area, Ward Number 15 (*Photo in Annex 8*). However, this will be finalized only during the stage of mobilization of the contractor. (*Ref. Fig. 4.4 below*)

#### 4.3.1.5 Ambient Air pollution, Noise nuisance and water pollution

Excavation and road widening works will generate dust nuisance in settlements like Pokharapali, Nanai chwok, Nanai, Nadawa, and Ghinaha 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 Butwal.

Noise nuisance is anticipated due to increase of vehicular movements and machinery equipment. Settlements of Pokharapali chowk, Bedi chowk, Nanai chowk, Nanai, Nadawa, Digbal, Ghinaha, Banjariya, Kuinya and Panditpur 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.

#### 4.3.1.6 Solid waste generation

Solid wastes from construction campsites are also likely to be a visible source of pollution. Assuming that per capita waste generation of a worker is 0.15 kg/day, every month around 450 kgs of waste will be generated from campsite. Although this is not a big volume of waste, if not 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.

#### 4.3.1.7 Spoil generation

It is estimated that around 2,435 m<sup>3</sup> 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.

#### Other issues

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

#### 4.3.2.1 Road stability and management

During the operation phase, heavily-loaded vehicles may frequently pass through this route as it passes through the industrial area. In addition to this, it is also linked to Parasi 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 Turiya 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 wards 6, 10, 14, 15 and 18. 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 29 trees along the RoW. These are small to medium sized trees with girth size ranging between 300 mm to 900 mm. Trees to be cut include 3 Kadam (*Anthocephalus chinensis*) trees, 14 Mango (*Magnifera indica*) trees, 2 Neem (*Melia azadirach*) trees, 1 Sissau (*Dalbergia Sissoo*) tree and 9 other small and pole size trees. Among these, there are 14 private trees (mango and kadam trees) and the remaining are within the ownership of the municipality.

### 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 requirement

There is no additional land requirement for the road upgradation works. Land within the RoW is already in use by the public. The RoW was declared on 2067/02/10 BS (May, 2010), and there is existing track of sufficient width to carry out upgrading work. Hence RoW is clear. Including 384 land parcels in stretch I and 127 land parcels in stretch II, there are total of 511 land parcels falling under the RoW of the proposed road, and the list is provided in Annex 3. 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, 170 electric poles will need to be shifted from the existing road sections. A short stretch of 280 m of water pipelines will need to be relocated at Pokharapali chowk. Likewise, there will be need of reinstatement of 14 private hand-pumps along the road alignment. There will also be need of replacement of 10 m of irrigation crossing pipeline at Ch. 0+375 of Section I. 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 chainages 0+000 to 0+340 km, 0+760 to 1+060 km, 2+000 to 2+100 km and 4+400 to 4+450 km of road Section I and changes 0+600 to 0+840 and 1+040 to 1+100 of road section II. 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.

#### 4.3.5.3 Loss of Standing Agricultural Crops due to Construction

There is no encroachment of any standing agricultural crops in the RoW. Therefore, there is no loss of agricultural crops due to construction and no consequential income loss.

#### 4.3.5.4 Difficulties in access & mobility to private properties and premises

There are no schools or any other public facilities/places just attached along the road. 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.

#### 4.3.5.5 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.

#### 4.3.5.6 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.

#### 4.3.5.7 Social Disturbance/Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and CoVID

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. 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.

#### 4.3.5.8 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.

#### 4.3.5.9 Traffic Management Issues

The flow of traffic along or near the proposed area will be affected, especially during the rush hour, peak travel periods. Traffic will be a more important concern for the Section II road stretch which starts from Ch-2+300 of the Road Section I and ends at Parasi Road (Nadawa) in the South - as this stretch is primarily used by the industrial set-ups of the project area.

#### 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.

#### 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 unavailable, they will be recruited from other parts of country. 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, enough lights and resting areas will make it easy for the pedestrians with different needs. 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 enhace 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

Nawalparasi (West) district is connected to the border with India. Hence, not only local tourists but also the Indian tourist will pass through this road for travelling to the different cities of the country. Moreover, Ramgram Municipality comprises Ramgram Stupa where Buddha Relic is situated and is considered as a part of greater Lumbini - a historical place. Hence, improved road transportation will help to promote this area as more easily accessible tourism areas and will also benefit the overall local tourism.

#### v. Enhancement in Access to Social Services

People living along the road alignment, or living close to the road alignment, and people living at other side of Turiya river 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, differentlyable 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<br>Significance |  |  |
| Beneficial Impacts                      | Beneficial Impacts |           |        |          |                                 |  |  |
| Construction Phase                      |                    |           |        |          |                                 |  |  |
| Employment generation and               | Direct             | М         | L      | St       | Significant                     |  |  |
| skill enhancement                       |                    | (20)      | (20)   | (05)     | (45)                            |  |  |
| Increase in Trade and                   | Direct             | М         | L      | St       | Significant                     |  |  |
| Business                                |                    | (20)      | (20)   | (05)     | (45)                            |  |  |
| <b>Operation &amp; Maintenance Phas</b> | se                 |           |        |          |                                 |  |  |
| Improved Transportation                 | Direct             | Н         | R      | Lt       | Highly Significant              |  |  |
| Facilities and Decrease in              |                    | (60)      | (60)   | (20)     | (140)                           |  |  |
| Traffic Congestion                      |                    |           |        |          |                                 |  |  |
| Rise of Land Value                      | Indirect           | М         | L      | Lt       | Significant                     |  |  |
|   |                    | (20)      | (20)   | (20)     | (60)                            |  |  |
| Enhancement in Trade and                | Indirect           | М         | L      | Lt       | Significant                     |  |  |
| Business                                |                    | (20)      | (20)   | (20)     | (60)                            |  |  |
| Increase in Tourism Sector              | Indirect           | М         | Ss     | Lt       | Significant                     |  |  |
|   |                    | (20)      | (10)   | (20)     | (50)                            |  |  |
| Enhancement in Access to                | Indirect           | М         | L      | Lt       | Significant                     |  |  |
| Social Services                         |                    | (20)      | (20)   | (20)     | (60)                            |  |  |
| Increased Time Saving and               | Indirect           | М         | L      | Lt       | Significant                     |  |  |
| reduced travel exhaustion               |                    | (20)      | (20)   | (20)     | (60)                            |  |  |
| Adverse Impacts                         |                    |           |        |          |                                 |  |  |
| Physical Environment                    |                    |           |        |          |                                 |  |  |
| Construction stage                      |                    |           |        |          |                                 |  |  |
| Land use and land requirement           | Direct             | L         | Ss     | Lt       | Significant                     |  |  |
|   |                    | (10)      | (10)   | (20)     | (40)                            |  |  |
| River bank instability                  | Direct             | L         | Ss     | Mt       | Insignificant                   |  |  |
|   |                    | (10)      | (10)   | (10)     | (30)                            |  |  |
| Quarry materials                        | Direct             | L         | L      | Mt       | Significant                     |  |  |
|   |                    | (10)      | (20)   | (10)     | (40)                            |  |  |
| Stockpiling area and                    | Direct             | М         | L      | Mt       | Significant                     |  |  |
| construction labour campsite            |                    | (20)      | (10)   | (10)     | (40)                            |  |  |
| Ambient Air pollution, Noise            | Direct             | М         | L      | St       | Significant                     |  |  |
| nuisance and water pollution            |                    | (20)      | (20)   | (5)      | (45)                            |  |  |
| Solid waste generation                  | Direct             | М         | Ss     | Mt       | Significant                     |  |  |

|           |                            |            | _       |
|-----------|----------------------------|------------|---------|
| Table 4 6 | <ul> <li>Imnact</li> </ul> | Evaluation | Summary |

| Impacts  | Nature   | Magnitude | Extent | Duration | Total score and<br>Significance |
|--|----------|-----------|--------|----------|---------------------------------|
|  |          | (20)      | (10)   | (10)     | (40)                            |
| Spoil generation                                   | Direct   | М         | Ss     | Mt       | Significant                     |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| <b>Operation &amp; Maintenance</b>                 |          |           |        |          |                                 |
| Road stability and                                 | Direct   | М         | Ss     | Mt       | Significant                     |
| management   |          | (20)      | (10)   | (10)     | (40)                            |
| Water pollution                                    | Direct   | М         | Ss     | Mt       | Insignificant                   |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| Air pollution and Noise                            | Direct   | L         | Lc     | Mt       | Insignificant                   |
| nuisance   |          | (10)      | (20)   | (10)     | (40)                            |
| Biological Environment                             |          |           |        |          |                                 |
| Construction Phase                                 |          | -         | •      | <u>.</u> |                                 |
| Vegetation loss                                    | Direct   | L         | Ss     | St       | Insignificant                   |
|  |          | (10)      | (10)   | (5)      | (25)                            |
| Socio-economic Environment                         |          |           |        |          |                                 |
| Pre-construction & Constructi                      | on Phase | <b>)</b>  | -      | <u>.</u> |                                 |
| Land requirement                                   | Direct   | М         | Ss     | Lt       | Significant                     |
|  |          | (20)      | (10)   | (20)     | (60)                            |
| Damage to private and public                       | Direct   | М         | Ss     | St       | Insignificant                   |
| utilities  |          | (20)      | (10)   | (5)      | (35)                            |
| Loss of Standing Agricultural                      | Direct   | L         | Ss     | Mt       | Insignificant                   |
| Crops due to Construction                          |          | (10)      | (10)   | (10)     | (35)                            |
| Difficulties in access & mobility                  | Direct   | Н         | Ss     | Mt       | Very Significant                |
| to private properties and premises                 |          | (60)      | (10)   | (10)     | (80)                            |
| Community Health & Safety                          | Direct   | М         | Ss     | Mt       | Significant                     |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| Occupational Health & Safety                       | Direct   | М         | Ss     | Mt       | Significant                     |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| Social Disturbance / Risk of                       | Direct   | L         | L      | Mt       | Significant                     |
| SEA/SH, Human trafficking, GBV, HIV AIDS and CoVID |          | (10)      | (20)   | (10)     | (40)                            |
| Child labour, forced labour and                    | Direct   | L         | L      | Mt       | Significant                     |
| wage discrimination                                |          | (10)      | (20)   | (10)     | (40)                            |
| Traffic Management Issues                          | Direct   | М         | Ss     | Mt       | Significant                     |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| <b>Operation &amp; Maintenance Stag</b>            | je       |           |        |          |                                 |
| Risk of road accidents                             | Direct   | М         | Ss     | Mt       | Significant                     |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| Community Health and Safety                        | Direct   | М         | Ss     | Mt       | Significant                     |
|  |          | (20)      | (10)   | (10)     | (40)                            |
| Impacts due poor maintenance                       | Direct   | L         | Ss     | St       | Significant                     |
| of road-drains                                     |          | (10)      | (10)   | (05)     | (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 and land requirement

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 RoW sites will be used for the completed road formation batters after approval by the Supervising Consultant.

#### 4.4.1.2 River bank instability

Launching apron and gabion revetment is proposed for protection of roadway embankment near Turiya khola. The cost is included in the BoQ of the project's construction procurement package.

#### 4.4.1.3 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 4.3.1.3 above. Some of the borrow pit materials will also be brought from the same private quarry sites. For any new borrow pit sites, the contractor will identify and get approval from the municipality based on DSC's recommendation. The borrow pit sites will be manged to minimize environmental as well as social impacts. The topsoil will be collected, 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.

#### 4.4.1.4 Stockpiling area and construction labour campsite

Nanai area of ward number 15 has been identified as a potential site for this. 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. Adequate space for sleeping, separate dining space, standard WASH facilities and potable water to be provisioned for the workers. The site will be reclaimed after the closure of the facility.

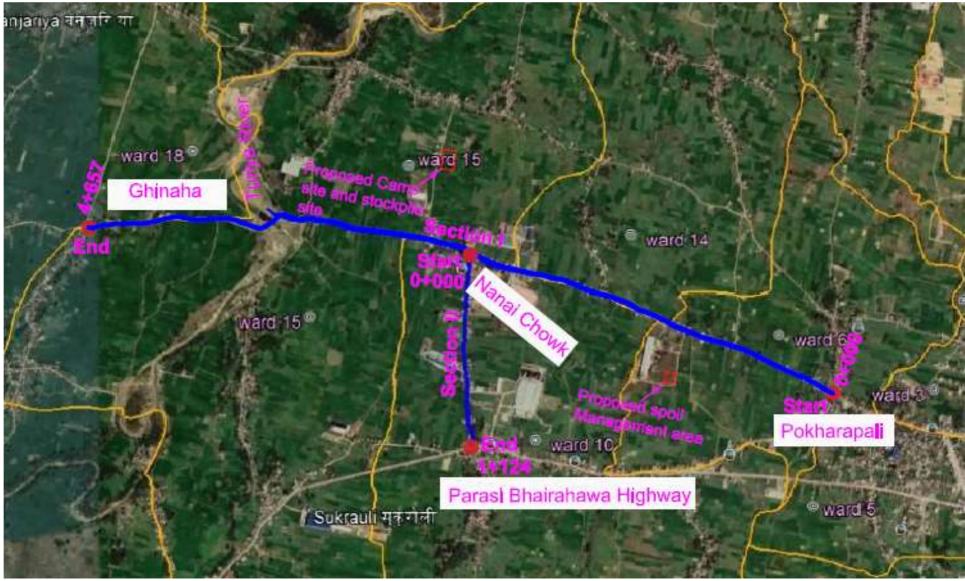


Figure 4.4: Proposed Campsite, Stockpile site & Proposed Spoil Disposal site

#### 4.4.1.5 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 Pokharapali, Naini, Ghinaha and Nadawa 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 Pokharapali, Naini, Ghinaha and Nadawa, 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 (*Turiya khola & Jharahi khola*) will be strictly prohibited. Such spoil will be disposed of at the designated spoil sites as recommended in the CESMP. 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 oberbents for emergency spills will be provisioned. Washing of vehicles at bank of Turiya 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 6.

#### 4.4.1.6 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.

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.

#### 4.4.1.7 Spoil management

Construction debris will be disposed at designated spoil 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. While hauling and storing spoil temporarily, spoil will be coverd 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 Turiya 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 Municipality, 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 operartion.

### 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, 290 trees need to be planted to compensate the loss of 29 trees in coordination with the Ramgram Municipality. 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 14 private trees at the rate of NPR 2,500 per timber tree (5), and at the rate NPR 3,500 per fruit trees (9) needs total NPR 44,000 to be provided by Ramgram Municipality for total of 14 private trees.

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

# 4.4.4.1 Land requirement

There is no need of acquisition of land for the road upgradation works. In case of land parcels falling under the RoW, the municipality will initiate and complete the process of transfer of deeds. 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. Water supply pipelines will be reinstated in coordination with the local water supply user group. Likewise, hand-pumps will also be relocated before starting of civil works. The project will ensure that affected households have unhindered access to the water supply. The crossing

pipeline of 10 m for irrigation purpose along section I will also be restored. The cost of relocation of utilities has been calculated and presented in the Table 6.1.

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

Metal planks and wooden planks will be placed to ease the access to private houses and shops. In total, ramps have been provisioned at 77 points. These additional provisions will be placed tentatively at 30 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 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 requird 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 6 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 CoVID

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. 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.

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 startend 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 road design has considered the requirements of EWCD (Elderly, women, child and disable) friendly design. 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. Road side plantation of aromatic and green-cover plants like *Chameli, Kapur* and *Ashoka* will be carried out along the road alignment.

# 5. SEXUAL EXPLOITATION AND ASSAULTS (SEA)/SEXUAL HARRASSMENT 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.

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.

### 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, drug abuse and dispute/fights in the local area
- Increased risk of illicit behavior and crime that includes theft, physical assaults, substance abuse, prostitution 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
- Other SEA/SH related risk

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

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

| Objective   | Indicator  | Measures  | Timeline  | Responsibility   | Cost (NPR)  |
|---|--|---|---|--|---|
|   |  | project construction.   |   |  | costs should<br>be inbuilt into<br>overall budget   |
| Formulate and adopt<br>code of conduct (CoC)<br>including sections on<br>safety of women and<br>girls | CoC developed, included<br>in all contracts, and staff,<br>consultants, contractors<br>trained.  | CoC will be included in the contract<br>document. Training on the CoC will be<br>provided.<br>It has been discussed with the Ramgram<br>Municipality officials for implementation of<br>CoC during project construction phase   | Prior to<br>contractor<br>mobilization and<br>during project<br>period. | Local Body<br>/PIU /<br>Contractor                             | The<br>awareness<br>and orientation<br>program cost<br>to be inbuilt in<br>PIU and at<br>individual<br>contractor<br>level in BoQ |
| Expert support on<br>SEA/SH to advise and<br>monitor action plan<br>during project<br>implementation  | Appointment of a<br>Specialist<br>Measure effectiveness of<br>the SEA/SH Action plan             | Social specialist/any designated focal<br>person will be assigned to oversee this<br>responsibility. Coordinate, report to and<br>work closely with the specialist from<br>NUGIP on the implementation and<br>monitoring of SEA/SH action plan  | Year 1  | Local Body<br>/PIU   | Included in<br>Project Cost   |
| Project Construction  |  |   | I   | 1  |   |
| Codes of Conduct<br>signed and understood   | Number of people<br>officially oriented and<br>trained   | CoC will be implemented for all workers<br>and orientation will be provided to the<br>operators, drivers and labourers<br>Ensure CoCs are clearly understood,<br>signed and behaviourally applied to the<br>job site<br>Disseminate CoCs (including visual<br>illustrations) and discuss with employees<br>and surrounding communities. | During<br>subproject<br>implementation                                  | Contractor,<br>PIU   | Built into<br>overall project<br>cost   |
| Awareness on SEA/SH   | Number of participants<br>and the awareness<br>materials and the<br>resources on project<br>area | Awareness to the woman children school<br>students and the professionals that<br>includes<br>- Community based-awareness<br>program   | 5   | PIU,<br>Contractor,<br>Concerned<br>Specialist,<br>Ward office | The costs are<br>included in<br>ESMP  |

| Objective              |         | Indicator   | Measures   | Timeline                               | Responsibility  | Cost (NPR)  |
|------------------------|---------|---|--|--|---|---|
|                        |         |   | - School based awareness program<br>The project should work with women's<br>groups to support the awareness<br>programs.   |  | CBO/NGOs<br>working in<br>area                                      |   |
|                        |         |   | Two (2) events of awareness on SEA/SH,<br>GBV (at least 45 participants in each<br>orientation/training, during first 2nd & 3rd<br>Quarter - Year 1)   |  |   |   |
|                        |         |   | Two (2) events of awareness on<br>Women/Girl Trafficking (at least 30<br>participants in each orientation/training;<br>during 3rd & 4th Quarter-Year 1)  |  |   |   |
|                        |         |   | Two (2) events of awareness on HIV<br>AIDS & CoVID (at least 30 participants in<br>each orientation/training; 1 event during<br>1st Quarter-Year 1, another to be<br>scheduled as per requirement) |  |   |   |
|                        |         | Availability of an effective<br>GRM with multiple<br>channels to initiate a<br>complaint relating to /<br>parallel SEA/SH | The GRM allows for the appropriate<br>referral of sub project-related<br>complainants.<br>-Discourage or prevent harassment anti-<br>harassment policies in the workplace.                         |  |   | Built into  |
| Grievance<br>Mechanism | Redress | Number of GRM<br>members trained.<br>Inclusive GRM system in<br>place.  | At the subproject level, select one women<br>member as first point of contact for the<br>survivors of SEA/SH and provide<br>appropriate training to them.  | During<br>subproject<br>implementation | Social<br>specialist/<br>designated<br>focal person to<br>oversight | overall project<br>cost and<br>SEA/SH<br>awareness<br>raising<br>outlined above |
|                        |         | Number of SEA/SH<br>issues which have been<br>referred to GBV Services  | 5  |  | gender related<br>issues of the<br>Project                          |   |

| Objective   | Indicator   | Measures   | Timeline       | Responsibility                               | Cost (NPR)                 |
|---|---|--|----------------|--|----------------------------|
|   | Providers   | support from local women's groups, for<br>example, CoC, GRM, how to report and<br>provide multiple entry-points  |                |  |                            |
|   |   | Maintain proper documentation is maintained for complaint registration and management  |                |  |                            |
|   |   | Have separate, safe and easily accessible facilities for women and men working on the site.  |                |  |                            |
| Implement appropriate<br>subproject-level<br>activities to reduce<br>SEA/SH risks prior to<br>civil works         | Documentation of<br>measures taken to<br>reduce SEA/SH risks.         | Establish locker rooms/secured rooms<br>and/or latrines for workers and project<br>staff, well-lit areas and include the ability<br>to lock them from inside.<br>Visibly display signs around the project<br>site (if applicable) that signal to workers |                | PIU, Gender<br>Specialist of<br>the project. | Include in<br>Project Cost |
| commencing  |   | As appropriate, public spaces around the subproject grounds should be well-lit.  |                |  |                            |
| Project Monitoring  |   |  |                |  | 1                          |
| Report in the quarterly<br>progress report and<br>review during<br>Implementation Status<br>Review (ISR) missions | Successful<br>implementation of<br>agreed SEA/SH action<br>Plan (Y/N) | Reports SEA/SH-related issues in the<br>quarterly progress report review during<br>ISR missions  | Project period | PCO, PIU,<br>Concerned<br>specialist         |                            |

Note: The requirements of the SEA/SH Risk Mitigation Action Plan must be included in CEMP 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 contractor is required to submit the Contractor's Environment, Health, and Safety Management Plan within 45 days of the commencement of the work. The client/consultant will review the Contractors EHS plan and provide approval along with necessary improvements. The regular monitoring will be followed by the PIU/Environmental and Social Monitoring team. It is in this context, the construction contractor is required to provide 1) a sound working environment to all employees involved in the design and construction of road as per national legislations, standards, and guidelines. 2) Must ensure HSE objectives are met during the entire construction, 3) Prepare and submit ESMP plan during construction period of the project. The ESMP should include; policy statement, roles and responsibilities, site regulations, risk management and hazard identifications, HSE trainings, PPE, Inspection and auditing, site security, medical care and first aid, 4).

