ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

ATHBISKOT-VAMPUCHAUR DISTRIBUTION LINE SUBPROJECT

SUBSTATION (33/11 KV) AND DISTRIBUTION LINE (33 KV)

WEST RUKUM & JAJARKOT DISTRICT, KARNALI PROVINCE

NEPAL ELECTRICITY AUTHORITY

DISTRIBUTION AND CONSUMER SERVICE DIRECTORATE

DISTRIBUTION SYSTEM UPGRADE AND EXPANSION PROJECT (DSUEP)

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ABBREVIATIONS

ACSR Aluminum Conductor Steel Reinforced

AIIB Asian Infrastructure and Investment Bank

BES Brief Environment Study

COVID-19 Corona Virus Disease

CDP Community Development Program

CPA Core Project Area

DCSD Distribution and Consumer Services Directorate

DHM Department of Hydrology and Meteorology

DL Distribution Line

DSUEP Distribution System Upgrade and Expansion Project

EHS Environment, Health and Safety

EIA Environmental Impact Assessment

EPA Environment Protection Act

EPR Environment Protection Regulation

EMF Electromagnetic Field

ESP Environmental and Social Policy

ESMF Environmental and Social Management Framework

ESMP Environmental and Social Management Plan

ESP Environmental and Social Policy

ESSs Environmental and Social Standards

GHG Green House Gas

GIS Geographic Information System

GoN Government of Nepal

GRM Grievance Redress Mechanism

IEE Initial Environmental Examination

IP Indigenous People

IUCN International Union for Conservation of Nature

IUSGS International Union of Geological Sciences

LPG Liquid Petroleum Gas

MDB Multilateral Development Bank

MoEWRI Ministry of Energy, Water Resources and Irrigation

MHT Main Himalayan Thrust

NEA Nepal Electricity Authority

PPE Personal protective equipment

RM Rural Municipality

RoW Right of Way

SPA Surrounding Project Area

SPM Suspended Particulate Matter

SWM Solid Waste Management

US EPA United States, Environment Protection Agency

USGS United States Geological Survey

VC Vulnerable Community

Unit

% Percent/ Percentage

CO₂ Carbon dioxide

dB Decibel

g Gram

ha Hectare

HHs Households

Kg Kilogram

Km Kilometer

kV Kilovolt

kWh Kilo Watt Hour

ltr Liter

LV Low Voltage

m Meter

masl Meter Above Sea Level

mm Millimeter

MVA Mega Volt Ampere

MW Megawatt

NRs. Nepalese Rupees

°C Degree Centigrade

sq.m. Square Meter

EXECUTIVE SUMMARY

Description of Project: Nepal Electricity Authority (NEA) under Ministry of Energy, Water Resources and Irrigation is responsible for the implementation of the Distribution System Upgrade and Expansion Project (DSUEP). DSUEP will enhance the distribution system to improve the reliability and quality of electric supply in Karnali Province, Lumbini Province and Sudurpashchim Province. The proposed **Athbiskot–Vampuchaur Distribution Line Subproject** is located within Ward No. 7 of Bafikot Rural Municipality (RM), Ward No. 10, 9 and 7 of Aathbiskot Municipality of Rukum West district and Ward No. 8, 9 and 10 of Tribeni Nalagad Municipality of Jajarkot District in Karnali Province. The Subproject requires 0.76 ha of land (Government Land) for the construction of the substation. The 33 kV distribution line of 25.1 km passes through the Right of Way (RoW) of the road and private land with installation of poles at the edge of the farm land. The proposed subproject is financed with a loan by Asian Infrastructure Investment Bank (AIIB).

Description of Environment

Physical Environment: The Subproject (substation and distribution line) area lies in Mid-Hill region of the Lesser Himalayan zone. The substation lies at Latitude 28°43'45.32"N, Longitude 82°26'14.78"E and elevation of 2,317 masl. The climate of the Subproject area is sub-tropical. The average temperature at the project area varied from 8.0°C to 34.0°C. The average annual rainfall is estimated at approximately 1,868.5 mm per year. The air quality of the Subproject area is within the range of the National Ambient Air Quality Standard while noise was found above Noise Quality Standard because of the vehicular noise nearby the settlement area. There are no water sources recorded within the distribution line (33 kV) and nearby the substation area.