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;

| S. N. | Project Phase<br>& Impacts                  | Mitigation Measures  | Responsibility                           | Cost, NPR  |
|-------|---|--|--|--|
|       | Physical (Const                             | ruction Phase)   |  |  |
| 1.    | Land use<br>concerns                        | <ul> <li>Leaseholder or rental contract will be maintained for any temporary land required for the project.</li> <li>Fertile topsoil will be conserved and reapplied as and when possible.</li> <li>Prior notification (2 months' before award of construction contract) for crop plantation will be given.</li> <li>All the temproray acquired land will be rehabilitated into previous state or better than the earlier state maintating natural drainage and acceptable to the land owner/DSC.</li> <li>Spoil disposal sites will be rehabilitated into</li> </ul>                                    | Contractor<br>Ramgram<br>Municipality    |  |
| 2.    | River bank<br>instability<br>(Turiya river) | <ul> <li>Launching apron and gabion revetment is proposed for protection of roadway<br/>embankment near Turiya khola.</li> </ul>   | Contractor                               | BoQ -<br>Abstract of<br>Cost - H                   |
| 3.    | Use of quarry<br>and borrow<br>materials    | <ul> <li>Contractor will obtain required construction materials from the legally operating crusher industries only.</li> <li>PIU &amp; DSC will check the site requirements and quality of quarrying material and approve it.</li> <li>In case of borrow pits, 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.</li> </ul>   | Contractor<br>DSC/client                 |  |
| 4.    | Issues of<br>stockpiling                    | <ul> <li>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.</li> <li>Stock of sand will be set wet to prevent it from blowing with the wind; water sprinkler will be used for this purpose.</li> <li>The places used for the stockpiling of construction materials will be cleaned promptly after the completion of the project.</li> <li>The site will be well fenced, and provided with a 24-hour guard.</li> <li>The site will be provisioned with proper lighting system.</li> </ul> | Contractor                               |  |
| 5.    | Ambient air<br>Air pollution in             | <ul> <li>Water sprinkling (3 times a day) at dry exposed surfaces and stockpiles of aggregates as necessary.</li> <li>Require trucks delivering aggregates and cement to have tarpaulin cover.</li> <li>Limit speed of construction vehicles in access roads to maximum</li> </ul>   | Contractor<br>(Supervision<br>support of | Included<br>within BoQ,<br>Abstract of<br>Cost B-6 |

## Table 6.1: Environmental and Social Impact Mitigation Plan

| S. N. | Project Phase<br>& Impacts                  | Mitigation Measures   | Responsibility   | Cost, NPR   |
|-------|---|---|--|---|
|       | the construction<br>locality                | <ul> <li>All diesel generators, haul trucks, pavers, graders, and rollers, required to comply to regulations prior to use of 30kph.</li> <li>No firewood for cooking and heating bitumen and incineration of wastes will be allowed by the contractor.</li> <li>Burning of waste (from campsite) will be strictly prohibited.</li> <li>Maintenance of vehicles on regular basis.</li> <li>Ensure use of equipment and fuel complying with applicable emission standards.</li> <li>Stockpiles of construction materials will be done away from roadways and from riverbanks.</li> <li>Air quality monitoring (at least 3 times).</li> </ul>  | Design &<br>Supervision<br>Consultant)   | NPR<br>270,000 for<br>air quality<br>monitoring   |
| 6.    | Noise nuisance                              | <ul> <li>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</li> <li>Restrict noisy construction activities at night-time</li> <li>Minimize drop heights when loading and unloading coarse aggregates</li> <li>Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach</li> <li>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</li> <li>Soft horns to be used, and use silent type generators (if required)</li> <li>If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor 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</li> <li>Contractor will monitor noise level along the construction site monthly.</li> <li>Complete work in settlement areas as quickly as possible</li> </ul> | Contractor<br>(Supervision<br>support of<br>Design &<br>Supervision<br>Consultant) | Cost of<br>Noise level<br>monitoring<br>comes<br>within the<br>Air Quality<br>monitoring<br>phase |
| 7.    | Impact on water<br>bodies<br>(Turiya khola) | <ul> <li>Earthworks generating higher amount of spoil will be conducted during dry season to avoid the difficult working conditions that prevail during monsoon season such as problems from runoff.</li> <li>Location for stock yards for construction materials are identified at least 300 m away from water courses. Place for storage of fuels and lubricants will be away from any drainage leading to water bodies.</li> <li>Washing of project vehicles at river banks will be restricted.</li> </ul>   | Contractor<br>(Supervision<br>support of<br>Design &<br>Supervision<br>Consultant) |   |

| S. N. | Project Phase<br>& Impacts          | Mitigation Measures   | Responsibility | Cost, NPR      |
|-------|-------------------------------------|---|----------------|----------------|
|       |                                     | <ul> <li>Proper storage of chemicals and lubricants, use of spillage kit to avoid spillage.<br/>Take all precautions to prevent entering of wastewater into streams, watercourses, or irrigation system. Install temporary silt traps or sediment basins</li> <li>While working across or close to any water body, the flow of water must not be obstructed. Ensure no construction materials like earth, stone, are disposed in a manner that may block the flow of water of any watercourse</li> <li>Proper and timely implementation of design measures to avoid impact of water</li> </ul>  |                | NPR<br>150,000 |
|       |                                     | <ul> <li>discharge at the outfall point</li> <li>Water quality monitoring (Turiya khola &amp; 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 6</li> <li>Any disposal on Turiya river will be prohibited; fishing by the workforce will be strictly prohibited; Washing of project vehicles along the river bank will also be prohibited;</li> </ul>   |                | NPR<br>120,000 |
|       |                                     | <ul> <li>Awareness activities will be carried out for the workforce (during 1<sup>st</sup> &amp; 3<sup>rd</sup><br/>Quarters - Yr. 1; at least 30 participants/event)</li> </ul>  |                | NPR 50,000     |
| 8.    | Solid waste and<br>spoil generation | <ul> <li>Waste minimization and waste segregation will be prioritized; 3R approach will be promoted.</li> <li>Composting of organic waste generated from the camps will be disposed within the proposed camps.</li> <li>Containment of hazardous waste will be carried out.</li> <li>Awareness raising event will be carried out.</li> <li>Decommissioning waste will be re-used, sold to local scrap dealers.</li> <li>Coordination with local municipality team for final disposal into the municipality's waste collection &amp; disposal system.</li> <li>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)</li> <li>Disposal of spoil into water bodies will be strictly prohibited.</li> <li>Generated spoil will be disposed only at designated spoil disposal sites.</li> </ul> | Contractor     | NPR<br>200,000 |

| S. N. | Project Phase<br>& 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.  |   |  |
| 9.    | Others                                       | <ul> <li>Contractor will dispose all the chemical wastes generated during the time of<br/>construction safely without intrupting the existing nearby settlements, water<br/>bodies, forests and wildlife.</li> </ul>  |   |  |
|       | Physical (Operati                            | on & Maintenance Phase)   |   |  |
| 10.   | Road Stability<br>and Drainage<br>Management | <ul> <li>Regular/periodic maintenance of the road</li> <li>Construction of drainage system to mitigate possible inundation in the settlements along the project alignment</li> <li>Ensure proper compaction as per design</li> <li>Awareness activities to be carried out in community level to reduce the incidences of disposal of waste into road-side drains</li> </ul> | Ramgram<br>Municipality                                 | Included<br>within BoQ,<br>Abstract of<br>Cost B-6 |
| 11.   | Air pollution and Noise nuisance             | <ul> <li>There should be a consensus between metropolitan, District Transportation<br/>Office, Transportation Entrepreneur, and the local people regarding the<br/>operation of conditioned vehicles</li> <li>Campaigns like 'No Horn' and use of soft-horns can be initiated by the local<br/>authority</li> </ul>   | DTO,<br>transportation<br>entrepreneur,<br>local people | No extra<br>cost will be<br>required.              |
| 12.   | Water pollution                              | <ul> <li>Disposal of any septic or industrial wastewater into the roadside drains will be strictly prohibited</li> <li>Washing of public and private vehicles at river banks will be restricted</li> </ul>  | Ramgram<br>Municipality                                 | No extra<br>cost will be<br>required.              |
|       | Biological (Const                            | ruction Phase)  | I   |  |
| 13.   | Vegetation loss                              | <ul> <li>Compensatory plantation of 290 trees, @ 1:10 for each tree cut</li> <li>Greenery promotion works will be carried out</li> <li>Compensation of 14 private trees @ NPR 2500 per timber tree (5), and @ NPR 3500 per fruit trees (9); total NPR 44,000 to be provided by Ramgram Municipality</li> </ul>  | Contractor<br>Ramgram<br>Municipality                   | NPR<br>450,000                                     |

| S. N. | Project Phase<br>& Impacts   | Mitigation Measures  | Responsibility   | Cost, NPR  |  |  |
|-------|--|--|--|--|--|--|
|       | Socio-economic and Cultural (Construction Phase)   |  |  |  |  |  |
| 14.   | Impact on<br>property from<br>vibrations due<br>to the use of<br>heavy<br>machinery and<br>other<br>construction<br>activities | <ul> <li>Establish photographic and video graphic evidences of structures and properties in and alongside RoW; cracked walls will be reinstated</li> <li>Conducting excavation works at critical sites under close observation of the local representatives</li> <li>Awareness raising, information and dissemination about GRM (meetings, monitoring and logistic costs@ 1 meeting every month)</li> </ul>  | Contractor   | NPR<br>300,000<br>NPR<br>350,000                                 |  |  |
| 15.   | Disturbance to<br>electric poles in<br>the RoW   | <ul> <li>Relocate 170 electric poles along the alignment in coordination with the local electricity office and telecommunication authority.</li> <li>Should be completed prior the beginning of the road construction</li> </ul>   | Ramgram<br>Municipality and<br>Contractor                | Included in<br>BoQ<br>(Abstract of<br>cost, D-9)                 |  |  |
| 16.   | Reinstatement<br>of Water Supply<br>Pipe lines,<br>hand-pumps<br>and irrigation<br>crossing<br>pipeline                        | <ul> <li>The project must work in close coordination with the locals and Water Supply Management Committee 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 280 m of pipelines of the system (<i>as detailed in Table 2.6</i>) should be addressed without any delay</li> <li>The hand pumps should be shifted/reinstated before starting construction works in the concerned alignment</li> <li>The project will timely reinstate 10 m of irrigation crossing pipeline with CI pipeline at Ch. 0+375 of section I in coordination with the local users</li> </ul> | Contractor in<br>support with<br>Ramgram<br>Municipality | Included in<br>BoQ<br>(Abstract of<br>cost, A-2)                 |  |  |
| 17.   | Difficulties in<br>access &<br>mobility to<br>private<br>properties and<br>premises  | <ul> <li>Diversions and proper crossings will be available for elderly and differently-<br/>able people in the construction phase to ensure their mobility is not impacted<br/>during construction. Elderly people should have access to socialize and<br/>meeting people and family to nurture their mental need/health.</li> <li>Metal planks and wooden planks will be placed to ease the access to private<br/>houses and shops (tentatively 30 sites)</li> <li>In total 77 ramps have been provisioned</li> </ul>   | Contractor<br>(Supervision<br>support by<br>DSC)         | NPR<br>150,000<br>Included in<br>BoQ<br>(Abstract of<br>cost, K) |  |  |

| S. N. | Project Phase<br>& Impacts           | Mitigation Measures  | Responsibility | Cost, NPR  |
|-------|--------------------------------------|--|----------------|--|
| 18.   | Road safety &<br>Community<br>safety | <ul> <li>'Drive slow' messages will be placed along the active sites.</li> <li>Barricades will be placed to avoid any accidental falls</li> <li>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.</li> <li>Trenches will be backfilled with immediate effect.</li> <li>Awareness activities will be conducted to inform &amp; aware locals.</li> <li>Carry out site management practice such as the fencing around work area and road signage.</li> <li>Increase public awareness of safety, health and environmental issues by providing information directly and indirectly through campaign.</li> <li>Display appropriate signage for use during construction and implementation of the project to enhance awareness creation on the potential hazards of the project.</li> <li>The contractor will be supervised to prepared a Traffic Management Plan.</li> <li>The contractor will assign a safety supervisor and will monitor daily construction works in terms of health and safety.</li> </ul> | Contractor     | Included in<br>BoQ<br>(Abstract of<br>cost, I)<br>NPR 50,000 |

| S. N. | Project Phase<br>& Impacts      | Mitigation Measures  | Responsibility  | Cost, NPR  |
|-------|---------------------------------|--|---|--|
| 19.   | Occupational<br>Health & Safety | <ul> <li>Personal Protective Equipment (PPEs) will be provided to the workers, and its use will be monitored closely.</li> <li>Replacement of PPEs after 'wear &amp; tear' - at least every quarter</li> <li>First aid boxes will be provided at campsites as well as active working sites (the kits to be refilled and updated every month).</li> <li>CoC will be implemented for the operators, drivers and labourers</li> <li>Proper WASH provisions will be provided in the labour camps</li> <li>Drinking water quality monitoring (at least 1 sample/quarter x 6 times)</li> <li>Provision of potable water for the workforce will be ensured</li> <li>Toilets will be provided at the ratio of at least 1 unit for 15 people.</li> <li>Provision of insurance to cover physical damage to workers.</li> <li>Drivers with authorized license holders will only be allowed for the operation of construction vehicles.</li> <li>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.</li> <li>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.</li> <li>Agreement with nearby health institution will be in place by the contractor.</li> <li>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.</li> </ul> | Contractor<br>(Supervision<br>support by DSC<br>team) | To be<br>included<br>within<br>contractor's<br>overhead<br>( <i>General</i><br><i>Condition of</i><br><i>Contract</i><br><i>document</i> )<br>NPR<br>120,000 for<br>drinking<br>water<br>quality<br>monitoring |

| S. N. | Project Phase<br>& Impacts   | Mitigation Measures  | Responsibility  | Cost, NPR                             |
|-------|--|--|---|---------------------------------------|
| 20.   | Social<br>Disturbance /<br>Risk of<br>SEA/SH,<br>Human<br>trafficking,<br>GBV, HIV AIDS<br>and CoVID | <ul> <li>(i) Regarding SEA/SH, GBV</li> <li>Locals will be given due priority for any employment opportunity</li> <li>CoC will be implemented for the operators, drivers and labourers</li> <li>Separate toilets will be provided for male and femal workers</li> <li>SEA/SH, GBV awareness raising activities, trainings and stakeholder engagements such as - Community based-awareness program, School based 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</li> <li>2 orientations/trainings with at least 45 participants in each training; to be conducted during first 2<sup>nd</sup> &amp; 3<sup>rd</sup> Quarter - Year 1</li> <li>(ii) HIV AIDS &amp; CoVID</li> <li>Awareness creation and sensitization to workers and other persons post-project to reduce or eliminate chances of infections of HIV-AIDS and other sexually transmitted diseases</li> <li>Distribute HIV &amp; AIDS awareness for CoVID is followed, prepare and follow SOPs by all workers and staff for CoVID (social distancing, immunization, hand washing, using sanitizer, masks etc) including the community health and safety awareness and management</li> <li>Health screening of the workers will be carried out before joining them into workforce</li> <li>Emergency Response Plan will be implemented during any critical circumstances (e.g. CoVID spead)</li> </ul> | Contractor with<br>consent, &<br>coordination<br>support from<br>municipality<br>office (Women<br>Development<br>Office),<br>mobilization of<br>NGOs/CBOs/<br>Clubs | NRs.<br>350,000<br>NRs.<br>250,000.00 |
|       |  | <ul> <li>2 orientations/trainings with at least 30 participants in each training; 1 event during 1<sup>st</sup> Quarter-Year 1, another to be scheduled as per requirement</li> <li>(iii) Human trafficking - focused on women &amp; girl trafficking</li> <li>Awareness program will be developed and implemented</li> <li>2 orientations/trainings with at least 30 participants in each training; during 3<sup>rd</sup> &amp; 4<sup>th</sup> Quarter-Year 1</li> </ul>  |   | NRs.<br>250,000                       |

| S. N. | Project Phase<br>& Impacts                                   | Mitigation Measures  | Responsibility  | Cost, NPR                                      |
|-------|--|--|---|--|
| 21.   | Child labour,<br>forced labour<br>and wage<br>discrimination | <ul> <li>Child labour &amp; forced labour will be strictly prohibited</li> <li>Citizenship card or other valid personal ID card</li> <li>Awareness among the workers and the local community</li> <li>Equal wage for male and female workers will be ensured</li> </ul>  | Contractor<br>(Supervised by<br>local authority<br>and DSC) | NPR 50,000                                     |
| 22.   | Traffic<br>Management  | <ul> <li>Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points.</li> <li>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.</li> <li>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.</li> </ul> | Contractor  | Included in<br>BoQ<br>(Abstract of<br>cost, I) |
|       | Socio-economic a   | and Cultural (Operation & Maintenance Phase)   |   |  |
| 23.   | Traffic<br>accidents and<br>associated risks                 | <ul> <li>Raise awareness of traffic rules, and installation of speed humps to control speed near pedestrian crossing areas</li> <li>Awareness will be raised regarding traffic safety</li> <li>Speed limits will be defined</li> <li>Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points</li> </ul>  | Ramgram<br>Municipality                                     | Cost will be<br>borne by<br>municipality       |
| 24.   | Community<br>Health and<br>Safety                            | <ul> <li>Provide bus laybys and Bus Shelters Bus laybys are provided at various locations where public buses or micro buses pull out of the traffic to pick and drop off passengers.</li> <li>Provide ramps in strategic section of roads</li> <li>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 &amp; Marking manual as per DPR</li> <li>Reinforced Cement Concrete covered drain must be provided throughout the alignment in integration with footpath.</li> </ul>   | Ramgram<br>Municipality                                     |  |
| 25.   | Impacts due<br>poor<br>maintenance of<br>road-drains         | <ul> <li>Awareness activities will be carried to stop disposal of waste into the road-side drains</li> <li>Drainages will be regularly cleared under periodic maintenance</li> <li>Road side plantation of aromatic and green-cover plants like <i>Chameli, Kapur</i> and <i>Ashoka</i></li> </ul>   | Ramgram<br>Municipality                                     | Cost will be<br>borne by<br>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. The cost of executing the ESMP includes cost of suggested mitigation measures such as of bank stabilization, awareness, waste management, and tree plantation, etc. under the mitigation measures of the project. The total cost for the ESMP is outlined in Table 6.2 below;

| SN    | Items & Headings   | Unit                | Qty | Rate    | Total, NPR   | Reference                   |
|-------|--|---------------------|-----|---------|--------------|-----------------------------|
|       | Provisional Sum amount   |                     |     |         |              |                             |
| 1     | Water quality test   | Samples             | 12  | 20000   | 240,000.00   | Table 6.1; S. N. 7          |
| 2     | Air quality & Noise monitoring   | Samples             | 3   | 90000   | 270,000.00   | Table 6.1;S. N. 5           |
| 3     | SWM works  |                     |     |         | 200,000.00   | Table 6.1; S. N. 8          |
| 4     | Storage of chemicals & lubricants  |                     |     |         | 150,000.00   | Table 6.1; S. N. 7          |
| 5     | Public safety (planks, etc)  |                     |     |         | 150,000.00   | Table 6.1; S. N.<br>17      |
| 6     | Damage repairing for any<br>vibration related damages  |                     |     |         | 300,000.00   | Table 6.1; S. N.<br>14      |
| 7     | Greenery promotion   |                     |     |         | 450,000.00   | Table 6.1; S.N. 13          |
| 8     | Awareness on Health & safety,<br>child labour, environmental<br>conservation   |                     | 6   |         | 150,000.00   |                             |
| (i)   | Environmental Awareness<br>(during 1 <sup>st</sup> & 3 <sup>rd</sup> Quarters - Yr. 1;<br>at least 30 participants/event)  | Events              | 2   | 25,000  |              | Table 6.1; S.N. 7           |
| (ii)  | Road safety & Community HS   | Events              | 2   | 25,000  |              | Table 6.1; S.N. 18          |
| (iii) | Child Labour   | Events              | 2   | 25,000  |              | Table 6.1; S.N. 21          |
| 9     | Awareness on Communicable<br>Diseases, CovID, Girls/Women<br>Trafficking, SEA/SH risks, GBV<br>(Events will be conducted for<br>workers as well as community)                      | Events              | 6   |         | 850,000.00   |                             |
| (i)   | SEA/SH, GBV (at least 45<br>participants in each<br>orientation/training, during first<br>2 <sup>nd</sup> & 3 <sup>rd</sup> Quarter - Year 1)                                      | Events              | 2   | 175,000 |              | Table 6.1; S.N. 20<br>(i)   |
| (ii)  | HIV AIDS & CoVID (at least 30<br>participants in each<br>orientation/training; 1 event<br>during 1 <sup>st</sup> Quarter-Year 1,<br>another to be scheduled as per<br>requirement) | Events              | 2   | 125,000 |              | Table 6.1; S.N. 20<br>(ii)  |
| (iii) | Women/Girl Trafficking (at least<br>30 participants in each<br>orientation/training; during 3 <sup>rd</sup> &<br>4 <sup>th</sup> Quarter-Year 1)                                   | Events              | 2   | 125,000 |              | Table 6.1; S.N. 20<br>(iii) |
| 10    | Social safeguards (grievance meetings, site monitoring, etc)   | Meetings<br>/Events | 18  |         | 450,000.00   | Table 6.1; S.N. 13          |
|       | Total  |                     |     |         | 3,210,000.00 |                             |