Biological Environment: The proposed Subproject (substation and distribution line alignment) distribution line passes from the edge of Koti Simla Community Forest (CF), Kalika CF lies in Rukum West while tapping from. Also, line passes from Salleri CF, and Vampopatal CF while tapping from Danipipal. The Subproject does not lie in any protected areas. The vegetation species recorded during the screening field visit are: Khasru (Quercus semecarpifolia), Chir pine (Pinus roxburghii), Banmasa (Lantana camara), Chutro (Berberis aristata), Utis (Alnus nepalensis), Rhododendron (Rhododendron arboreum), Banjh (Quercus leucotrichophora), Kafal (Myrica esculenta) and Buki phool (Anaphalis contorta). Similarly, wild animal recorded during the public consultation are: Indian Hare (Lepus nigricollis), and Golden Jackel (Canis aureus). Altogether six species of birds were noted around the surrounding project area; House Crow (Corvus splendens), Western Spotted Dove (Spilopelia suratensis), Slaty-headed Parakeet (Himalayapsitta himalayana), House Sparrow (Passer domesticus), Tree Sparrow (Passer montanus), and Red-vented Bulbul (Pycnonotus cafer).

The proposed 33 kV distribution line passes through the 8 different community forests. A total of 3.81 ha of the forest area will be occupied by RoW of proposed 33 kV distribution line. An estimation of 856 trees to be cleared from the RoW of the proposed distribution line I in eight community forests.

Socio-Economic Environment: The major ethnic compositions within the surrounding project area i.e., Ward No. 7 of Bafikot RM, Ward No. 10, 9 and 7 of Aathbiskot Municipality

and Ward No. 8, 9 and 10 of Tribeni Nalagad Municipality are Chhetri (46.3%), Dalit (29.0%), Thakuri (15.2%), and Magar (6.1%) of the total population of 16,184. The implementation of the Subproject will increase the electricity beneficiaries to 3,428 HHs, 30 commercial purposes and 10 industries. Chaurjhari, Musikot and Khalanga are the nearest business markets nearby the Subproject. The transportation facilities in this local level seem to be satisfactory. Tap/piped water is the main source of drinking water in the surrounding Subproject area. People of the Subproject have access to communication facilities mainly through mobile telephone services. The nearest and easily accessible health facility nearby the proposed Subproject's substation area is Mangma Health Post (Bafhikot Municipality, Ward No.7) with a travel distance of 1.5 km from the site. The main occupation of people in the area is agro base with nearly 65% contribution followed by small trade and business/enterprises and services.

Potential Impacts and Mitigation Measures: Civil works will be involved with temporary impacts on air, noise and water quality and occupational and community health and safety; particularly related to working with electricity and in the context of the COVID-19 pandemic. Long-term impacts, although insubstantial, during operation and maintenance include occupational and community health and safety risks related to the presence of electricity infrastructure. The potential environmental issues and mitigation measures identified in screening and the preparation of the ESMP report will be addressed during the compliance monitoring carried out by the safeguard team. The land requirements for the substation and the pole erection there will be no any issues. Since the proposed substation land is private land and for the distribution line people have suggested to install poles at the edge of farmlands, without affecting any private structures along the distribution line. The implementation of the proposed Subproject needs 3.81 ha of forest area with estimated loss of 856 trees. The total enumeration of the loss trees and mitigation cost will be incorporated in the Brief Environmental Study (BES) report. The compensatory plantation will be done as per Forest Regulation (2022) in the ration of 1:10. The ESMP cost estimated for the Subproject is NRs 13,00,000.00 associated to mitigation measures and monitoring activities. NEA Project Implementation Unit has agreed on the estimated cost for the mitigation measures and monitoring activities.

Environmental and Social Management Plan: The ESMP serves as a guide to implement environmental and social mitigation measures and responsibility of the concerned agencies during the construction and operations of the Subprojects. Monitoring and inspection of the environmental and social activities will be carried out by Environment and Social Management Unit and Project Supervision Consultant of PIU. ESMP will be an integral part of the contractor's Bidding document which will be updated by the contactor during the subproject construction period.

Institutional Arrangements: To ensure the full compliance to the ESMP, institutional arrangement for monitoring and reporting has been proposed. All the resources needed for the implementation of ESMP for the construction and operation phase will be provided by the PIU. Project Supervision Consultant's with Environmental and Social Safeguard Specialist will be responsible for compliance monitoring activities during the construction phase. Environment and Social Management Unit of NEA will provide regular updates to the site offices regarding the implementation of ESMP. Contractor shall prepare an Environment,

Health and Safety (EHS) plan approved by the PIU before field mobilization. Contractor should mobilize a safety officer at each work site during the construction period.

Public consultation: Public consultations have been conducted in the Subproject area. People in the Subproject area noted that electricity service is poor with frequent interruptions. People have suggested to install poles at the edge of farm-lands, and project components should not affect any house and structures along the line. The impacts on the crops while stringing of lines should be minimized. Prospective electricity consumers and people to be affected are supportive and have recommended for quick implementation of the project.

Grievance Redress Mechanism (GRM): A three-tier Grievance Redress Mechanism (GRM) has been established to receive, evaluate, and facilitate the resolution of affected people's concerns, complaints, and grievances about the social and environmental issues at Subproject level. In each Subproject, two levels i.e., Tier-I and Tier-II of Grievance Redress Mechanism have been established. During the ESMP study period, NEA has disseminated letters to the local level stakeholders regarding the formation of the GRM at the Subproject level.

Conclusion: The environmental impacts envisaged from the implementation of proposed Subproject are site specific, short term, temporary and reversible in nature. The Subproject will provide significant benefits to people and economy by providing the reliable and improve electricity supply. The implementation of the proposed Subproject needs 3.81 ha of forest area with estimated loss of 856 trees. The total enumeration of the loss trees and mitigation cost will be incorporated in the Brief Environmental Study (BES) report. This ESMP is considered sufficient to mitigate the environmental and social issues identified for the Subproject and will be updated during the Subproject construction stage.

1. INTRODUCTION

1.1 Project Background

The proposed Distribution System Upgrade and Expansion Project (DSUEP) will enhance the distribution system to improve the reliability and quality of electric supply in the Karnali province. The project aims improvement in voltage level and reduction in power loss which in turn will improve Nepal Electricity Authority's (NEA) financial health, improve electricity supply reliability, and reduce dependence on petroleum-fueled accessories. The government of Nepal (GoN) has envisaged DSUEP to extend the reach of 33 kV and 11 kV distribution lines "to achieve affordable electricity fulfilling the demands at the local levels for all the households by 2022". Asian Infrastructure Investment Bank (AIIB) is financing a loan to upgrade existing and build new distribution systems in Lumbini Province, Karnali Province and Sudurpashchim Province of Nepal. This ESMP is prepared for Athbiskot–Vampuchaur distribution line Subproject of DSUEP.

This Subproject has three major components:

Component 1: construction, extension and augmentation of distribution lines and substations, especially 33 kV lines and 33/11 kV substations.

Component 2: construction of 11 kV lines, distribution transformers, and Low Voltage (LV) lines for new power distribution facilities.

Component 3: Capacity Building, Project Implementation Support, and Technical Assistance.

1.2 Scope of Study

This study ensures that the project meets the requirements of Nepal Government's Environmental Regulations, and Environmental and Social Policy (ESP) & Environmental and Social Standards (ESSs) of AIIB. This report provides the measures for environmental and social management, monitoring, and reporting of the project.