Table 6.2: Cost of ESMP Implementation

The total cost of implementation of ESMP activities is NPR 3,210,000 (*In words: Thirty two lakhs ten 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;

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

 Table 7.1: Stakeholder roles and responsibilities

| 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 Ramgram Municipality Office were contacted. The list of people and institutions consulted are given in table below;

| SN  | I able 7.2: Lists of People and Institutions Consulted           Name         Organization/Address |   |  |  |
|-----|--|---|--|--|
|     |  | Organization/Address                            |  |  |
| 1.  | Mr. Dhanapat Yadav   | Mayor, Ramgram Municipality                     |  |  |
| 2.  | Mrs. Samjhana Chaudhary  | Deputy Mayor, Ramgram Municipality              |  |  |
| 3.  | Mr. Man Bahadur Khadka   | CEO, Ramgram Municipality                       |  |  |
| 4.  | Mr. Satish Kumar Gupta   | Chief, IDS, Ramgram Municipality                |  |  |
| 5.  | Mr. Madhav Neupane   | Engineer, Ramgram Municipality                  |  |  |
| 6.  | Mr. Rudra Prasad Regmi   | Chief, SDS, Ramgram Municipality                |  |  |
| 7.  | Mr. Sanjaya Kumar Sharma   | Account Officer, Ramgram Municipality           |  |  |
| 9.  | Mr. Maheshwor Thakur   | Engineer, Ramgram Municipality                  |  |  |
| 10. | Mr. Soyab Ahamad Ansari  | Sub Engineer, Ramgram Municipality              |  |  |
| 11. | Mr. Rakesh Gupta   | Assistant Sub Engineer, Ramgram Municipality    |  |  |
| 12. | Mr. Durga Prasad Bhandari  | Assistant Sub Engineer, Ramgram Municipality    |  |  |
| 13. | Mr. Rabi Shankar Chaudhari   | Assistant Sub Engineer, Ramgram Municipality    |  |  |
| 14. | Mr. Bidhya Sagar Tripathi  | 6 No. Ward Chairman, Ramgram Municipality       |  |  |
| 15. | Mr. Surya Prakash Kewat  | 6 No. Ward Member, Ramgram Municipality         |  |  |
| 16. | Mr. Suresh Yadav   | 10 No. Ward Chairman, Ramgram Municipality      |  |  |
| 17. | Mr. Om Prakash Yadav   | 14 No. Ward Chairman, Ramgram Municipality      |  |  |
| 18. | Mr. Dhanapat Yadav   | 15 No. Ward Chairman, Ramgram Municipality      |  |  |
| 19. | Mr. Rakesh Kumar Shah  | Proprietor, Siddhi Binayak Udhyog, Pragati Tole |  |  |
| 20. | Mr. Om Prakash Agrahari  | President, FNCCI                                |  |  |
| 21. | Mr. Sanjaya Pathak   | Proprietor, Pathak Restaurant, Pragati Tole     |  |  |
| 22. | Mr. Prem Sagar Gupta   | Farmer, Pokharapali,                            |  |  |
| 23. | Mr. Chhotelal Hajam  | Businessman, Pokharapali,                       |  |  |
| 24. | Mr. Manoj Panta  | Farmer, Pokharapali,                            |  |  |
| 25. | Mr. Bhuwalal Gupta   | Social Worker, Pokharapali                      |  |  |
| 26. | Mr. Rameshwor Panta  | Ex-teacher, Pokharapali                         |  |  |
| 27. | Mr. Baliram Kewat  | Farmer member, Pokharapali                      |  |  |
| 28. | Mr. Amin Miya  | Social worker, Pokharapali                      |  |  |
| 29. | Mr. Ramayan Teli Gupta   | Businessman, Pokharapali                        |  |  |
| 30. | Mrs. Sushila Yadav   | Farmer, Pokharapali                             |  |  |
| 31. | Mrs. Jamurti Kewat   | Farmer, Pokharapali                             |  |  |
| 32. | Mr. Manoj Panta  | Farmer, Pokharapali                             |  |  |
| 33. | Mrs. Sangita Kewat   | Farmer, Pokharapali                             |  |  |
| 34. | Mr. Harischandra Jaisawal  | Businessman, Pokharapali                        |  |  |
| 35. | Mr. Shambhu Sahani   | Businessman, Pokharapali                        |  |  |
| 36. | Mr. Jitan Tharu  | Social worker, Nadawa Chowk                     |  |  |
| 37. | Mr. Narad Prasad Yadav   | Archeologist, Pragati Tole                      |  |  |
| 38. | Mr. Manoj Kumar Yadav  | Social worker, Pragati Tole                     |  |  |
| 39. | Mr. Suleman Ali  | Farmer, Pragati Tole                            |  |  |
| L   | 1  |   |  |  |

#### Table 7.2: Lists of People and Institutions Consulted

| SN  | Name                    | Organization/Address                      |  |
|-----|-------------------------|---|--|
| 40. | Mr. Shreekanta Thakur   | Salon Business, Pragati Tole              |  |
| 41. | Mr. Anurodh Yadav       | Pragati, Pragati Tole                     |  |
| 42. | Mr. Buddhiman Tharu     | Farmer, Pragati Tole                      |  |
| 43. | Mr. Subash Kewat        | Farmer, Pragati Tole                      |  |
| 44. | Mr. Jitendra Agrahari   | Businessman, Pragati Tole                 |  |
| 45. | Mr. Ramu Yadav          | Farmer, Pragati Tole                      |  |
| 46. | Mr. Khaderu Bhar        | Ex-service man, Pragati Tole              |  |
| 47. | Mr. Mahesh Chaudhari    | Businessman, Pragati Tole                 |  |
| 48. | Mr. Sikandar Gupta      | 10 No. Ward Member, Nadawa                |  |
| 49. | Mr. Hari Prasad Kohar   | Ex-service man, Nadawa                    |  |
| 50. | Mr. Dakawar Chaudhary   | Farmer, Nadawa                            |  |
| 51. | Mr. Shiva Narayan Shah  | Manager, Lumbini Paper Board Mill, Nadawa |  |
| 52. | Mr. RaJesh Prasad Kohar | Farmer, Nadawa                            |  |

#### 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;

| Objective and Target Goal        | Method                              | Responsibility         |  |
|----------------------------------|-------------------------------------|------------------------|--|
| I. Build Local Ownership         |                                     |                        |  |
| Introduce Project DPR Report     | Group Meeting/Workshops             | DPR Consultant/        |  |
| and its components               |                                     | PCO/Municipality       |  |
| Maintain efforts for two-way     | Face to face meeting with           | PCO, Design            |  |
| communication with relevant      | concerned stakeholders              | Supervision            |  |
| stakeholders through the project |                                     | Consultant, Ward       |  |
|                                  |                                     | Level Authority        |  |
| II. Start Consultation Process   | with Potentially Affected Communiti | es by construction and |  |
| operation of road                |                                     |                        |  |
| Identify communities to be       | Electronic and face to face         | PCO, DPR Consultant    |  |
| potential affected by project    | communication with relevant         | Municipality Ward      |  |
|                                  | stakeholders and implementing       | Authority              |  |
|                                  | agencies                            |                        |  |

| Objective and Target Goal                             | Method  | Responsibility                                   |
|---|---|--|
| Consult with community                                | Face to face meeting with   | PCO, DPR Consultant                              |
| representatives and ensure that                       | community representative  | Municipality Ward                                |
| their concerns with the proposed                      | (includes social officer of   | Authority  |
| project are addressed                                 | Municipality, women's   | ç  |
|   | 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 a                                 |  |
|   | open and ventilated places)   |  |
| Ensure that the views and needs                       | Face to face meeting with affected                                  | PCO, Design and                                  |
| of vulnerable segment (if                             | communities' representative   | Supervision                                      |
| required) of communities,                             | (including social officer of  | Consultant                                       |
| including but not limited to poor,                    | Municipality, women's   | Municipality Ward                                |
| women, elderly, and are                               | representative etc.)  | Authority  |
| addressed by the subproject                           |   |  |
| III. Implementation Phase                             |   |  |
| Maintain effective communication                      | Electronic and face to face   | PCO, Design and                                  |
| with PIU  | communication with  | Supervision                                      |
|   | representative of relevant agency                                   | Consultant                                       |
|   | /organization   | Municipality Ward                                |
| Raise awareness of project                            | Media advertisements and  | Authority<br>PCO, Consultant/                    |
| Raise awareness of project activities among potential | Media advertisements and targeted campaign                          | Municipality                                     |
| beneficiaries   | largeted campaign   | Municipality                                     |
| Maintain consultation process                         | Face to face meeting with affected                                  | PCO, Design and                                  |
| with a potential affected                             | communities' representative   | Supervision                                      |
| communities and beneficiaries                         | (including social officer of  | •  |
|   | Municipality, women's   | Municipality Ward                                |
|   | representative etc.)  | Authority  |
| Monitoring and evaluation                             | Face to face meeting with affected                                  | PCO, Design and                                  |
| community involvement                                 | communities' representative   | Supervision                                      |
|   |   | Consultant                                       |
|   |   | Municipality Ward                                |
|   |   | Authority  |
| Reports outlining progress of                         | Collation of progress report, self-                                 | PCO  |
| activities related to engagement                      | evaluation by PCO   |  |
| and communication                                     |   |  |
| Agreement on operation and                            | Electronic or face to face  | PCO, Design and                                  |
| maintenance system                                    | communication with relevant   | Supervision                                      |
|   | stakeholder   | Consultant                                       |
|   | Face to face meeting with local                                     | Municipality Ward                                |
| Implementation of ESIA                                | authority   | Authority<br>The requiremente                    |
| Implementation of ESIA                                | The contractor will prepare the                                     | The requirements                                 |
|   | various stand-alone plans to  | stipulated in ESIA shall be included in          |
|   | comply with ESIA requirements By                                    |  |
|   | including all the stand alone plans,<br>the contractor will prepare | bid document of the<br>contractor. The           |
|   | the contractor will prepare Contractor's Environmental and          |  |
|   | Social Management Plan (ESMP)                                       | contractor will prepare<br>the stand alone plans |
|   | and submit it to PIU. This  | and submit it to the                             |
|   | requirements will be included in                                    | PIU before the                                   |
|   | the contract BoQ  | construction begins                              |
|   |   | and obtain approval.                             |
|   |   | and obtain approval.                             |

| Objective and Target Goal | Method | Responsibility       |
|---------------------------|--------|----------------------|
|                           |        | 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;

| SN | Meeting               | Date        | Total        | Outcomes                                      |  |
|----|-----------------------|-------------|--------------|---|--|
|    |                       |             | Participants |   |  |
| 1  | Stakeholder           | January 02, | 17 (M - 16,  | Presentation and discussion on DPR            |  |
|    | consultation held at  | 2023        | F - 1)       | Report and Socio-economic condition,          |  |
|    | Municipality Office   |             |              | Safeguards aspects, Land requirement          |  |
|    |                       |             |              | and acquisition process etc.                  |  |
| 2  | Stakeholder           | March 31,   | 17 (M - 17,  | Sharing of design and coverage area; and      |  |
|    | consultation held at  | 2023        | F -05)       | safeguards requirements of the project etc.   |  |
|    | Municipality Office   |             |              |   |  |
| 3  | Community             | January 02, | 15 (M - 14,  | Detailed Discussion on updated design         |  |
|    | consultation held at  | 2023        | F - 1)       | aspects; discussion on avoiding vegetation    |  |
|    | Pokharapali Chwok     |             |              | loss; land requirement, land acquisition      |  |
|    |                       |             |              | process and on social and environmental       |  |
|    |                       |             |              | aspect including GBV, SEA/SH                  |  |
| 4  | Community             | March 31,   | 30 (M - 26,  | Detailed Discussion on updated design         |  |
|    | consultation held at  | 2023        | F - 4)       | aspects; discussion on avoiding vegetation    |  |
|    | Nadawa Chwok          |             |              | loss; land requirement, land acquisition      |  |
|    |                       |             |              | process and on social and environmental       |  |
|    |                       |             |              | aspect including GBV, SEA/SH                  |  |
| 5  | Informal Consultation | November    | 52 (M - 35,  | Share delineation of road up-gradation        |  |
|    | along road alignment  | 20, 2022    | F -17)       | areas, mitigation measure of social,          |  |
|    |                       |             |              | environmental issues and Detail Engineering   |  |
|    |                       |             |              | Design, Construction modality, Required       |  |
|    |                       |             |              | Lands for the road, replacement of utilities, |  |
|    |                       |             |              | and safeguard issues, GBV, SEA/SH issues      |  |
|    |                       |             |              | during construction period.                   |  |

The stakeholder consultations and community included Ward Committee Chairpersons, Ramgram Municipality 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 including Tharu. 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 private land at Nanai (WN 15 can be leased) for campsite & stockpile site.
- It was discussed that space near Siddhi Laxmi Steel factory (WN 6) 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 Pokharapali - Panditpur Road project is presented in Table 8.5 below;

| Means of Communication      | Timeline & Frequency              | Responsibility | Resources     |  |  |
|-----------------------------|-----------------------------------|----------------|---------------|--|--|
| Municipality Website        | At the start of the project which | PIU/           | Information   |  |  |
| (project details, grievance | will be maintained throughout     | Information    | Officer       |  |  |
| mechanism)                  | the project                       | Officer        |               |  |  |
| Newspaper and local         | Project implementation phase      | PIU,           | Radio-        |  |  |
| Radio (project salient      | Weekly basis                      | municipality   | program/Talk, |  |  |
| features, dates, grievance  |                                   | Information    | FM Radio Clip |  |  |
| mechanism etc.)             |                                   | Officer        |               |  |  |

#### Table 7.5: Information Dissemination Plan

| Project leaflets and Fact<br>Sheet  | Project details, Implementing<br>agencies, project period - 2<br>times | -                   | Double-sided<br>color A4<br>(500 copies) |
|---|--|---------------------|--|
| Face to face engagements<br>- meetings, focus group<br>discussion with relevant<br>stakeholders | Project Main Activities,   | PIU,<br>Information |  |

#### 7.8 Grievance Redress

As part of the implementation stage the PIU, the project municipality, project engineers and Environment and Social staffs will directly interact and consult with the project affected persons. These would comprise of consultations towards relocation of the PAPs, relocation of cultural properties, and towards addressing the impacts on common property resources such as places of religious importance, community buildings, trees, etc. Since such type of resettlement and rehabilitation are not envisaged in this project, there is no need to include such aspects in this project. The information provided here are for understanding purpose and if applicable in future (if it triggers).

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 information office of the project, and the information office will determine whether it can be resolved within the project, at the ward level, or whether another mechanism should be used.

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). Stakeholders will be made fully aware of their rights and the procedures.

#### 7.8.1 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 Environmental and Social Development Unit are taken in decision making process, if the judicial committee determines that is required.

#### 7.8.2 Proposed Grievance Redress Mechanism

Existing mechanisms for grievance redress at the local level will be drawn upon under the project to enable grievant to lodge issues, complaints and requests for information, to help support and build the capacity of local governments.

#### 7.8.3 Structure of the GRM

The project will follow the existing Grievance Redress procedures. For effective redressal of the grievances, the following Grievance Redress Mechanism is proposed;

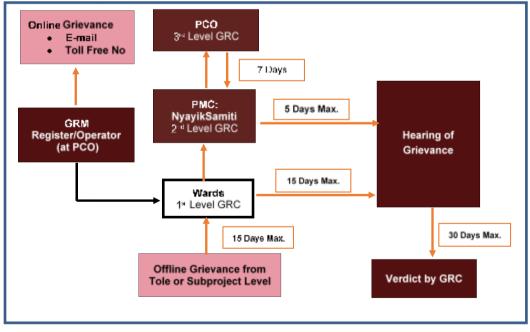
The grievant should first raise any project-related grievances with the information office of the subproject, which will decide whether the grievance can be resolved by the ward or other mechanism. A focal person will look after grievances issues and the focal person will be one of the member of existing grievance redress committee of the municipality. The person will refer

the cases according to the nature of grievances to the concerned entities. The records shall be kept properly.

At the Ward level, the staffing of the grievance redress committee (GRC) will include Ward Chairman,. The second level will be at the municipality level, engineer from sub project and will comprise the Nyayik Samit. The Nyayik Samiti will discuss the environmental and social concern with E&S section/department of municipality to redress grievance pertaining to gender, vulnerable community, and other social and environmental issues in transparent and effective manner. 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.

## 7.8.4 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. A ticket or a unique number will be generated for all such call, messages and letters. The complainant will follow up based that unique number with Operator at PCO-Kathmandu.



#### Figure 7.1: Grievance Redress Process

All complaints will be responded within two weeks at any level. In case response is not received from 1stlevel within 15 days, the complaint will be escalated to next level. If complaint remains unaddressed at 1<sup>st</sup> and 2<sup>nd</sup> within maximum 30 days after registering the compliant, it will be elevated to 3<sup>rd</sup> 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.