1.3 Objective of ESMP

The Environment and Social Management Plan aims to sets out the measures required to maximize the benefits of the project; and to avoid, minimize and mitigate any adverse environmental and social impacts caused by the project. The objectives of this ESMP are to:

- Describe the existing natural and socio-economical resources in and surrounding Subproject area;
- Based on existing environmental conditions, identify and assess potential significant impacts during project preconstruction, construction, and operation & maintenance stages;
- Identify and recommend mitigation measures to minimize any potential impacts caused by Subproject activities;
- Identify the local concerns on environmental and social issues and address them;
- Develop environmental management plan and monitoring plan including cost;

 Recommend institutional arrangement, including capacity building to ensure proper environmental and social safeguards implementation during construction and operation phases.

1.4 Legal Provision

According to the E & S safeguard Screening report, safeguard risks/issues identified for this Subproject fall under Category III (ESMF), which triggers the preparation of ESMP to execute the Subproject. This Subproject has minimal or no adverse environmental and social impact; does not physically displace any family; and does not result in economic displacement of more than 10% of productive assets for any family.

Pertaining to Section 3 (1), the Environment Protection Act (EPA), 2019 describes completing Environmental Studies as per Schedule 1 or 2 or, 3 under Environment Protection Regulation (EPR) 2020 (First Amendment in 2021/05/24 on Nepal Gazette), detailed environmental studies Brief Environmental Study (BES) or Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) is required. For this Subproject, pertaining to Section 3(1), EPA (2019) describes to complete Environmental Studies as per Schedule 1(Cha) Energy, water resources and irrigation sector (1) under EPR (2020) state "use of forest area for the electricity distribution line project up to 66 KV". The proposed Subproject will intercept the Koti Simla Community Forest (CF), Kalika CF lies in Rukum West while tapping from. Also, line passes from Salleri CF, and Vampopatal CF land area for the purpose of 33 kV distribution line extension and substation construction. Thus, as per EPR (2020), a BES is mandatory for the proposed sub project.

1.5 Methodology for the ESMP

The methodology that was followed while conducting the ESMP study is as follows:

- i. Literature Review: Published literature of government institutions and international organizations were reviewed to collect information on project surroundings. The Municipality/Rural Municipality (RM) and its Ward profiles are used to collect the socio-economic baseline information of the Subproject. National policies, legislative frameworks and Multilateral Development Bank (MDB) policies were reviewed to understand the priorities and any legally binding requirements were studied that should be complied with while implementing the project. The Legislative provisions relevant to the project are listed in **Annex 4**.
- ii. Field Survey and Investigation: Field surveys were conducted to generate information on the physical, biological and socio-economic environment of the project area. The physical environment; air quality data was monitored by Temtop Airing-1000 PM Detector, noise level by UNI-T UT 353 Mini Sound Meter (dB) and water quality by EXTECH ExStik II DO600. Field observation of the core project area and the surrounding vicinity of the project footprint area were applicable for the biological assessment. A circular quadrate of radius 12.5m was used for the estimation of the number of trees presence within the RoW of the proposed distribution line. A total of 8 different sample quadrates were used and trees numbers were estimated by extrapolation within RoW. The total enumeration of the trees to be cleared for the

implementation of the sub project will be estimated during the BES study. The tree clearance approval is made once the Brief Environment Study (BES) is approved from the Ministry of Energy, Water Resources and Irrigation. Priority was given to the consultation with local communities at substation sites and the settlement areas that benefit from the project. Pertaining to Forest Act (2076) and Forest Regulation, (2079), BES report will be prepared and as per Forest Act (2076) Section 42 and Forest Regulation (2079) Rule 87 to 90, NEA/PIU must take approval from Government of Nepal, for the use of forest on the implementation phase. As per Rule 93 (5) and (6), the compensatory ratio for the loss of trees should be made in the ratio of 1:10 and require care, maintenance and upkeep of the planted trees before handover to concerned forest office after 5 years.