#### 7.8.5 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

#### 7.8.6 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 Rules, 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 Pokharapali Panditpur Road, May 2023
- Municipal Profile of Ramgram Municipality, 2076 BS Ramgram Municipality Office, Nawalparasi (Paschim)
- Municipality Transport Master Plan (MTMP) of Ramgram Municipality, , 2078 BS Ramgram Municipality Office, Nawalparasi (Paschim)
- Project Implementation Manual, Nepal Urban Governance and Infrastructure Project, December 2022, the World Bank
- Recent Status of Arsenic Contamination In Groundwater of Nepal A Review, Panthi SR., Sharma S., Mishra AK., 2006 Kathmandu University
- https://censusnepal.cbs.gov.np/Home/Index/EN
- https://www.iqair.com/nepal/western-region/butwal, 20th April 2023

#### List of Annex

- Annex 1: Minutes, Public Notice and Letters
- Annex 2: Proposed Typical Cross Section
- Annex 3: Land parcels along RoW and Cadastral Maps
- Annex 4: List of handpumps along RoW
- Annex 5: List of Institutions within Zone of Influence
- Annex 6: GoN Permissible Environmental limits/standards
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- Annex 8: Photographs

Annex 1: Minutes, Public Notice and Letters

#### Letters from Ramgram Municipality

रामग्राम नगरपालिका

नगर कार्यपालिकाको कार्यालय



परासी ज़म्मलपुरासी लम्बिनी प्रदेशक्ति (व.स.प)

पत्र संख्याः ०६८/०८० च.नः ४२०४

मिति : २०८०१११०

ीम्यिती प्रदेश

लिकाको क

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

विषय:- पोखरापाली - पण्डितपुर सडकको क्षेत्राधिकार (RoW) सम्बन्धमा ।

उपरोक्त विषयमा यस रामग्राम नगरपालिकाको वडा नं. ६, १०, १४, १५ र १८ मा पर्ने पोखरापाली-पण्डितपुर सडक खण्डको स्तरोन्नति गर्ने कार्यका लागि विश्व बैंकको आर्थिक सहयोगमा त्यस आयोजना मार्फत निर्माण गर्न लागिएको सडकको क्षेत्राधिकार (Righ of Way) ४१ फिट (१२.५ मिटर) कायम गर्ने भनि मिति २०६७/०२/१० मा सरोकारवालाहरुको सर्वदलिय वैठक वसी उक्त बाटोको क्षेत्राधिकार (RoW) ४१ फिट (१२.५ मिटर) निर्धारण भएको व्यहोरा जनाकारीको लागि अनुरोध गर्दछु । साथै उक्त निर्णयको प्रतिलिपी यसै पत्रसाथ संलग्न गरि पठाइएको व्यहोरा समेत अनुरोध गर्दछु ।

धनयल यादव

नगर प्रमख

धलपत यादव लगर प्रमुख रामग्राम नगरपालिका

बोधार्थः श्री BN-PEA JV काठमाडौं, नेपाल ।

#### **Municipality Minute of RoW**

भाजा मिति २०६७ साल जेल्ट १० गतेना दिन संयोजन रामकुन्डल यादा. को भारतमामा थेरक वसी जारोकी मापडाड र वारोकी नामजता वडा नं ६ की पोल्तापाली गांडमा वसी निमन अनुसार अपव्यतिका रहलप्रल गरी निर्णेष 'गरीयो ) 346410 SINMO राम्युट्डल यादव अगोती सादव own रामरतन पासी SI मर बहापु भाषा 218-1 994 817 - ज्याइम् JUM सुपे प्रकाश मेनर why int. Sj 2619PRI JIMIS 4105 and an LIGIZI agring such sigonta Tour alfre us 12 201 - TT File 3611 िर्धि मेक्से राध माख केवट WISIGH EXISTA Q95122 cjanin an ATRICIOL SEL . राज (काला (ठाप्रा to at AURTH AG 2105 सल माइराला 2018 392

राम जमत केवर Dra zuga SEACUG 269 QIT allo gris प्रस्लान ने १:-यम रामग्राम नगएपा तीना भग गे ह पोवरा पाली गाउमा नसी विभिन्न वाटी, बाला नारी, युनवारो के नाम र त्यतनों भाषडण के कात कापम गर्न भन्ने सम्यन्भमा अनाज मिति २० ६७ साल जेरट १० जते का दिनमा निम्न अस्तुत्माद हुने गरी ध्रवाफल गरी निर्णम गर्ने गरीयो निर्णाम ने १: - रामखाडा, पुल काट पाईन्म मुन्मतीया नी रह सुम्म . हुलानी स्टर नस्तामा, भएको, युगावत रहनेर कमी अएको ठांउमा नीत्ररित फिट नापम रोने साथे हलानी जारो जार प्रदिण जाइपात सम्मन्थ मिट जायम र्गेर्ग, हुलाजी वारो भार उत्तर आता वारो १० कि महजीद मार्ग सार्थ हलाकी नाट उन्नर पोखरापानी भौराह सम्म्र कार्यर सोही जारी बाट पार्झ्य गए को माखा वार्टी 90 फिट आर्की आत्ना वारो 90 फिट भाषक गर्म साम पोलरापानो भौराह होि पर्छन्म रक्साहा जाने नगएगलीका सिमाना सीम 89 मिट प्रातीमार्ग गोर्न साम भीराहा देखे उत्तर मान्दर सम भीगर्न 20 मिट र भौराहा बाट द्विरामलण्डा पुल स्कम ३० किट जोरिसी मार्ग जाम गर्भ जीरसी मार्ग वाट र्द्ध ईमिलीयोल तक गएको खाला वारो ईमिली मुल सम् (मीतारी) ११ फिर सो रवान वाट रई १८ फिर साथ सोहे स्थान वाट्रे अत्र हुद रचनायको प्र सम १६ मिट सो रूपानवाट उत्त विर्तामार्ग सम 20 मिट र जीरहरी मार्गवाट इंग्रिनी टोल सम्म - पालको दार् सम्म 20 किर 211(91 मार्ग रामरवण्डा उल जार भोगहा हर उत्ता नगए पालीका स्पिमाग कार्रगापु स्पूर्म न्योगर् 201 मान्द्र सक्त रसे देखे उत्तर 10 मिट नाम जोरेलरी मार्ग, जीरसी मार्गवार ध्वे लोक तान्त्रीय-मीराहा जाने वाटी २० फिर विमा HI 0

# रामग्राम नगरपालिकाको १६औं (संघीय लोकतान्त्रीक गणतन्त्र पश्चिको पाँचौ) नगरपरिषद्मा प्रस्तुत गरिएको आ.व. ०६९।०७० को पारीत नीति, बजेट तथा कार्यक्रम

नगरपरिषदका प्रमुख अतिथि माननीय रक्षा राज्य मन्त्री रामवचन यादव ज्यू, विजिष्ट त्रतिव माननीय सभासवज्यहरु, पूर्व यह राज्य मन्त्रीज्यू, पूर्व शिक्षा राज्य मन्त्रीज्यू, माननीय जिल्ला न्यायाधीशज्यू, राजनैतिक दलका प्रमुखज्यूहरु, प्रमुख जिल्ला अधिकारीज्यू, स्थानीय विकास अधिकारीज्यू, कार्यालय प्रमुखज्युहरु, नागरिक समाजका व्यक्तित्वहरु, समाजयवी, एव वृद्धिजीवीहरु, सचारकर्मी महानुभावहरु, गैर सरकारी संस्थाका प्रमुख एवं प्रतिनिधिज्यहरु, कर्मचारी मित्रहरु, आमन्त्रीत एव उपस्थित सर्वे दाज भाइ तथा दीदी बहिनीहरु ।

सर्वप्रथम संघीय लोकतान्त्रीक गणतन्त्र स्थापनाको लागि जनयुद्ध, जनआन्दोलन तथा मधेश आन्दोलनमा आफ्नो अमूल्य जीवन उत्सर्ग गनुंहुने ज्ञात अज्ञात महान शहीदहरु प्रॉन हॉर्डिक श्रद्धान्जली अपंण गर्न चाहन्छु । मुलुकमा संघीय लोकतान्त्रिक गणतन्त्र स्थापना भए पछिको पांचौ नगर परिपदको निणंय सावंजनिकीकरणको अवसरमा उत्साहका साथ उपस्थित हुनुहुने संपूर्ण महानुमावहरुमा रामग्राम नगरपालिकाको तफंबाट हार्दिक स्थागत गर्न चाहन्छु । आ-आफ्नो कार्य व्यस्तताका वावजुद पनि हाम्रो निमन्त्रणालाइं स्वीकार गरी यस नगरपरिषद्मा उपस्थित हुनु भएका प्रमुख अतिथि माननीय रक्षा राज्य मन्त्रीज्यू बिश्चिष्ट अतिथिज्यूहरु एवं उपस्थित सम्पूर्ण महानुभावहरु प्रति हार्दिक आभार व्यक्त गर्न पाउदा आफुलाइं गौरवान्वित ठानेको छु ।

नवलपरासी जिल्लाको सदरमुकाम रामग्राम नगरपालिकाको स्थापना २०५३ चैत्र १४ गतेका दिन भएको हो । तत्कालिन परासी आदर्श, मन्भारीया, उनवच र जमुवाड ४ गा.वि.स. मिली बनेको यस नगरपालिकाको नामाकरण महामानव गौतम बुढको अष्टधातु रहेको प्राचीन रामग्राम स्तुपका नाममा भएको छ । यो नगरपालिका १३ वटा वडा, ४२ गाउँ र ७९ वटा टोलमा विमाजित रहेको छ । अति विपन्न र पिछडीएका जात जाती समेतको वसोवास बाहुल्यता रहेको यस नगरपालिकाको सवै वार्डमा बाटो, बसी र टेलिफोनको सुविधा उपलब्ध भएता पनि अधिकांश नगरवासीहरु आर्थिक, सामाजिक एवं शैक्षिक दूष्टिकोणवाट पिछडीएका छन् । विकास कममा पछाडी परेका यस्ताक्षेत्र, वर्ग र समुदायलाइं विकाश प्रकृयामा सहभागी बनाई विकासको प्रतिफल सुनिश्चित गरी नगरवासीलइ परिवर्तनको अनुभूति दिलाउनु जस्ता चुनैतिहरु हाम्रा सामु विद्यमान छन् । उल्लेखित चुनैतिहरु सामना गर्न नगरमा राजनैतिक प्रतिबढता, विकास प्रति जनतामा उत्साह र जागरण, नागरिक समाज, निजी क्षेत्र तथा सरकारी तथा गैर सरकारी संघ संस्था संग सहकार्य गर्ने र जनसहभागिता जुटाउने कार्यलाई उच्च प्रार्थमिकता दिनु पर्ने देखिन्छ । विकास प्रकृयालाई जम्भ वढी प्रभावकारी बनाउदै लैजान नगरवासीहरुमा विकास प्रति अपनत्वको भावना जागृत गराई सहमागितामुलक योजना तज्मा प्रकथाको अवलम्बन गर्ने प्रयास गरिएको छ । स्थानीय निकायको गठन भई नसकाको मौजूदा अवस्थालां अवलम्बन गर्ने प्रयास गरिएको छ । स्थानीय निकायको गठन भई नसकाको मौजूदा अवस्थालां मध्यनजर राखी निजि क्षेत्र, विभिन्न राजनैतिक दल , गैसस, दलित, महिला, वालबालिका, आदिवासी,

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पिछडावगं, वांड्रजिवि समेतको प्रतिनिधित्व भएको एकीकृत योजना तर्जमा र्यमितिको सभाव र समन्वयमा समुदायवाट आएका मागहरुलाई प्रावमिकताको आधारमा श्रीत र साधनको वितरण गर्भ समावेशी र समतामुलक विकास प्रकयालाई अगाडी वढाउन टाल यिकास सरथा वडा नागरिक मज्य विषयगत कार्यालय र अन्य स्थानीय समहहरुलाई कियाशील वनाइएको छ । यस कममा निम्न नीतिहरु अवलम्बन गरिएका छन् ।

- १ वडा नागरिक मञ्च, टोल विकास संस्था र अन्य संघ संस्था, समह एवं नागरिक समाजको व्यापक सहभागितामा गरिएको वडा भेला वाट सिफारिस भएका एव प्राथमिकता नौकिएका क्षेत्रजाड ग्रात र साधनको उपलब्धताको आधारमा योजना तथा कार्यक्रम समावेश गरिएको छ ।
- २ विषयगत सरकारी तथा गैर सरकारी कार्यालयहरुका प्रमुख एव प्रतिनिधिहरुका वैठकमा छलफल गरी प्राप्त सुभ्गावलाई अंगिकार गरिनुको साथै सहकार्यको संस्कृतिलाई वढावा दिइएको छ ।
- ३ नगरपालिका क्षेत्र भित्र बसोवास गर्ने न्युन आय श्रोत भएका परिवारहरुको आय स्तरमा वृद्धि गन कृषि जन्य उत्पादन वृद्धिहुने क्षेत्रको अध्ययन गरी तत् सम्बन्धि विषयगत कार्यालयहरु संग समन्वय गर्ने नीति लिइएको छ।
- ४ न.पा बडा नं. २ मा रहेको हाटवजारको स्तरोन्नति गर्न तयार पारिएको गुरु योजनालाई कमण कार्यान्वयन सदै जाने नीति अनुरुप आगामी वर्ष पनि निरन्तरता दिइने छ ।
- ४. महिला, वालवालिका तथा पिछडियका वर्गहरुलाई प्रत्येक्ष फाइदा पुरने कार्यक्रम तथा आयोजनाहरुको लागि नि:सर्त पूजिगत अनुदानको ३४% रकम छुट्याई उच्च प्राथमिकता दिइएको छ
- ६ अत्यधिक समस्याको रुपमा रहेको मुख्य शहरी क्षेत्रको ढल निकास कार्यको लागि नगर विकास कोषको सहयोगमा यसै आ.व.मा कार्य शुभारभ भैसकेको छ । साथै भवन तथा शहरी विकास डिभिजन कार्यालयको सहयोग जुटाउने कार्यमा संक्रियता अपनाईएको छ ।
- ७ न.पा क्षेत्र भित्र भवन निर्माण गर्ने स्वीकृती दिदा नेपाल सरकार वाट स्वीकृत गरिएको राण्ट्रिय भवन संहिता कडाइका साथ लागु गर्ने नीति लिइएको छ ।

रू. नगरपालिका भित्र निर्माण भएका विभिन्न सडकहरुको नामाकरण गरी सडक दोर्घाधकारको मापदण्ड परिमार्जन गरिएको छ ।

९. राजस्व संभाव्यता अध्ययन कर प्रक्षेपण प्रतिवेदन एवं नगर स्तरीय राजस्व परामर्श सीमतिको सिफारिश र न.पा बोर्ड बैठकको निर्णय अनुसार राजस्वका संभावित क्षेत्र पहिचान गरी सा अनुसार कर एवं सेवा शुल्कमा सामान्य परिमार्जन गरिएको छ ।

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- 90. जिल्ला सदर मुकाम रहेको यस न पा मा सुविधा सम्पन्न नगर समाहलको अभाव महसूस भईरहेकाले सार्वजनिक निजी साभ्तेदारी कार्यक्रम अन्तरगत उद्योग वाणिज्य संघ संग सहकार्य गरी नगर सभाहल निर्माण कार्यको शुभारम्भ गर्ने प्रस्ताव गरिएको छ ।
- १९ चालु आ व मा नगरपालिका क्षेत्रभित्र निमार्णधिन कममा रहेका सम्पन्न भइनसकेका आयोजनाहरु तथा कार्यक्रमहरुलाई निरन्तरता दिइएको छ ।
- . नगरपालिका क्षेत्र भित्र २०६२ सालमा गठन गरिएका टोल विकास संस्था र बडा नागरिक मञ्चलर विच समन्वय कायम गरी संस्थागत विकास गर्ने कार्यलाई निरन्तरता विडएको छ।
  - १३. गत वर्ष देखि जिल्ला विकास समितिको वास कार्यक्रमको सहकार्यमा शुरु गौरएको खुल्ला दिसा मक्त क्षेत्र घोषणा गर्ने कार्यलाई निरन्तरता दिइएको छ ।
  - १४. रामग्राम नगरपालिका क्षेत्र भित्र रहेको रामग्राम स्तुपलाई राष्ट्रिय तथा अन्तर्राष्ट्रय सम्पदा सुत्रीमा सुचिकृत गर्ने कार्यको थालनी र पर्यटन विकास कार्यलाई निरन्तरता दिइएको छ ।
  - ९५. रामग्राम नगरपालिकामा सवारी पार्थिङ्गको समुचित व्यवस्थापन नभएको हुदा आवागमनको असुविधालाई मध्य नजर गरी पहिलो निर्वाचित जनप्रतिनिधिहरुको निर्णय अनुसार नै वडा नं. १२ को शान्तिचौरमा सवारी पार्थिङ्गको व्यवस्थापन कार्य यातायात व्यवसायी समितिहरुको सहकायमा यालनी गरिएको छ ।

# आदरणीय महानुभावहरु,

अब म आ.व. ०६९।०७० को लागि नेपाल सरकारवाट प्राप्त हुने अनुदान, आन्तरिक श्रोत. लागतसहभागिता र दातृ निकायको सहयोगमा संचालन गरिने कार्यक्रमहरुको संक्षीप्त विवरण आजको यस गरिमाय नगर परिषद्को निर्णय सार्वजनिकीकरण कार्यक्रममा प्रस्तुत गर्न गईरहेको छु।

# आ.व. ०६९।०७० को आय व्ययको संक्षिप्त विवरण

आयतर्फ आन्तरिक श्रोतको कर, शुल्क, दस्तुर र अन्य शिर्षकमा रु ६९ लाख ९३ हजार १२३ आय रहेको छ । नेपाल सरकारवाट प्राप्त हुने अनुदान, दातृ निकाय, जगेडाकोष, आयोजना र कायंकम समेतको गरी वाह्य श्रोतबाट रु.४ करोड १९ लाख १२ हजार ३४१ र लागत सहभागिताबाट रु. १ करोड १३ लाख २४ हजार समेत गरी रु. ६ करोड २ लाख ३० हजार ४७४ हुने गरी अनुमानित आय पारित गरिएको छ ।

यसै गरी नगरपालिकाको आन्तरिक श्रोत, नेपाल सरकारबाट प्राप्त अनुदान तथा दात् निकायको सहयोग बाट प्राप्त रकमहरुको व्यय अन्तर्गत चालु खर्चमा दमकल संचालन, सामाजिक परिचालन र क्षमता विकास कार्यक्रम समेतको रु १ करोड ३१ लाख ८९ हजार ४७४ र पुजीगत खर्चमा रु. ४

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## आदरणीय महानुसावहरू

गराएणो सूर्व । सहस्रोध साम्यानिको सन्दर्भन ता साम्यान सन्दर्भना साम्यान का सन्दर्भना साम्यान्त्र का सन्दर्भना का सहस्रोध साम्यान साम्यानिको सन्दर्भना कृत साम्यान साम्यान साम्यान्त्र का सन्दर्भना का सन्दर्भना का सम्यान साम्यान कृत्व वजीतको १९९२ का द पुण्डीसान साम्यान नामा का करतान्त्र का सन्दर्भना का सम्यान सार्टर्ग्न सूर्व ।

#### उपस्थित महानुभावहत

नगरको समय विकासको लागि हासी पित्तवस्थील तुप्र हरे परि सामल प्रकार को कार्यको काल नगरवालीको आवश्यकला रे पालना लाइ ससेटन सकिएको तैन समालको समय विकासको जानि सौलिक विकासवाट साथ संसव देन । व्यक्तिको आस्तिको आस्ति विकासवाट साथ ल्याव विकासको कार्य गिव हुन जान्छ । व्यक्तित्व विकासको लागि शिक्षा स्वास्त्र विकासवाट साथ ल्याव विकासको कार्य गिव हुन जान्छ । व्यक्तित्व विकासको जागि शिक्षा स्वास्त्र विकासवाट साथ ल्याव विकासको कार्य गिव वीवेकशील सह निर्णय सिक्कास को जागि शिक्षा स्वास्त्र विकासवाट साथ ल्याव विकासको कार्य गिव वावश्यक पदार । स्वान व्यक्तिको वान्तरिक लगानिककरण कार साथ क्राव विचान स्वान प्रतान आवश्यक पदार । स्वान व्यक्तिको वान्तरिक लगानिक प्रान्तवान साथ कार्यन्त वान्तव स्वान हेन सह संग्राज विकासको कार्य जगाडी वडन जान्त्र । स्वत्वो लागि साथाविक गरिवाल्यको आवश्यकला पन जाने हंग विधान जेवको प्रतिनिधित्व साफी स्वानां कार्यका लाग्यका सहस सह सो समितिको सकियता एव संसल्वयस्य साथाकि प्रतित्वान गरी जान्तरिकको सन्त्र स्वान सने कार्यलाइ उच्च पायसिकता दिईएकोस्ट