- iii. Data Analysis: All potential Subproject impacts on physical, biological, socioeconomic and cultural resources were integrated and assessed using best practice of
 Multilateral Development Banks, and also complied with national requirements. The
 Geographic Information System and SW Maps were used for the field assessment
 and analysis of the CPA and SPS data and presentation of the maps in the ESMP
 report. The project foot print Ward and Municipality/RM are considered for the
 collection of socio-economic and baseline information.
- iv. Impact Evaluation: The significance of impacts was evaluated on the basis of reversibility, nature, magnitude, extent and duration of the impact. Identification of magnitude, extent and duration is as provided in the National EIA Guidelines, 1993 of Nepal. While evaluating the impacts and prescribing mitigation, maximum efforts were made to get expert opinion and input from the DSUEP's technical and safeguard consultant team.
- v. Public Consultation: As per the Government of Nepal EPA and the AIIB Environmental and Social Policy (ESP), pre-notifications with the subject of consultation, venue, and time were given at Subproject foot-print area, local level and affected Ward office in presence of the concerned local stakeholders. Consultations were conducted in the Subproject area, at substations and the distribution line system settlement areas with local stakeholders.
- vi. Report Format: The ESMP report is prepared as per the Environmental and Social Policy (ESP) of the AIIB, which contains an executive summary, a main report, and annexes as appropriate, including one on the nature and findings of consultations undertaken. All the comments and suggestions from the field consultation are mentioned in the ESMP report.

1.6 Classification of Impact Area

The National EIA Guidelines (GoN, 2050) have mentioned on the "Core Project Area", and "Surrounding Project Area" based on the proximity and magnitude of the impacts due to the construction and operation of the proposed project.

Core Project Area (CPA) refers to the temporary and permanent area for the proposed project construction and associated activities. It is area where direct impacts can be seen.

For the Athbiskot-Vampuchaur Distribution Line Subproject, proposed substation area with 0.76 ha and Right of Way (RoW) of 33 kV distribution line with 25.1 km length is considered as CPA. The Subproject components are located within the Ward No. 7 of Bafikot RM, Ward No. 10, 9 and 7 of Aathbiskot Municipality and Ward No. 8, 9, 10 and 11 of Tribeni Nalagad Municipality. The major settlements in the subproject area are Radijiula, and Chaukha. The distribution line stringing route passes along the RoW of the road alignment (2+400-2+800, 11+350-12+300, 15+000-16+650, 20+800-20+900, 20+950-22+200, 22+700-10+650, 20+800-20+900, 20+950-22+200, 22+700-10+650, 20+800-20+900, 20+950-22+200, 22+700-10+650, 20+800-20+900, 20+950-22+200, 22+700-10+650, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+800-20+900, 20+950-22+200, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+950-20+900, 20+900-20+900-20-9022+990, 24+100-25+920), cultivated land (0+100-0+240, 0+380-0+420, 0+600-1+000, 1+300-1+260, 1+310 -1+400, 1+550-1+650, 1+700-1+900, 2+800-3+810, 4+000-4+190, 4+300-5+040, 6+025-6+060, 7+250-7+850, 8+100-9+045, 9+180-9+023, 9+280-10+820, 11+200-11+250, 12+780-13+200, 13+420-14+850, 18+130-18+150, 18+800-19+200, 19+285-19+420, 20+700-20+900, 22+200-22+270, 22+390-23+200 and 24+000-24+1000), along the barren land (0+240-0+380, 0+420-0+600, 1+000-1+200, 1+260-1+310, 1+400-1+550, 1+650-1+700, 3+910-4+000, 9+230-9+280, 10+820-11+000, 13+200-13+420, 22+500-22+600, and along the edge of forest (11+400-12+200, 12+400-12+650, 14+200-15+600, 16+000-16+600, 17+500-18+800, 21+400-21+600, 22+800-23+000, 23+000-24+600 and 25+920).

Surrounding Project Area (SPA) is the immediate vicinity of the footprint location of the proposed Subproject site. SPA is the moderate and indirect impact area. For this Subproject the 33 kV distribution line will be located within the Ward No. 7 of Bafikot RM, Ward No. 10, 9 and 7 of Aathbiskot Municipality of Rukum West district and Ward No. 8, 9, 10 and 11 of Tribeni Nalagad Municipality of Jajarkot district and along with these Wards, the adjoining Wards; Ward No. 3, 5 and 9 of Aathbiskot Municipality and Ward No.6 of Bafikot RM being considered as SPA. The SPA will have impact on the beneficiary's area of 11 kV lines and Low Tension (LT) lines service. The impact area showing the CPA and SPA area is presented in the google map **Figure 1-1**.