#### आदरणीय महान्मानहरु.

कार्य व्यस्तताको बावज्द हाथो निमलणालय को कर गई हो वस्त्यारेषद्वां नेपन् तथा बजेट सावजानिककरण कार्यक्रमको परिमा वडाई दिन सण्डोया घर्यक नीर्वांच माण्डीक स्मा स्वल मन्त्री रामवच्चन यादव ज्यू विशिष्ट अतिथिव्यहरु भारतीय समास्त्रज्युहरु एवं साह राज्य मत्त्रीच्च स्मा क्वीच्यू मानतीय जिल्ला त्यायाप्रीसच्य राजनीत्वर स्वयं घ्रेसव्यान्त्र प्रव साह राज्य मत्त्रीच्यू मानतीय जिल्ला त्यायाप्रीसच्य राजनीत्वर स्वयं घ्रेसवन्त्रण प्रत्य क्रियं जिल्ला त्यायाप्रीसच्य राजनीत्वर स्वयं घ्रेसवन्त्रण प्रयत्न क्रियं व्यक्तिय्यू स्वानीय विकास अधिकारीच्यू स्वानीय विकास अधिकारीच्यू स्वानीय विकास अधिकारीच्यू स्थानीय विकास अधिकारीच्यू कार्यात्य प्रत्यच्यात्र स्वयं प्रत्यच्यात्र स्वानीय विकास अधिकारीच्यू स्वानीय विकास अधिकारीच्यू स्थानीय घ्रंसव्यक्त त्यार्थक लाग्य स्वयं व्यक्त व्यक्त व्यक्त क्रियं स्थावन्त्र संघल्यात्वर स्वयं स्वयं क्रियं स्वयं व्यक्त व्यक्त व्यक्त व्यक्त व्यक्त व्यक्त त्यां स्वयं स्वयं व्यक्त व्यक्त स्वित्य संघल्यात्वर स्थायात्वर स्थायात्वर संघल्यात्वर संघल्यात्वर संघल्यात्वर संघल्यात्वर संघल्यां व्यक्त संघल के संघलार्थ विवाय संघल्य त्यं क्रियं संस्थाका प्रमुख एव प्रतिनिधि लाग्य क्रियं संघल्या त्यं क्वरं संघल्या के संघलार्थ विकाय त्याधिक्त संघल के संघल्य त्यं त्यां विद्व विद्वजीवीहरु संघलात्वर संघलारी विचाय प्रायं प्रायं विकाय संघल्य क्रियं संचलकों संघल त्यां दीदी बहिनीहरुमा नगरपालिकाको त्यां त्यां त्यां व्यवं त्यां प्रत्य त्यां त्यां क्वरं संचलकों स्व तथा दीदी बहिनीहरुमा नगरपालिकाको त्यां त्यां त्यां त्यां त्यां प्रायं त्यां व्यवं व्यवं संचल विकाय औं नगरपारेषद्वा नीति तथा वजेत सार्वातीव संगत्य त्यां स्वरंथ प्रायं यत्य व्यां संचल संचल्य त्यां समितिका सदस्य, सामोदारी संचालन समितिका सदस्य, नगर स्तरिय क्षमता विकास समन्वय समिति सदस्य, सामाजिक परिचालन समन्वय समितिका सदस्य र अन्य समितिका सदस्य, विषययत कार्यालयका प्रतिनिधि ज्यूहरू एवं सम्पूर्ण नगरवासीहरुमा हार्विक सम्मान तथा धन्यवाद जापन गर्न चाहन्छु।

विशेषत: योजनाको सफलता कार्यान्वयनमा भर पर्ने भएकाले म सबै राजनैतिक दल, विषय गत कार्यालय, गैर सरकारी संस्था, टोल विकास संस्था, वडा नागरिक मञ्च, नागरिक समाज, निजी क्षेत्र एवं कर्मचारी वर्गको प्रतिबढताको अपेक्षा गर्दछ ।

अन्तमा नगरको समग्र विकासको लागि सहयोग पुऱ्याउने नेपाल सरकार, स्थानीय विकास मन्त्रालय, अन्य विषयगत कार्यालयहरु, दातृ निकायहरु, राष्ट्रिय तथा अन्तराष्ट्रिय गैर सरकारी संस्था, निजी क्षेत्र, नागरिक समाज प्रति हार्दिक धन्यवाद ज्ञापन गर्न चाहन्छु । परिषद् तयारीको कममा अहोरात्र खटिने कर्मचारी प्रति आभार व्यक्त गर्न चाहन्छु । प्रस्तुत नगर विकास योजनाको कार्यन्वयनमा सदाम्फै सवै क्षेत्रको निरन्तर सकारात्मक सहयोग एवं सुभावको अपेक्षा राख्यै विदा हुन चाहन्छु ।

धन्यवाद ।

दुर्गानाथ गौतम ।प्रमुख एवं कार्यकारी अधिकृत। रामग्राम नगरपालिका परासी, नवलपरासी

मिति: २०६८ साल पौष २७ गते वुधवार

आज मिति २०६८ साल गौग २७ गतेका दिन श्री स्थानीय विकास मन्त्रालय, स्थानीय निकाय सतयोग शाखाको च न २७३ मिति ०६८/०९/२० को पत्रानुसार नगरपरिवगदका क्षेत्राधिकार प्रयोग गदै आउन्मएका यस रामग्राम नगरपालिकाका नगर प्रमुख एवं कार्यकारी अधिकृत श्री दगांनाथ गौनम ज्यु का अध्यक्षतामा नगरपालिका बोर्ड बैठकबाट पेण हुन आएका प्रस्ताव रामग्राम नगरपालिकाको १६औं सधीय लोकनान्त्रिक गणनन्त्र पछिको पाची। नगरपरिषद बैठक वसी तपसिलका उपस्थितमा निम्न बमोजिमको निर्णय गरियो ।

#### उपस्थिती

थी दगांनाथ गौतम

प्रमुख एवं कार्यकारी अधिकृत

आमन्त्रित

| লন্ধা গণ্ডিকুল | श्री कुन्दन कुमार चौधरी | अधिंक प्रशासन शाखा प्रमुख ।प्रवक्ताः       |
|----------------|-------------------------|--|
| इंस्जिनियर     | श्री सतिस कुमार गुप्ता  | योजना शाखा प्रमुख                          |
| नगरसहजकतां     | श्री हितेश राज पन्त     |  |
| लेखापाल        | श्री सजय कुमार शर्मा    | सामाजिक विकास शाखा प्रमुख                  |
| नायव सुव्वा    | श्री विष्णु कुमार आले   | प्रशासन शाखा प्रमुख 🏼                      |
| থাৰিয়িক       | श्री भगौती यादव श       | तथा वा शाखा प्रमुख (गुनासो सुन्ने अधिकार्र |
| र्खारदार       | श्री ललिता पाण्डे ढुईल  | कर उपशाखा प्रमुख                           |
| र्खारदार       | श्री शिवनारायण यादव     | जिन्सी उपशाखा प्रमुख                       |
| र्खारदार       | श्री उमेश प्रसाद चौधरी  | पन्जिकरण उपशाखा प्रमुख                     |
| बरिदार         | श्री निर्मला कोहार      | सुचना उपशाखा                               |
|                |                         |  |

ा शाखा प्रमुख

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# निर्णय नं : ४६

सगरपालिका बोहे, जांच पास तथा फरफारकका समिति, उपसमितिन विभिन्न मित्रिमा गरेका लिणेकार अनमोदन गर्न नगरपरिषद्याह श्रीकत गरियो ।

#### निर्णय नं : ४६

रामराम नगरपालिका भिव व्यवस्थित दैनिक हाटवजार मा पश्वधशाला निर्माण का लोग कौंप मन्त्रालय (जल्ला पश् सेवा कार्यालय मार्फत सम्बन्धित तिकायमा आग गर्न नगरपरिगडवाट स्वीकत गरियो ।

# ि निर्णय नं : ४४

मगरपामिका अनुदान संचालन कार्य विधि २०६७ को भाग ६को वृंदा २६ जनसार मपरिश्ववण नवा अनगमन गठीत समिति अनुमोदन गर्न नगरपरिषदवाट स्वीकृत गरिया ।

#### निर्णय नं : ४९

बहा भेलामा समावेश नभएका तर प्रत्यक्ष रुपमा सकरात्मक प्रभाव पाने खालका योजनाहरु माग भएमा त्यस्ता खालका योजनाहरु छनौट गरि वजेट व्यवस्था मिलाई मन्त्रालन गर्न समतका लागि न पा झोड लाई अधिकार प्रत्यायोजन सनं नगरपरिषद्वाट स्वीकृत गरियो ।

आ चे २०६७०६⊏ मा निर्माण भएको यस नगरपालिकाको आर्बाधक योजना २०६≃ लाइ निर्णय नं : ४0 नगरपरिषद्वाट स्वीकृत गरियो ।

# निर्णय नं. : ४१

आ व २०६७०६८ मा निर्माण भएको यस नगरपालिका को साप्ताहिक हाट बजार को मास्टर प्लानलाई नगरपरिषद्वाट स्वीकृत गरियो ।

गत आ व मा रु ४० लाख भन्दा माथि का योजनाहरु संचालन गर्नका लागि तयार गरिएको निर्णय नं : ४१ योजनाहरुको दस्तावेज र सम्भाव्यता अध्ययनलाई अनुमोदन गरियो ।

# निर्णय नं. : ५३

यस वर्षमा संचालन गरिने रू ४० लाख भन्दा माधिका योजनाहरुको पुर्व सम्भाव्यता अछायन गराइ योजना संचालन गर्न नगरपरिषद्वाट स्वीकृत गरियो ।

# निर्णय नं. : १४

यस रामग्राम न पा का लागि तयारभएको जावधिक योजना दस्तावेज स्थानीय विकास भन्वालय भौतिक योजना तथा निर्माण मन्त्रालय , ADB , र अन्य वात् निकायमा पेश गरि सहयोग माग गर्न

नगरपरिषद्वाट स्वीकृत गरियो ।

#### निर्णय नं. : १४

आ व २०२८:०६९मा निमाण भएको यस नगरपालिकाको नगर स्तर्भय प्रकाप व्यवस्थापन योजना २०६८ लाई नगरपरिषद्वार स्वीकृत गरियो ।

#### निर्णय नं : ५६५

यस रामग्राम न पा बाहे न १२ मा रहेको सरस्वनी नि मा वि को भवन निमाण गर्न का लागि डिटेन्ट नागत इंफ्टिमेट उइड परामशं दाता संग तयार गराई स्वानीय विकास मन्त्रालयका स्वीक्ती लिड भारतीय राजदूतावास सग माग गर्न स्विक्तीको नागि नगरपरिपदमा पेश गर्न निर्णय गरियो ।

#### निर्णय न. : ४६

यस नगरपालिकाको जि आई एस सहितको वैज्ञानीक डिजिटल पढनीवाट सडकको वगिकरण जवा लम्बाइ सहित हिटेल म्यापिड तयार गर्न नगरपरिषद्वाट स्वीकृत गरियो ।

#### निर्णय नं. : १९

सार्वजनिक सुनवाई ,सामाजिक परिक्षण र प्रगति समिक्षा बाट तयार भगर आएको प्रतिवेदनलाइ अनुमोदन गर्न स्विकृतीको लागि नगरपरिषद्मा पेश गर्ने निर्णय गरियो ।

#### निर्णय नं. : 🕼

कुनै पनि सरकारी कार्यालय ,संघ संस्था वा उपभोक्ता समितिले न पा वाहेकका अन्य निकायमा योजनाको लागत इंष्टिमेट तयार गर्न लिखित रुपमा भाग गरिआएमा कुल लागतको ०.४ प्रतिशतले हुन आउने सेवा शुल्क रकम सम्बन्धित सँग लिई ०.२४ प्रतिशत सोफी तयार गर्ने प्राविधिकलाई दिने र वॉकी रकम न पा मा दाखिला गर्न नगरपरिषद्वाट स्वीकृत गरियो ।

#### निर्णय नं. : ६%

रामग्राम स्तुप क्षेत्र भित्र आउने पर्यटक हरुका लागि विश्वाम गृह को व्यवस्था नरहेको हुदा विश्वाम गृह निर्माणका लागि जग्गा एकीन गरि मास्टर प्लान तयार गर्न नगरपरिषद्वाट स्वीकृत गरियो ।

## / निर्णय नं. : ६९

नगरपालिकाको २०४ द सालमा स्वीकृत सडक क्षेत्राधिकार रेकडं पुस्तिकालाई पेश भए बमेजिमको ससोधन नगरपरिषद्वाट स्वीकृत गरियो ।

## निर्णय न. : ६१

रामग्राम न पा. ले निर्माण गरेका कालीपत्रे सडक, ग्राभेल, कच्ची सडकहरुको नामाकरण गरि उक्त सडकहरुमा पर्ने सडकको जगगाको लगत कट्टा गर्न मालपोत तथा नापी कार्यालयलाई अनुरोध नगरपरिषद्वाट स्वीकत गरियों।

#### निर्णय नं. : ६१

यस रामग्राम न पा को कर्मचारी कल्याण कोषलाई प्रभावकारी ढगले सचालन गर्नका लागि कर्मचारी कल्याण कोष संचालन निर्देशिका तयार गरी सो निर्देशिकालाई स्वीकत गर्नका लागि सम्पूर्ण अधिकार नगरपालिका वोडंलाई प्रत्योजन गरियो ।

-6:2-63

**Meeting Minutes** 

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## **Notice for Public Consultations**



रामग्राम नगरपालिका नगर कार्यपालिकाको कार्यालय परासी, नक्क्समसे के प्रबंध के माल लुस्ट्रिन ज्वस्वर के माल लुस्ट्रिन ज्वस्वर के माल लुस्ट्रिन ज्वस्वर के माल

मिति २०७९/१२/११

### विषयः सुचना सुचना सुचना

यस नगरपालिकामा शहरी विकास तथा भवन निर्माण विभाग अन्तर्गत नेपाल शहरी सुशाशन तथा पूर्वाधार आयोजना (NUGIP) का DSC परामर्शदाता टोलीले तयार गर्दै गरेको पोखरापाली - पण्डितपुर सडक खण्डको विस्तृत परियोजना प्रतिवेदन तयारीका चरणमा गरिने वातावरणीय तथा समाजिक प्रभाव मूल्याङ्कन (ESIA) अध्ययनका क्रममा DSC team र यस नगरपालिकाको वडा नं. ६. १०. १४. १५ र १८ को पोखरापाली-पण्डितपुर सडक खण्डका आयोजनाबाट प्रभावित बासिन्दा जग्गा धनीहरुसंग मिति २०७९.१२/१७ गतेका दिन पोखरापाली चोक र प्रगति चोकमा विस्तृत छलफल तथा अन्तरक्रिया गरिने भएकोले उक्त दिन सम्बन्धित सबै सरोकारवालाहरुलाई उपस्थित हुन सुचित गरिनछ ।

#### विबरणः

१. मितिः २०७९/१२/१७ गते, समयः विहानः ८:०० बजे, पोखरापाली चोक ।

२. मितिः २०७९ १२ १७ गते, समयः विहानः ११:०० बजे, प्रगति चोक ।

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कुन्द्रम कुमार चौधरी लंबा अधिकृत (बातौं)

### **Public Consultations**

आज मिति २०७९ छ॰ ९ ८ गतेका दिन मेपाल शाली शासकिय तथा पर्वाधार आयोजना अन्तर्मत स्वलपरासी जिल्लाको रामग्राम सगरपालिका वडा स. ६, १०,**१४**,१४ रिवल पोसरपाली - पण्डिलपुर सडक खण्ड स्तरोस्ति समें कार्यको विस्तृत परियोजना अध्ययनका कममा प्राधिधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तरिर्धात माधिको मुल्याइन, प्रभाव र सम्भाव्य उपयाहरुका वरेमा B.N. Consultancy Pvt. Ltd. का DSC Team र स्थानिय सरोकारवालाहरूसंग छलफल तथा अन्तरकिया गर्ने कार्य सम्पन्त भयो । उपस्थिति संपर्क न संस्था ठेगाना क.सं नाम 9857115425 LODIN धानवत चादव 9. र्याता नाध्य 11 9847081643 2. 985762811 मान जें जवादी BN consul B 985101194 Jenes July un 021820 8 सिम के मर राष्ट्रा CIMILIE 3 anytera and ( DSC/B-10- Consultat 985 7024286 9801939448 STORAT BAIR atte SUN: 1851090863 34ोत्र अन्नार। अगृहरी अपार्धभ/इस्रोज बानिज्भ संघ 0 9857046100 9. 21321 1130 UTED ROZEZ /PODIO विद्या सागर निपार्ह Q.n. र्दनवडी अरथदा 3857045258 grater Amortia 23 rai 1 on at 92 रात्रे अलामा लेवह इ र्व कडा श्विम्म 93 בואידה שב בד הדודרול मेत्र खाजा जाप्ता CEKEYS 98. घोरेमान हत्ताक Chlore SC76553010 मनोज कत 92. 71 3566229521-96 रदा मार्च रवकारेवी sociologist /BH Engineer IBN Environmental Specialist 9841019160 १७. भी रात्र शापा 9843203357 साजेश है।। कर nt. तवरात भन्दारी Road sagety Eng 9851046615 98

DSC Team रांज आज अरुके वातावरणीय रुवै सामाजिक य्राजानिक सुरक्षण यात्रसि हलफलमा नित्र उल्लेखिन जुद्दास्ठ (Key Issues) का राज्यतान विस्तृत हलफल अये। 9. सड्य निर्माण गई कुने पनि भोलिक संस्वामल झाते पुगेल त्मर्युको तत्काल पुत्र तिलाही र सेचालत्र यात्र्वास्व विधत्रला विस्तृत हलफल भयो। 2. राड्य निमार्ग्या काम्य काम्यारहरबाट हत राकते अवादिन्त जातिविधिका राज्यसमा इलाफल जारियो। 2. राडक निर्मालक कामा हरे वायु रूवे ध्वती प्रदुषणका यात्रक पति त्यापठ हलाइन जीर्यो।

- ४. सड्ठ तिल्ली गरी राष्ट्रीय सजुरापलाई जोजगारिजा आध्यप्रिकत सन्वर्धना इ लाफल जाहियो।
- لا. बाटो रक्टा/निर्मात गर्दा उत्पन्न हुने जाहो छाल्न चडा मं ६ छिट्ठि तक्टी रहाल तनिठ्ठो रवाली रुपात पुर्त वा राज्याप्रजा उपयुक्त हुने नक्रिक्रण हलफल जारियो।
- ६. काजवारका चिविर रवापनाका लाजि वडा में १४ को रुक्रीनी छेत्रजा उपमुक्त हरे विषयका इलाफल गरियो।

आज मिति २०७९, ९२/ ९८, गतेका दिन नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत नवलपरांसी जिल्लाको रामयाम नगरपालिका बडा नं ६, १०,१४/१४ स्थित पोसरपाली - पण्डितपुर सहक सण्ड स्तरोलित गर्ने कार्यको विस्तृत परियोजना अध्ययनका कममा पाविधिक, वातावरणीय र सामाजिक एवं आर्थिक बस्तुस्थिति माधिको मूल्याइन, प्रभाव र सम्भाव्य उपयाहरुका बरेमा B.N. Consultancy Pvt. Ltd. का DSC Team र स्थानिय सरोकारवालाहरुसंग छलफल तथा जन्तरकिया गर्ने कार्य सम्भन्त मयो ।

उपस्थितिः

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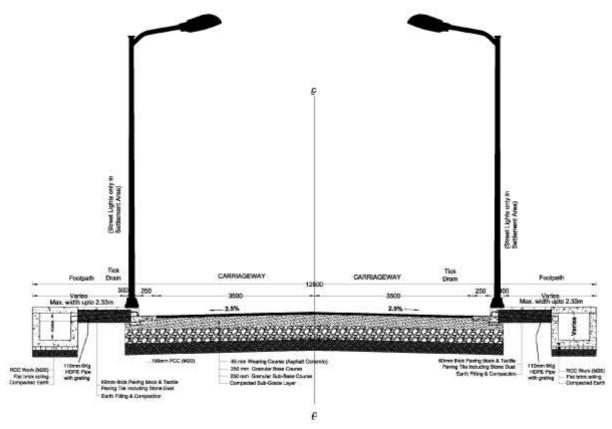
DSC Team रहेग आज अरही बातावरणीय रावे रगामाजिक रार्यण राज्यसि इलाज्लमा निज्य उल्लेखित मुद्दाहरुमा (Key Issues) विस्तृत इलाइन मिर्द्यो। 9. राडकको ROW सन्बन्धमा विस्तृत इलफल जारियो। साथे गागस्तरिय बारेर तिमाले खान्वयामा वनि हलाऊल जारियो । &. 2750 निर्णाण गरी राग्री महरुवाई रोजनामिम पहिलो आयमिकता हर परे खिखामा हल्फन गरियो। 3. तारो स्वत्या उत्पत्त हरे जारो रहा आदि फारत वडा में ६ रिकात सिद्धितइमी स्टॉल तजिंडकों खाली रयान राज्याउन र पुर्त उपमुक्त हो विषयमा ह नजन राहियो। & राडक निमार्ग जारी कोरे मात्रे भोतिक राइकामा (Row काहिएक) इाति पुत्रेला त्यरको तत्काल पुतः प्रिलीग २ एम्बाजन रक्ष्यसमा विस्त्रत कलण्डल गरियो। ४. आमदाको चितिर स्वापनाका लगाई नडा तं-१४ को स्वेतीला घोठाग उपयुक्त हो किएमना हलाप्वत मार्गि। ह. राडव निमाणेवा काममा बाह्य कामयाख्यवार हन यूक्ने उमाछित्व त अतिविधिका राज्यसमा निस्तूर त हलफव जरियो । 6. राडक निक्रांगेला इडमका हुन सकने हबनी, नामु अद्रवा जस्ता राह्याय राष्ट्रक हाराय हार्ट्यो । All Deput

आज मिति २०७९ **9.2** ९.६. गतेका दिन नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत नवलपरासी जिल्लाको रामग्राम नगरपालिका वडा न ६, १०,**९४**, ११ स्थित पोखरपाली - पण्डितपुर सडक खण्ड स्तरोन्ति गर्ने कार्यको विस्तृत परियोजना अध्ययनका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तुस्थिति माधिको मुल्याइन, प्रभाव र सम्भाव्य उपयाहरुका बरेमा B.N. Consultancy Pvt. Ltd. का DSC Team र स्थानिय सरोकारवालाहरुसंग छलफल तथा जन्तरकिया गर्ने कार्य सम्पन्न भयो ।