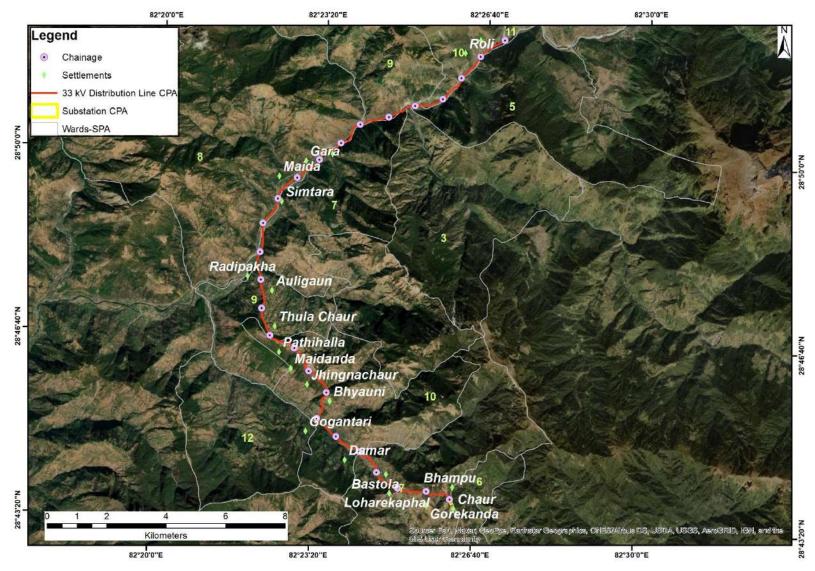


Figure 1-1: Core Project Area (CPA) and the Surrounding Project Area (SPA) Wards of the Athbiskot-Vampuchaur DL Subproject

2. DESCRIPTION OF THE SUBPROJECT

2.1 Subproject Location and Accessibility

The proposed **Athbiskot–Vampuchaur Distribution Line Subproject** is located within Banphikot RM, Ward No. 7, Aathbiskot Municipality, Ward No.10, 9, and 7 of Rukum West and Tribeni Nalagad Municipality, Ward No. 8, 9 and 10 of Jajarkot district in Karnali Province. The tapping point of Subproject lies in Chaukha Substation, Tribeni Nalgad Ward No.11, Jajarkot. The proposed distribution line (33 kV) is 25.1 km in length and runs by the RoW of access road. There is access to the road transport within the proposed Subproject Ward area. There is the access to road transport within the proposed Subproject Ward area. The Subproject location and the accessibility map are presented in the map below Error! eference source not found.. The main features of the Subproject are presented in **Table 2-1**.

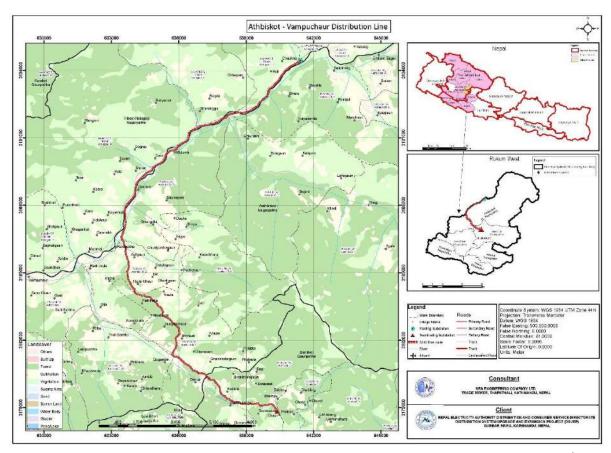


Figure 2-1: Location and Accessibility Map of Athbiskot–Vampuchaur Subproject¹

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¹ Source: Department of Survey, 1995 and Field Study 2021