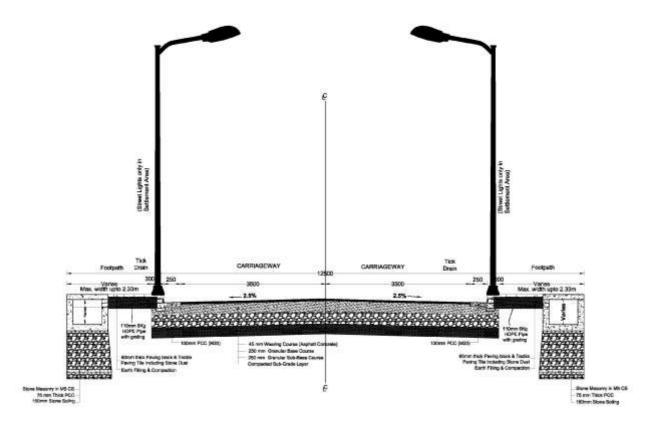
उपस्थिति:

| क.सं.      | नाम                          | संस्था / ठेगाना         | दस्तस्वत          | संपर्क नं.            |
|------------|------------------------------|-------------------------|-------------------|-----------------------|
| <i>a</i> . | र्विधारसण्ड निवाही           | च्छा में. ६, इन्स्टाक्ष | fort.             | 9857045268            |
| 2.         | स्रारे अन्मता के नह          | नग्न में ६, रह्तदस्य    | - Ciniol .        | SEREQSONOS            |
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| G .        | জামণিন লিফা                  | पोर्वरामली              | BORNE             | 2292425382            |
| 6.         | खुकीता यादव                  | पोखरापाली               | कुसीता            | 1.1                   |
| 5          | जमुनी केवट                   | पोरवरापाली              | जम्त              | 1 76 6                |
| 5.         | मनोडा पन्त                   | <u>मोखरायाल</u> )       | anti-s            | 3566229642            |
| 90.        | संजीता केंत्रट               |                         | रंग्रीता          |                       |
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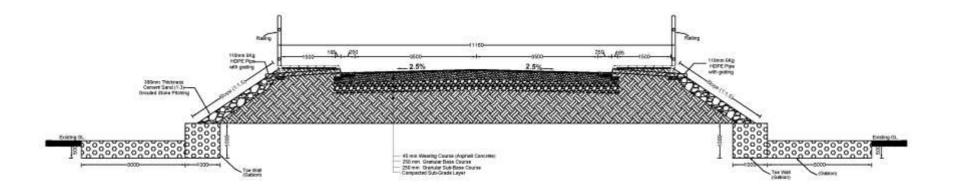
Annex 2: Proposed Typical Cross Section



Typical Cross section for 12.5 m road (section Type A)



Typical Cross section for 12.5 m road(section Type B)



Typical Cross section near Turiya River Type

Annex 3: Land parcels along RoW and Cadastral Maps

| List of land parcels within Row in Section I |            |            |      |                 |         |  |
|--|------------|------------|------|-----------------|---------|--|
| S.N.   | Parcel No. | VDC        | Ward | Sheet No.       | Remarks |  |
| 1  | 1184       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 2  | 1185       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 3  | 1186       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 4  | 331        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 5  | 356        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 6  | 355        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 7  | 357        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 8  | 418        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 9  | 417        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 10   | 415        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 11   | 323        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 12   | 287        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 13   | 1116       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 14   | 1117       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 15   | 1118       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 16   | 289        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 17   | 292        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 18   | 1337       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 19   | 1338       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 20   | 1121       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 21   | 1257       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 22   | 1256       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Right   |  |
| 23   | 411        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 24   | 574        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 25   | 575        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 26   | 318        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 27   | 317        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 28   | 316        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 29   | 315        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 30   | 1263       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 31   | 230        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |  |
| 32   | 191        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 33   | 1291       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 34   | 1290       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 35   | 1128       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 36   | 1126       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 37   | 1127       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 38   | 1125       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 39   | 1178       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 40   | 636        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |
| 41   | 182        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |  |

List of land parcels within RoW in Section I

| S.N. | Parcel No. | VDC        | Ward | Sheet No.       | Remarks |
|------|------------|------------|------|-----------------|---------|
| 42   | 160        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 43   | 1394       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 44   | 1395       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 45   | 586        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 46   | 156        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 47   | 229        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 48   | 424        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 49   | 501        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 50   | 502        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 51   | 154        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 52   | 153        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 53   | 1190       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 54   | 1191       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 55   | 1192       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 56   | 151        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 57   | 150        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 58   | 149        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 59   | 148        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 60   | 147        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 61   | 1194       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 62   | 1193       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 63   | 613        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 64   | 497        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 65   | 726        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 66   | 972        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 67   | 971        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 68   | 967        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 69   | 826        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 70   | 97         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 71   | 160        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 72   | 1394       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 73   | 1395       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 74   | 586        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 75   | 156        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 76   | 157        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 77   | 77         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 78   | 1389       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 79   | 1390       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 80   | 1398       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 81   | 1399       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 82   | 1138       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 83   | 1137       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 84   | 57         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |

| S.N. | Parcel No. | VDC        | Ward | Sheet No.       | Remarks |
|------|------------|------------|------|-----------------|---------|
| 85   | 44         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 86   | 43         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 87   | 38         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 88   | 524        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 89   | 1494       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 90   | 1157       | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 91   | 854        | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 92   | 32         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 93   | 33         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 94   | 35         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 95   | 36         | Manjhariya | 5 ka | Manjhariya 5 ka | Right   |
| 96   | 97         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 97   | 93         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 98   | 92         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 99   | 1227       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 100  | 1226       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 101  | 1177       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 102  | 81         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 103  | 88         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 104  | 87         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 105  | 939        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 106  | 940        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 107  | 40         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 108  | 679        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 109  | 678        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 110  | 707        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 111  | 1253       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 112  | 1252       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 113  | 30         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 114  | 29         | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 115  | 1352       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 116  | 1351       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 117  | 784        | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 118  | 1229       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 119  | 1228       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 120  | 1224       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 121  | 1222       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 122  | 1270       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 123  | 1271       | Manjhariya | 5 Ga | Manjhariya 5 Ga | Left    |
| 124  | 551        | Aamrauta   | 1 Ka | Aamrauta 1 Ka   | Right   |
| 125  | 578        | Aamrauta   | 1 Ka | Aamrauta 1 Ka   | Right   |
| 126  | 579        | Aamrauta   | 1 Ka | Aamrauta 1 Ka   | Right   |
| 127  | 580        | Aamrauta   | 1 Ka | Aamrauta 1 Ka   | Right   |

| S.N. | Parcel No. | VDC       | Ward | Sheet No.     | Remarks |
|------|------------|-----------|------|---------------|---------|
| 128  | 597        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 129  | 750        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 130  | 751        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 131  | 752        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 132  | 753        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 133  | 437        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 134  | 591        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 135  | 592        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 136  | 490        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 137  | 593        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 138  | 594        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 139  | 361        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 140  | 452        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 141  | 142        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 142  | 141        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 143  | 140        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 144  | 673        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 145  | 723        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 146  | 722        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 147  | 695        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 148  | 694        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 149  | 681        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 150  | 677        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 151  | 676        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 152  | 699        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 153  | 700        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 154  | 85         | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 155  | 595        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 156  | 680        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 157  | 679        | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 158  | 83         | Aamrauta  | 1 Ka | Aamrauta 1 Ka | Right   |
| 159  | 614        | Banjariya | 3    | Banjariya 3   | Right   |
| 160  | 613        | Banjariya | 3    | Banjariya 3   | Right   |
| 161  | 500        | Banjariya | 3    | Banjariya 3   | Right   |
| 162  | 1205       | Banjariya | 3    | Banjariya 3   | Right   |
| 163  | 1206       | Banjariya | 3    | Banjariya 3   | Right   |
| 164  | 1088       | Banjariya | 3    | Banjariya 3   | Right   |
| 165  | 1215       | Banjariya | 3    | Banjariya 3   | Right   |
| 166  | 1216       | Banjariya | 3    | Banjariya 3   | Right   |
| 167  | 1086       | Banjariya | 3    | Banjariya 3   | Right   |
| 168  | 492        | Banjariya | 3    | Banjariya 3   | Right   |
| 169  | 895        | Banjariya | 3    | Banjariya 3   | Right   |
| 170  | 896        | Banjariya | 3    | Banjariya 3   | Right   |

| S.N. | Parcel No. | VDC       | Ward | Sheet No.   | Remarks |
|------|------------|-----------|------|-------------|---------|
| 171  | 1188       | Banjariya | 3    | Banjariya 3 | Right   |
| 172  | 1189       | Banjariya | 3    | Banjariya 3 | Right   |
| 173  | 1190       | Banjariya | 3    | Banjariya 3 | Right   |
| 174  | 478        | Banjariya | 3    | Banjariya 3 | Right   |
| 175  | 595        | Banjariya | 3    | Banjariya 3 | Right   |
| 176  | 470        | Banjariya | 3    | Banjariya 3 | Right   |
| 177  | 674        | Banjariya | 3    | Banjariya 3 | Right   |
| 178  | 675        | Banjariya | 3    | Banjariya 3 | Right   |
| 179  | 788        | Banjariya | 3    | Banjariya 3 | Right   |
| 180  | 1202       | Banjariya | 3    | Banjariya 3 | Right   |
| 181  | 1201       | Banjariya | 3    | Banjariya 3 | Right   |
| 182  | 957        | Banjariya | 3    | Banjariya 3 | Right   |
| 183  | 1124       | Banjariya | 3    | Banjariya 3 | Right   |
| 184  | 462        | Banjariya | 3    | Banjariya 3 | Right   |
| 185  | 1431       | Sukauli   | 9    | Sukauli 9   | Left    |
| 186  | 1432       | Sukauli   | 9    | Sukauli 9   | Left    |
| 187  | 1433       | Sukauli   | 9    | Sukauli 9   | Left    |
| 188  | 1434       | Sukauli   | 9    | Sukauli 9   | Left    |
| 189  | 564        | Sukauli   | 9    | Sukauli 9   | Left    |
| 190  | 860        | Sukauli   | 9    | Sukauli 9   | Left    |
| 191  | 862        | Sukauli   | 9    | Sukauli 9   | Left    |
| 192  | 861        | Sukauli   | 9    | Sukauli 9   | Left    |
| 193  | 1369       | Sukauli   | 9    | Sukauli 9   | Left    |
| 194  | 1370       | Sukauli   | 9    | Sukauli 9   | Left    |
| 195  | 1280       | Sukauli   | 9    | Sukauli 9   | Left    |
| 196  | 1279       | Sukauli   | 9    | Sukauli 9   | Left    |
| 197  | 1181       | Sukauli   | 9    | Sukauli 9   | Left    |
| 198  | 1180       | Sukauli   | 9    | Sukauli 9   | Left    |
| 199  | 1179       | Sukauli   | 9    | Sukauli 9   | Left    |
| 200  | 793        | Sukauli   | 9    | Sukauli 9   | Left    |
| 201  | 794        | Sukauli   | 9    | Sukauli 9   | Left    |
| 202  | 794        | Sukauli   | 9    | Sukauli 9   | Left    |
| 203  | 794        | Sukauli   | 9    | Sukauli 9   | Left    |
| 204  | 795        | Sukauli   | 9    | Sukauli 9   | Left    |
| 205  | 618        | Sukauli   | 9    | Sukauli 9   | Left    |
| 206  | 1184       | Sukauli   | 9    | Sukauli 9   | Left    |
| 207  | 1085       | Sukauli   | 9    | Sukauli 9   | Left    |
| 208  | 1057       | Sukauli   | 9    | Sukauli 9   | Left    |
| 209  | 1601       | Sukauli   | 9    | Sukauli 9   | Left    |
| 210  | 1602       | Sukauli   | 9    | Sukauli 9   | Left    |
| 211  | 1053       | Sukauli   | 9    | Sukauli 9   | Left    |
| 212  | 1968       | Sukauli   | 9    | Sukauli 9   | Left    |
| 213  | 1967       | Sukauli   | 9    | Sukauli 9   | Left    |

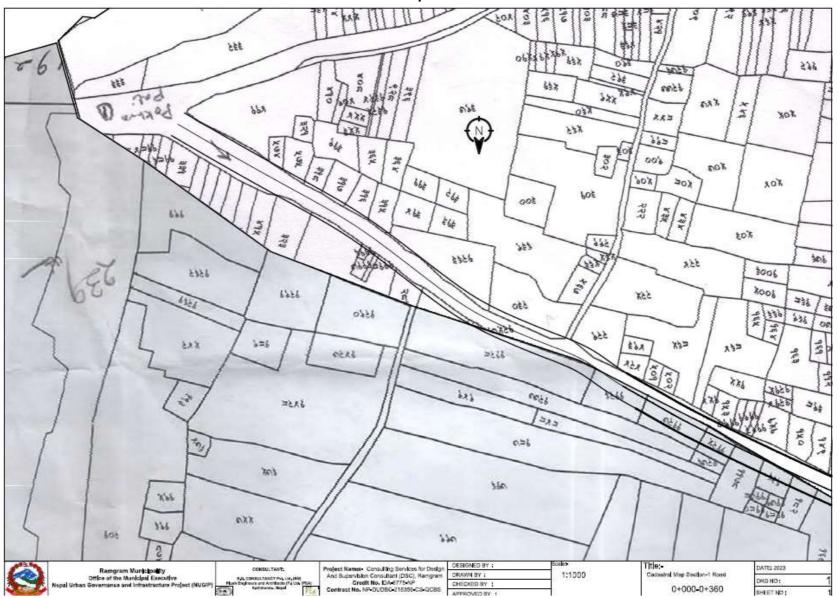
| S.N. | Parcel No. | VDC       | Ward | Sheet No.   | Remarks |
|------|------------|-----------|------|-------------|---------|
| 214  | 1810       | Sukauli   | 9    | Sukauli 9   | Left    |
| 215  | 1842       | Sukauli   | 9    | Sukauli 9   | Left    |
| 216  | 1844       | Sukauli   | 9    | Sukauli 9   | Left    |
| 217  | 0          | Sukauli   | 9    | Sukauli 9   | Left    |
| 218  | 1960       | Sukauli   | 9    | Sukauli 9   | Left    |
| 219  | 1949       | Sukauli   | 9    | Sukauli 9   | Left    |
| 220  | 232        | Sukauli   | 9    | Sukauli 9   | Left    |
| 221  | 231        | Sukauli   | 9    | Sukauli 9   | Left    |
| 222  | 1616       | Sukauli   | 9    | Sukauli 9   | Left    |
| 223  | 1617       | Sukauli   | 9    | Sukauli 9   | Left    |
| 224  | 1618       | Sukauli   | 9    | Sukauli 9   | Left    |
| 225  | 1619       | Sukauli   | 9    | Sukauli 9   | Left    |
| 226  | 609        | Sukauli   | 9    | Sukauli 9   | Left    |
| 227  | 1501       | Banjariya | 4    | Banjariya 4 | Right   |
| 228  | 1618       | Banjariya | 4    | Banjariya 4 | Right   |
| 229  | 1619       | Banjariya | 4    | Banjariya 4 | Right   |
| 230  | 1470       | Banjariya | 4    | Banjariya 4 | Right   |
| 231  | 1469       | Banjariya | 4    | Banjariya 4 | Right   |
| 232  | 1195       | Banjariya | 4    | Banjariya 4 | Right   |
| 233  | 1194       | Banjariya | 4    | Banjariya 4 | Right   |
| 234  | 657        | Banjariya | 4    | Banjariya 4 | Right   |
| 235  | 1040       | Banjariya | 4    | Banjariya 4 | Right   |
| 236  | 1041       | Banjariya | 4    | Banjariya 4 | Right   |
| 237  | 1641       | Banjariya | 4    | Banjariya 4 | Right   |
| 238  | 1640       | Banjariya | 4    | Banjariya 4 | Right   |
| 239  | 1266       | Banjariya | 4    | Banjariya 4 | Right   |
| 240  | 1265       | Banjariya | 4    | Banjariya 4 | Right   |
| 241  | 1264       | Banjariya | 4    | Banjariya 4 | Right   |
| 242  | 1629       | Banjariya | 4    | Banjariya 4 | Right   |
| 243  | 1628       | Banjariya | 4    | Banjariya 4 | Right   |
| 244  | 795        | Banjariya | 4    | Banjariya 4 | Right   |
| 245  | 812        | Banjariya | 4    | Banjariya 4 | Right   |
| 246  | 641        | Banjariya | 4    | Banjariya 4 | Right   |
| 247  | 633        | Banjariya | 4    | Banjariya 4 | Right   |
| 248  | 1661       | Banjariya | 4    | Banjariya 4 | Right   |
| 249  | 1662       | Banjariya | 4    | Banjariya 4 | Right   |
| 250  | 1663       | Banjariya | 4    | Banjariya 4 | Right   |
| 251  | 1664       | Banjariya | 4    | Banjariya 4 | Right   |
| 252  | 1684       | Banjariya | 4    | Banjariya 4 | Right   |
| 253  | 1683       | Banjariya | 4    | Banjariya 4 | Right   |
| 254  | 1425       | Banjariya | 4    | Banjariya 4 | Right   |
| 255  | 626        | Banjariya | 4    | Banjariya 4 | Right   |
| 256  | 625        | Banjariya | 4    | Banjariya 4 | Right   |

| S.N. | Parcel No. | VDC        | Ward  | Sheet No.        | Remarks |
|------|------------|------------|-------|------------------|---------|
| 257  | 613        | Banjariya  | 4     | Banjariya 4      | Right   |
| 258  | 612        | Banjariya  | 4     | Banjariya 4      | Right   |
| 259  | 1208       | Banjariya  | 4     | Banjariya 4      | Right   |
| 260  | 1207       | Banjariya  | 4     | Banjariya 4      | Right   |
| 261  | 1206       | Banjariya  | 4     | Banjariya 4      | Right   |
| 262  | 601        | Banjariya  | 4     | Banjariya 4      | Right   |
| 263  | 1450       | Banjariya  | 4     | Banjariya 4      | Right   |
| 264  | 582        | Banjariya  | 4     | Banjariya 4      | Right   |
| 265  | 1385       | Banjariya  | 4     | Banjariya 4      | Right   |
| 266  | 576        | Banjariya  | 4     | Banjariya 4      | Right   |
| 267  | 178        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 268  | 270        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 269  | 269        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 270  | 268        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 271  | 163        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 272  | 162        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 273  | 76         | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 274  | 118        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 275  | 117        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 276  | 116        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 277  | 115        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 278  | 74         | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 279  | 111        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 280  | 238        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 281  | 241        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 282  | 240        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 283  | 139        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 284  | 149        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 285  | 159        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 286  | 133        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 287  | 134        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 288  | 330        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 289  | 331        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 290  | 206        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 291  | 205        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 292  | 196        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 293  | 195        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 294  | 271        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 295  | 47         | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 296  | 166        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 297  | 214        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 298  | 288        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 299  | 12         | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |

| S.N. | Parcel No. | VDC        | Ward  | Sheet No.        | Remarks |
|------|------------|------------|-------|------------------|---------|
| 300  | 11         | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 301  | 10         | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 302  | 315        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 303  | 316        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 304  | 236        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 305  | 7          | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 306  | 6          | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 307  | 261        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 308  | 230        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 309  | 231        | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 310  | 1          | Sukhrawali | 4 Kha | Sukhrawali 4 Kha | Left    |
| 311  | 945        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 312  | 944        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 313  | 381        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 314  | 382        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 315  | 409        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 316  | 932        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 317  | 414        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 318  | 413        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 319  | 861        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 320  | 860        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 321  | 271        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 322  | 270        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 323  | 323        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 324  | 322        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 325  | 321        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 326  | 320        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 327  | 1          | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 328  | 3          | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 329  | 394        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 330  | 395        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 331  | 289        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 332  | 412        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 333  | 411        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 334  | 410        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 335  | 192        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 336  | 191        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 337  | 20         | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 338  | 210        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 339  | 23         | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 340  | 22         | Banjariya  | 1 Kha | Banjariya 1 Kha  | Right   |
| 341  | 388        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Left    |
| 342  | 389        | Banjariya  | 1 Kha | Banjariya 1 Kha  | Left    |

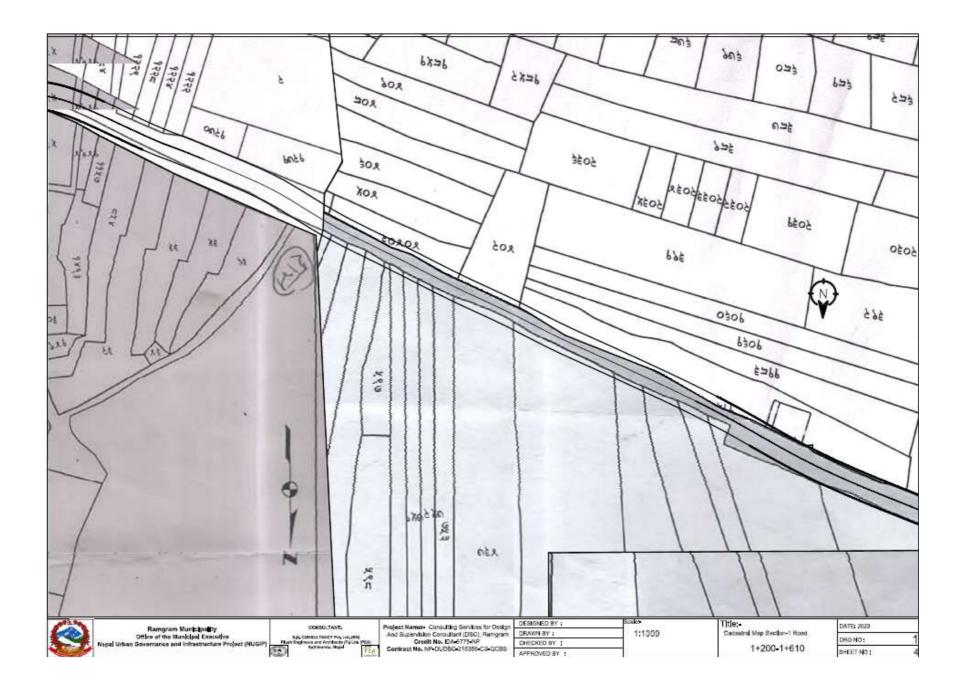
| S.N. | Parcel No. | VDC       | Ward  | Sheet No.       | Remarks |
|------|------------|-----------|-------|-----------------|---------|
| 343  | 213        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 344  | 212        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 345  | 211        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 346  | 341        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 347  | 340        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 348  | 339        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 349  | 338        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 350  | 942        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 351  | 941        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 352  | 943        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 353  | 880        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 354  | 383        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 355  | 384        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 356  | 205        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 357  | 204        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 358  | 203        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 359  | 428        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 360  | 429        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 361  | 430        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 362  | 183        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 363  | 5          | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 364  | 390        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 365  | 392        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 366  | 391        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 367  | 393        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 368  | 7          | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 369  | 405        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 370  | 402        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 371  | 881        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 372  | 325        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 373  | 18         | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 374  | 202        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 375  | 201        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 376  | 200        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 377  | 28         | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 378  | 27         | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 379  | 859        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 380  | 858        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 381  | 433        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 382  | 434        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 383  | 907        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |
| 384  | 908        | Banjariya | 1 Kha | Banjariya 1 Kha | Left    |

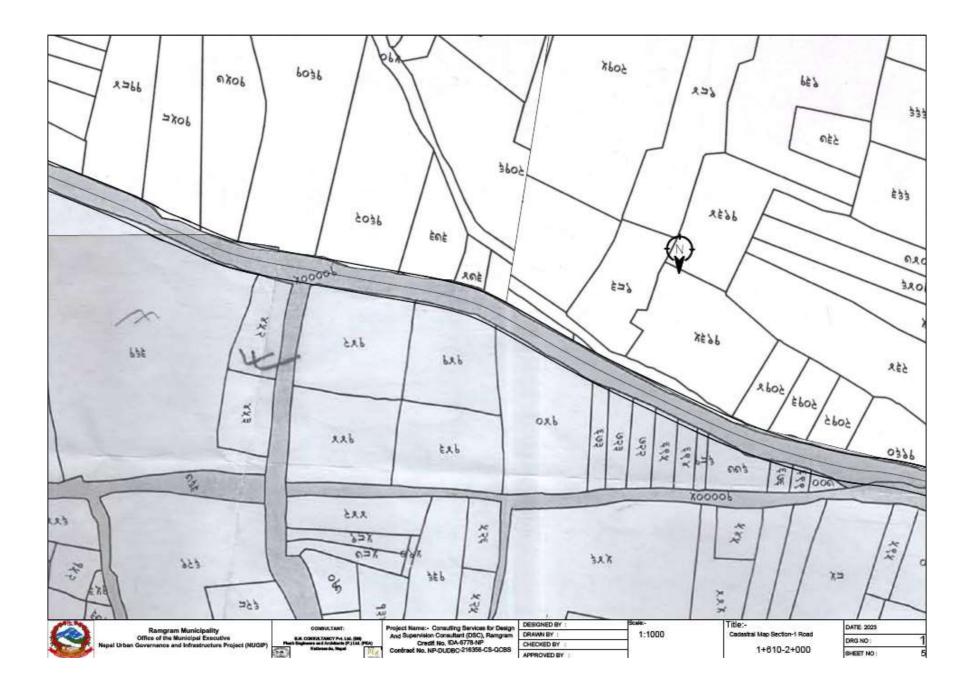
Cadestral Map of Section I





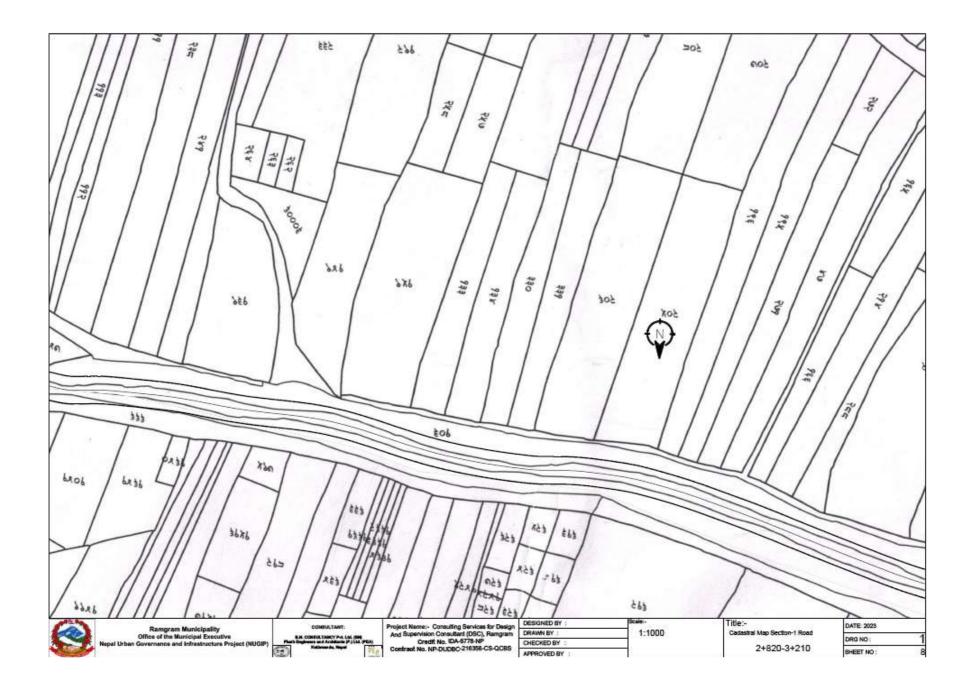




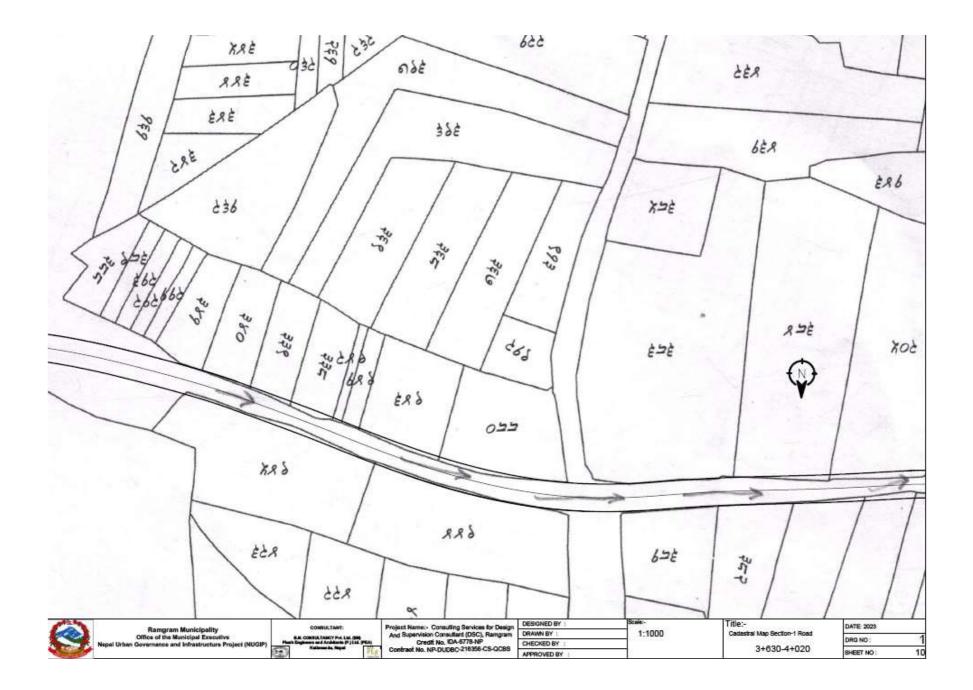




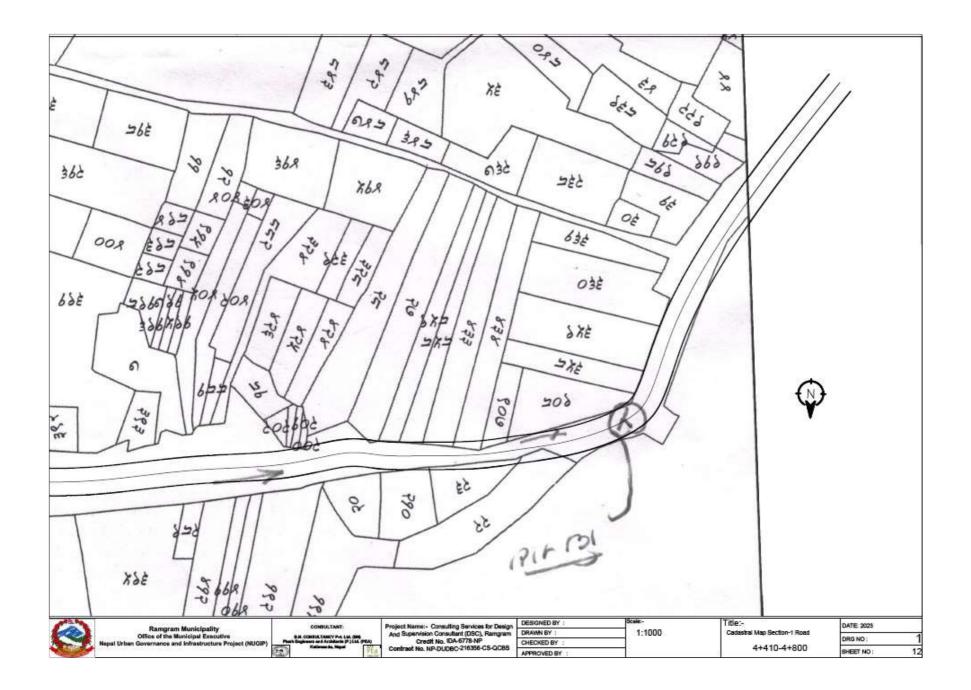












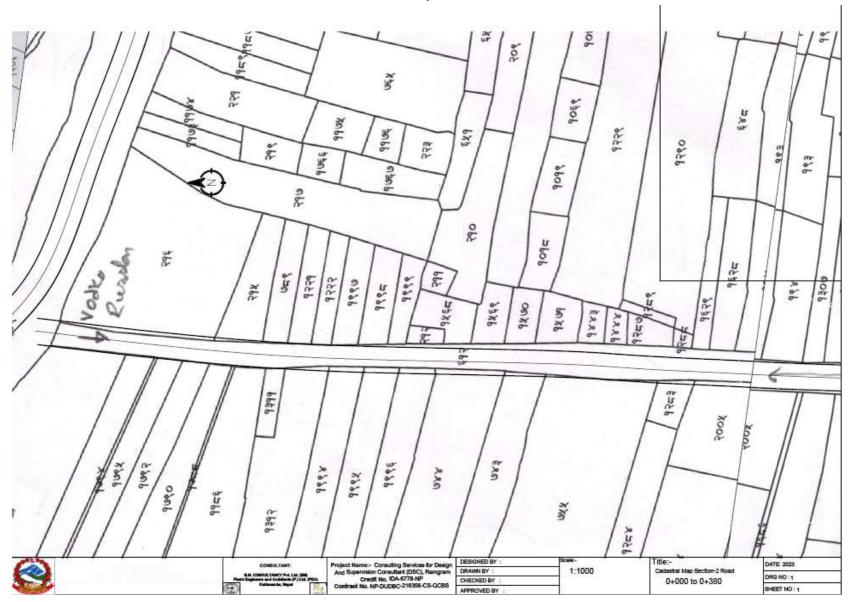
# List of land parcels within RoW in Section II

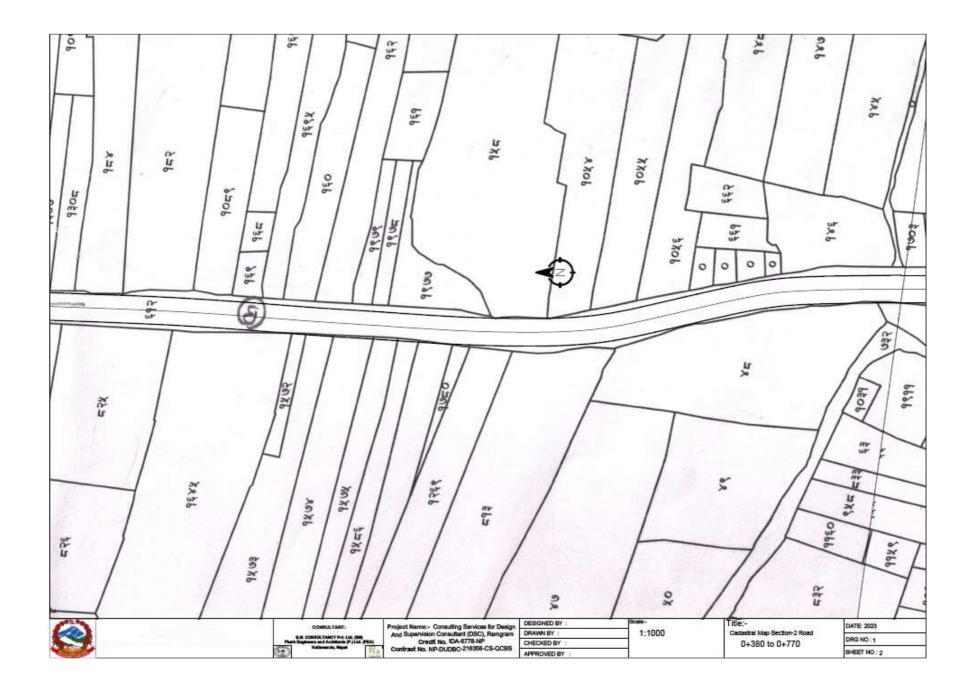
| S.N | Parcel<br>No.   | VDC     | Ward             | Sheet<br>No. | Remarks |
|-----|---|---------|------------------|--------------|---------|
| 1   | 799   | Sukauli | 9                | Sukauli 9    | Right   |
| 2   | 1794  | Sukauli | 9                | Sukauli 9    | Right   |
| 3   | 1795  | Sukauli | 9                | Sukauli 9    | Right   |
| 4   | 1792 Sukauli  |         | 9                | Sukauli 9    | Right   |
| 5   | 1790  | Sukauli | 9                | Sukauli 9    | Right   |
| 6   | 1788  | Sukauli | 9                | Sukauli 9    | Right   |
| 7   | 1186  | Sukauli | 9                | Sukauli 9    | Right   |
| 8   | 1311  | Sukauli | 9                | Sukauli 9    | Right   |
| 9   | 1312  | Sukauli | 9                | Sukauli 9    | Right   |
| 10  | 1994  | Sukauli | 9                | Sukauli 9    | Right   |
| 11  | 1995  | Sukauli | 9                | Sukauli 9    | Right   |
| 12  | 1996  | Sukauli | 9                | Sukauli 9    | Right   |
| 13  | 744   | Sukauli | 9                | Sukauli 9    | Right   |
| 14  | 743   | Sukauli | 9                | Sukauli 9    | Right   |
| 15  | 755   | Sukauli | 9                | Sukauli 9    | Right   |
| 16  | 1283  | Sukauli | 9                | Sukauli 9    | Right   |
| 17  | 2005  | Sukauli | 9                | Sukauli 9    | Right   |
| 18  | 1686  | Sukauli | 9                | Sukauli 9    | Right   |
| 19  | 864   | Sukauli | 9                | Sukauli 9    | Right   |
| 20  | 825   | Sukauli | 9                | Sukauli 9    | Right   |
| 21  | 216   | Sukauli | 9                | Sukauli 9    | Left    |
| 22  | 215   | Sukauli | 9                | Sukauli 9    | Left    |
| 23  | 789   | Sukauli | 9                | Sukauli 9    | Left    |
| 24  | 1221  | Sukauli | 9                | Sukauli 9    | Left    |
| 25  | 1222  | Sukauli | 9                | Sukauli 9    | Left    |
| 26  | 1997  | Sukauli | 9                | Sukauli 9    | Left    |
| 27  | 1998  | Sukauli | 9                | Sukauli 9    | Left    |
| 28  | 1999  | Sukauli | 9                | Sukauli 9    | Left    |
| 29  | 121   | Sukauli | 9                | Sukauli 9    | Left    |
| 30  | 1568  | Sukauli | 9                | Sukauli 9    | Left    |
| 31  | 1569  | Sukauli | 9                | Sukauli 9    | Left    |
| 32  | 1570  | Sukauli | 9                | Sukauli 9    | Left    |
| 33  | 1571  | Sukauli | 9                | Sukauli 9    | Left    |
| 34  | 1443  | Sukauli | 9                | Sukauli 9    | Left    |
| 35  | 1444  | Sukauli | 9                | Sukauli 9    | Left    |
| 36  | 1287Sukauli9Sukauli 9   |         | Left             |              |         |
| 37  | 1288Sukauli9Sukauli 9L  |         | Left             |              |         |
| 38  |   |         | Left             |              |         |
| 39  | 39         1628         Sukauli         9         Sukauli 9         I |         | Left             |              |         |
| 40  |   |         | Left             |              |         |
| 41  | 1307  | Sukauli | 9 Sukauli 9 Left |              |         |
| 42  | 1308  | Sukauli | 9                | Sukauli 9    | Left    |
| 43  | 1645  | Sukauli | 9                | Sukauli 9    | Right   |
| 44  | 1572  | Sukauli | 9                | Sukauli 9    | Right   |

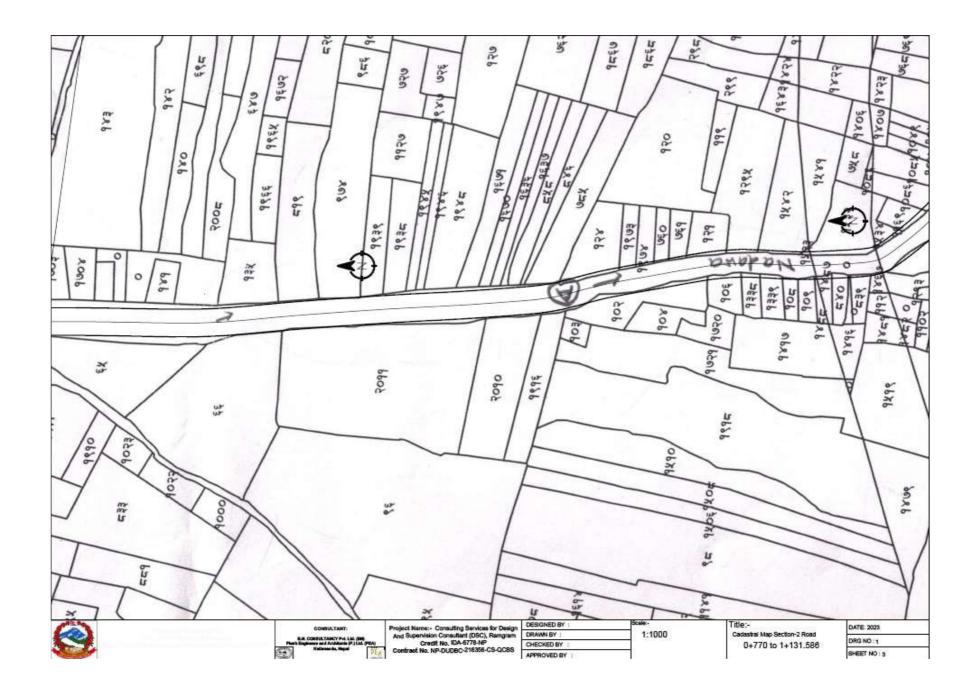
| S.N | Parcel<br>No. | VDC     | Ward  | Sheet<br>No.      | Remarks |
|-----|---------------|---------|-------|-------------------|---------|
| 45  | 1573          | Sukauli | 9     | Sukauli 9         | Right   |
| 46  | 1574          | Sukauli | 9     | Sukauli 9         | Right   |
| 47  | 1575          | Sukauli | 9     | Sukauli 9         | Right   |
| 48  | 1586          | Sukauli | 9     | Sukauli 9         | Right   |
| 49  | 1781          | Sukauli | 9     | Sukauli 9         | Right   |
| 50  | 1780          | Sukauli | 9     | Sukauli 9         | Right   |
| 51  | 1269          | Sukauli | 9     | Sukauli 9         | Right   |
| 52  | 813           | Sukauli | 9     | Sukauli 9         | Right   |
| 53  | 48            | Sukauli | 9     | Sukauli 9         | Right   |
| 54  | 65            | Sukauli | 9     | Sukauli 9         | Right   |
| 55  | 184           | Sukauli | 9     | Sukauli 9         | Left    |
| 56  | 182           | Sukauli | 9     | Sukauli 9         | Left    |
| 57  | 1089          | Sukauli | 9     | Sukauli 9         | Left    |
| 58  | 169           | Sukauli | 9     | Sukauli 9         | Left    |
| 59  | 1695          | Sukauli | 9     | Sukauli 9         | Left    |
| 60  | 160           | Sukauli | 9     | Sukauli 9         | Left    |
| 61  | 162           | Sukauli | 9     | Sukauli 9         | Left    |
| 62  | 1979          | Sukauli | 9     | Sukauli 9         | Left    |
| 63  | 1978          | Sukauli | 9     | Sukauli 9         | Left    |
| 64  | 1977          | Sukauli | 9     | Sukauli 9         | Left    |
| 65  | 158           | Sukauli | 9     | Sukauli 9         | Left    |
| 66  | 1054          | Sukauli | 9     | Sukauli 9         | Left    |
| 67  | 1055          | Sukauli | 9     | Sukauli 9         | Left    |
| 68  | 1056          | Sukauli | 9     | Sukauli 9         | Left    |
| 69  | 0             | Sukauli | 9     | Sukauli 9         | Left    |
| 70  | 0             | Sukauli | 9     | Sukauli 9         | Left    |
| 71  | 0             | Sukauli | 9     | Sukauli 9         | Left    |
| 72  | 0             | Sukauli | 9     | Sukauli 9         | Left    |
| 73  | 146           | Sukauli | 9     | Sukauli 9         | Left    |
| 74  | 1703          | Sukauli | 9     | Sukauli 9         | Left    |
| 75  | 66            | Sukauli | 9     | Sukauli 9         | Right   |
| 76  | 2011          | Sukauli | 9     | Sukauli 9         | Right   |
| 77  | 2010          | Sukauli | 9     | Sukauli 9         | Right   |
| 78  | 1916          | Sukauli | 9     | Sukauli 9         | Right   |
| 79  | 103           | Sukauli | 9     | Sukauli 9         | Right   |
| 80  | 102           | Sukauli | 9     | Sukauli 9         | Right   |
| 81  | 106           | Sukauli | 9     | Sukauli 9         | Right   |
| 82  | 1338          | Sukauli | 9     | Sukauli 9         | Right   |
| 83  | 1339          | Sukauli | 9     | Sukauli 9         | Right   |
| 84  | 108           | Sukauli | 9     | Sukauli 9         | Right   |
| 85  |               |         | Right |                   |         |
| 86  | 1487          | Sukauli | 9     | 9 Sukauli 9 Right |         |
| 87  | 840           | Sukauli | 9     | Sukauli 9         | Right   |
| 88  | 839           | Sukauli | 9     | Sukauli 9         | Right   |
| 89  | 1467          | Sukauli | 9     | Sukauli 9         | Right   |
| 90  | 116           | Sukauli | 9     | Sukauli 9         | Right   |

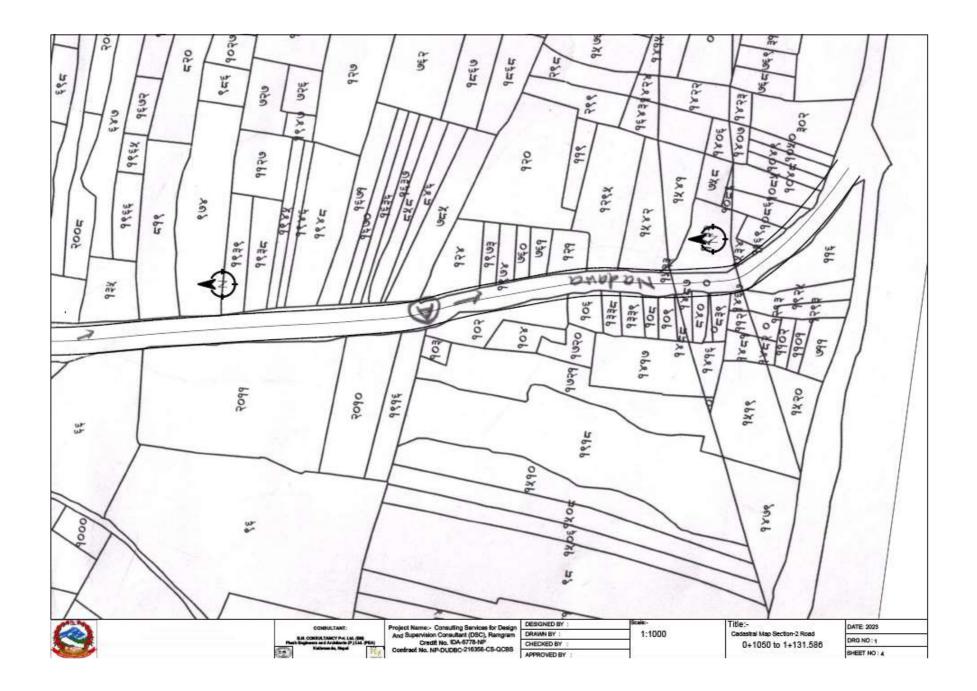
| S.N | Parcel<br>No.              | VDC     | Ward | Sheet<br>No. | Remarks |
|-----|----------------------------|---------|------|--------------|---------|
| 91  | 1704                       | Sukauli | 9    | Sukauli 9    | Left    |
| 92  | 0                          | Sukauli | 9    | Sukauli 9    | Left    |
| 93  | 0                          | Sukauli | 9    | Sukauli 9    | Left    |
| 94  | 141                        | Sukauli | 9    | Sukauli 9    | Left    |
| 95  | 135                        | Sukauli | 9    | Sukauli 9    | Left    |
| 96  | 819                        | Sukauli | 9    | Sukauli 9    | Left    |
| 97  | 974                        | Sukauli | 9    | Sukauli 9    | Left    |
| 98  | 1939                       | Sukauli | 9    | Sukauli 9    | Left    |
| 99  | 1938                       | Sukauli | 9    | Sukauli 9    | Left    |
| 100 | 1945                       | Sukauli | 9    | Sukauli 9    | Left    |
| 101 | 1946                       | Sukauli | 9    | Sukauli 9    | Left    |
| 102 | 1948                       | Sukauli | 9    | Sukauli 9    | Left    |
| 103 | 1671                       | Sukauli | 9    | Sukauli 9    | Left    |
| 104 | 1670                       | Sukauli | 9    | Sukauli 9    | Left    |
| 105 | 1636                       | Sukauli | 9    | Sukauli 9    | Left    |
| 106 | 1637                       | Sukauli | 9    | Sukauli 9    | Left    |
| 107 | 858                        | Sukauli | 9    | Sukauli 9    | Left    |
| 108 | 846                        | Sukauli | 9    | Sukauli 9    | Left    |
| 109 | 785                        | Sukauli | 9    | Sukauli 9    | Left    |
| 110 | 124                        | Sukauli | 9    | Sukauli 9    | Left    |
| 111 | 1973                       | Sukauli | 9    | Sukauli 9    | Left    |
| 112 | 1974                       | Sukauli | 9    | Sukauli 9    | Left    |
| 113 | 760                        | Sukauli | 9    | Sukauli 9    | Left    |
| 114 | 761                        | Sukauli | 9    | Sukauli 9    | Left    |
| 115 | 121                        | Sukauli | 9    | Sukauli 9    | Left    |
| 116 | 1295                       | Sukauli | 9    | Sukauli 9    | Left    |
| 117 | 1542                       | Sukauli | 9    | Sukauli 9    | Left    |
| 118 | 1541                       | Sukauli | 9    | Sukauli 9    | Left    |
| 119 | 1532                       | Sukauli | 9    | Sukauli 9    | Left    |
| 120 | 1534                       | Sukauli | 9    | Sukauli 9    | Left    |
| 121 | 1169                       | Sukauli | 9    | Sukauli 9    | Left    |
| 122 | 1086Sukauli9Sukauli 9I     |         | Left |              |         |
| 123 | 3 1085 Sukauli 9 Sukauli 9 |         | Left |              |         |
| 124 |                            |         | Left |              |         |
| 125 | 1049                       | Sukauli | 9    | Sukauli 9    | Left    |
| 126 | 1050                       | Sukauli | 9    | Sukauli 9    | Left    |
| 127 | 302                        | Sukauli | 9    | Sukauli 9    | Left    |

#### **Cadestral Map of Section II**









Annex 4: List of handpumps along RoW

| S.N.  | Chainage | Name of House Owner  | No. of<br>Hand | Remarks |
|-------|----------|----------------------|----------------|---------|
| 5.11. | Chainage | Name of House Owner  | Pump           | Remarks |
| 1     | 0+042    | Rajan Dhobi          | 1              |         |
| 2     | 0+050    | Madan Parashad       | 1              |         |
| 3     | 0+057    | Buddhi Ram Dhobi     | 1              |         |
| 4     | 0+070    | Shib Kumari Kewat    | 1              |         |
| 5     | 0+100    | Raman Gupta          | 1              |         |
| 6     | 0+103    | Ramad Gupta          | 1              |         |
| 7     | 0+120    | Gairun Nisha Nau     | 1              |         |
| 8     | 0+305    | Jagadamba Gril Udyog | 1              |         |
| 9     | 0+306    | Harichandra Jaisawal | 1              |         |
| 10    | 0+307    | Shib Kumari Jaisawal | 1              |         |
| 11    | 0+540    | Ganesh Jaisawal      | 1              |         |
| 12    | 0+790    | Jalandhar Kewat      | 1              |         |
| 13    | 1+041    | Ramrati Kewat        | 1              |         |
| 14    | 2+560    | Ramu Yadav           | 1              |         |
|       |          | Total                | 14             |         |

# Name of Household Owner of Shifting Hand Pump

Annex 5: List of Institutions within Zone of Influence

#### List of Public and Private Institution

| S.N. | Name of Institution                 | Ward No. | Remarks  |
|------|-------------------------------------|----------|--|
| 1.   | Shiddhi Laxmi Pvt. Ltd.             | 6        |  |
| 2.   | Ramgram Sagarmatha Academy          | 6        | Girls- 408, Boys- 392  |
| 3.   | Jayagurudev Ashram                  | 6        | On the 5 <sup>th</sup> of every month,<br>2,000 to 5,000 devotees<br>gather to visit the Guru<br>Ashram. |
| 4.   | Diptubewell Irrigation Office       | 6        |  |
| 5.   | Masjid                              | 6        |  |
| 6.   | Laxmi Paper Mills Pvt. Ltd.         | 10       |  |
| 7.   | Barun Beverage Pvt. Ltd.            | 10       |  |
| 8.   | Aarati Gas Udyog Pvt. Ltd.          | 10       |  |
| 9.   | Siddhartha Agro Pvt. Ltd            | 10       |  |
| 10.  | M.S. High Tec. Pvt. Ltd.            | 10       | This factory belongs both ward no. 10 & 15   |
| 11.  | Milano Pvt. Ltd.                    | 10       |  |
| 12.  | Durga Temple                        | 10       |  |
| 13.  | Chhatimai Ghat                      | 10       | Worship place of Chhatimai   |
| 14.  | Raj Briary (Ruslan Vodka) Pvt. Ltd. | 14       |  |
| 15.  | Om Nature Pvt. Ltd.                 | 14       |  |
| 16.  | Furniture Factory Pvt. Ltd.         | 14       |  |
| 17.  | Brijeshwori Pvt. Ltd.               | 15       |  |
| 18.  | Siddhi Binaya Noodles Pvt. Ltd.     | 15       |  |
| 19.  | M.S. Hitake Pvt. Ltd.               | 15       | This factory belongs both ward no. 10 & 15   |
| 20.  | Biogas Pvt. Ltd.                    | 15       |  |
| 21.  | Ten Steel Pvt. Ltd                  | 15       |  |
| 22.  | Samai Mai Mandir                    | 15       |  |

# Main Public/Private Educational Institution's in ward level of the Project area;

| S.N. | Name of Public Educational Institutions  | Ward No.       | Remarks |
|------|--|----------------|---------|
| 1.   | Janata Ma. Bi.                           | Laxmipur, 10   |         |
| 2.   | Rajeshwori Pr. Bi.                       | Nada. 10       |         |
| 3.   | Janata Ma. Bi.                           | Dainahawa, 14  |         |
| 4.   | Shree Janata Ma. Bi.                     | Sukrauli, 15   |         |
| 5.   | Ghinaha Pr. Bi.                          | Ghinaha, 15    |         |
| 6.   | Janata Pr. Bi.                           | Nanai, 15      |         |
| 7.   | Madarasa Arwiya Ahale Sunnat             | Digol, 15      |         |
| 8.   | Shree Saraswati Pr. Bi.                  | Sukrauli, 15   |         |
| 9.   | Rastriya Ma. Bi.                         | Panditpur, 18  |         |
|      | Name of Private Educational Institutions |                |         |
| 1.   | Sagaramatha School                       | Pragatishil, 6 |         |
| 2.   | Sanjibini Boarding School                | Manjhariya, 10 |         |
| 3.   | ELITE Boarding School                    | Dainahawa, 14  |         |
| 4.   | Holi Child Boarding School               | Dharampur, 18  |         |
| 5.   | New Flawel Boarding School               | Banjariya, 18  |         |
| 6.   | Future Bright Boarding School            | Kuhiya, 18     |         |

Annex 6: 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                |
| б.    | 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  | рН                      |             | 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 | 0                |         |
|    |                        | ml)     | (In 95% samples) |         |

### (C) National Ambient Air Quality Standard, 2069 BS

| Parameters       | Units             | Averaging Time | Concentration in Ambient Air, Maximum |
|------------------|-------------------|----------------|---------------------------------------|
| TSP              | μg/m <sup>3</sup> | 24 - hours     | 230                                   |
| PM10             | μg/m <sup>3</sup> | 24 - hours     | 120                                   |
| PM2.5            | μg/m <sup>3</sup> | 24 - hours     | 40                                    |
| Sulfur Dioxide   | μg/m <sup>3</sup> | Annual         | 50                                    |
|                  | 107000            | 24-hours       | 70                                    |
| Nitrogen Dioxide | μg/m³             | Annual         | 40                                    |
|                  | 0.7000            | 24-hours       | 80                                    |
| Carbon Monoxide  | μg/m <sup>3</sup> | 8hours         | 10000                                 |
| Lead             | µg/m <sup>3</sup> | Annual         | 0.5                                   |
| Benzene          | µg/m³             | Annual         | 5                                     |
| Ozone            | µg/m <sup>3</sup> | 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, LegdB(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) | со  | 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 7: Water Quality Test Report

| Amount       Amount       Amount         Name       Amount       Image: Amount       Image: Amount         Batch       Amount       Image: Amount       Image: Amount         Water Source:       Surface/Deep Boarding/H         Lab No       Depth       Loo m/r         Class       S.N.       Parameter       Unit       Maximum<br>Concentration<br>Limit         Class       S.N.       Parameter       Unit       Concentration<br>Limit         1       Color       TCU       5 (15)         2       Odor       -       -         3       pH       6.5-8.5         4.       Temperature       -         5.       Turbidity       NTU       5 (10)         6.       T.D.S.       mg/l       1000         7.       Electrical Condutivity       mc/cm       1500         8.       Iron       mg/l       0.3         9.       Fluoride       mg/l       0.5-1.5         10.       Phosphorus       mg/l       1.5         11.       Total Hardness       mg/l       1.5         12.       Ammonia NH3+       mg/l       1.5         13.       Chloride       <  | saut Newalf    |
|--|----------------|
| ClassS.N.ParameterUnitMaximum<br>Concentration<br>Limit1ColorTCU5 (15)2Odor-3pH6.5-8.54Temperature-5TurbidityNTU5 (10)6T.D.S.mg/l10007Electrical Condutivitymc/cm15008Ironmg/l0.39Fluoridemg/l0.5-1.510Phosphorusmg/l50011Total Hardnessmg/l50012Ammonia NH3+mg/l1.513Chloridemg/l25014Nitrite NO3+mg/l5015Arsenicmg/l25017Calciummg/l200  |                |
| 1.         Color         TCU         5 (15)           2         Odor         -         -           3.         pH         6.5-8.5         -           4.         Temperature         -         -           5.         Turbidity         NTU         5 (10)           6.         T.D.S.         mg/l         1000           7.         Electrical Condutivity         mc/cm         1500           8.         Iron         mg/l         0.3           9.         Fluoride         mg/l         0.5-1.5           10.         Phosphorus         mg/l         1.5           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | Observed Value |
| 2         Odor   | Trught         |
| 3.         pH         6.5-8.5           4.         Temperature   | Smile          |
| Physical         Image: stress of the system         Image: stresystem         Image: stress of the system | 75             |
| 1.         Turbidity         NTU         5 (10)           5.         Turbidity         mg/l         1000           6.         T.D.S.         mg/l         1000           7.         Electrical Condutivity         mc/cm         1500           8.         Iron         mg/l         0.3           9.         Fluoride         mg/l         0.5-1.5           10.         Phosphorus         mg/l         10           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | 33°C           |
| 6.         T.D.S.         mg/l         1000           7.         Electrical Condutivity         mc/cm         1500           8.         Iron         mg/l         0.3           9.         Fluoride         mg/l         0.5-1.5           10.         Phosphorus         mg/l         10           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         500           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | 75             |
| 7.         Electrical Condutivity         mc/cm         1500           8.         Iron         mg/l         0.3           9.         Fluoride         mg/l         0.5-1.5           10.         Phosphorus         mg/l         10.5-1.5           10.         Phosphorus         mg/l         10.5-1.5           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | 305 mal        |
| 8.         Iron         mg/l         0.3           9.         Fluoride         mg/l         0.5-1.5           10.         Phosphorus         mg/l         10.           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200   | 679            |
| 9.         Fluoride         mg/l         0.5-1.5           10.         Phosphorus         mg/l         10.           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | o'Ind          |
| 10.         Phosphorus         mg/l           11.         Total Hardness         mg/l         500           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200   | 0.6 m          |
| It.         Total Hardness         mg/l         500           11.         Total Hardness         mg/l         1.5           12.         Ammonia NH3+         mg/l         1.5           13.         Chloride         mg/l         250           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200   | 1.Soula        |
| In.         Mathematical   | 32000          |
| Initial         Chloride         mg/l         250           13.         Chloride         mg/l         50           14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | o.s.nd         |
| 14.         Nitrite NO3+         mg/l         50           15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200   | 3º nd          |
| 15.         Arsenic         mg/l         0.05           16.         Sulphate         mg/l         250           17         Calcium         mg/l         200  | rone           |
| 16.Sulphatemg/t25017Calciummg/l200   | reil           |
| 17 Calcium mg/l 200  |                |
|  | SU CHARLES     |
|  | some of        |
| 18. FRC mg/l 0.1-0.2   | 35 mula        |
| Iicro-         19.         Tetal Eoliform         CFU/100ml         O           Dogical         20         E Coli         CFU/100ml         O  |                |

Comments: No any cours.

Lab Incharge Interior

Annex 8: Photographs





Photo 2: Consultation meeting with stakeholders in Ramgram Municipality, March 2023



Photo 3: Key Informatnt Interview - Pokahrapali (Section I), January 2023



Photo 4: Community Consultation - Pokharapali (Section I), March 2023



Photo 5: Key Informatnt Interview - Section II, March 2023



Photo 6: Community Consultation - Nadawa of Section II, March 2023



Photo 7: Proposed Campsite and Stockpile area at Nanai of WN 15