Table 2-1: Technical Description of the proposed Subproject

Description	Features
Proponent	Nepal Electricity Authority
Project	Distribution System Upgrade and Expansion Project (DSUEP)
Subproject	Athbiskot-Vampuchaur Distribution Line Project
Funding Agency	AIIB
	Banphikot Rural Municipality, Ward No. 7, Aathbiskot
Drainet Legation	Municipality, Ward No.10, 9, & 7 of Rukum West and Tribeni
Project Location	Nalagad Municipality, Ward No. 8, 9 & 10, Jajarkot district,
	Karnali Province.
	Distribution Line
	Tapped from Existing Chaukha Substation, Tribeni Nalgad-11,
33 kV Line Starting Point	Jajarkot.
	Co-ordinate: Lat 28°52'11.47"N, Long 82°27'0.16"E
	Vampuchaur Substation (Proposed) at Banfikot-7,
33 kV Line End Point	Vampuchaur, West Rukum
	Co-ordinate: Lat 28°43'45.32"N, Long 82°26'14.78"E
Land type	Government/Private
System Voltage	33 kV
Max, Min System Voltage	36, 30 kV
	Wind Speed: As per IS 802-1-1
Climatic Condition	Maximum Ambient Temperature: 34 °C
	Altitude (Min, Max): 890, 2317 masl
Length of Line/ No. of Pole	25.1 km/628 Poles
Right of Way	6 m
Number of Circuit	1
Conductor	ACSR Dog
Line Capacity/Thermal Limit	13.4 MW at 0.9 power factor
(approx.)	·
Type	Steel Tubular Pole with 11m/13m Height
Pole Configurations	Single Pole Structures, H-Pole Structures etc. (With and
	without Stay Sets)
Diameter of a Single Pole	0.22m (As per IS 2713-3)
(approx.)	,
Planting Depth of Pole	2.2m
Insulators	Porcelain Disc and Pin Insulator
	Substation
	Vampuchaur Substation (Proposed) at Banfikot-7,
Location	Vampuchaur, West Rukum Co-ordinate: Lat 28°43'45.32"N,
	Long 82°26'14.78"E Elevation: 2317 masl
Land type	Government
Voltage Level	33/11 kV
Substation Capacity	3 MVA
Number and Capacity of	1 nos., 3 MVA
Transformer	
Type of Transformer	3 Phase, ONAN/ONAF, Mineral Oil
Type of Substation	AIS (33 kV) and Indoor (11 kV)
Number of 33 kV Line Bays	1

Number of 33 kV Transformer Bays	1
Number of 11 kV Feeders	4
Substation Area	0.76 ha

2.2 Subproject Components

The major components of the Subproject are the 33/11 kV substation and 33 kV distribution line (DL). The 33 kV DL is tapped from an existing 33 kV network line and acts as a source feeding to the proposed 33/11 kV substation. 11 kV distribution feeders emerge from the substation, eventually supplying the electricity to the consumers. The structures of the Subprojects are briefly described here.

2.2.1 33 kV Distribution Line (DL)

The 33 kV DL serves as the pathway for feeding electricity to the proposed substation. Aluminum Conductor Steel Reinforced (ACSR) type conductors are stringed on Steel Tubular Pole from the starting point of the line. In general, the 33 kV lines comprises of the Steel Tubular Poles, Insulators, Conductors and Supporting Stays.

Steel Tubular Poles: Steel tubular poles will be installed in this Subproject. 11 m and 13 m long poles shall be used depending upon the location of the poles and the number of circuits used in the line. The poles to be erected will be supported by stays wherever necessary. Insulators will be installed at cross arms to support the conductor from the poles. The length of the proposed 33 kV distribution line is 25.1 km and the total number of steel tubular poles to be erected is estimated as 628.

Insulators: The insulators provide insulation to the poles from the high voltage in the conductors. Pin-type insulators will be employed for suspension poles whereas disc types will be employed for tension poles. Porcelain-type insulators will be used owing to their dielectric strength, better compressive strength, higher resistance to degradation, suitability for extreme climate, and environment friendly characteristics over its counterparts.

Conductor: ACSR Conductor – Aluminum Conductors Steel Reinforced, conductors with stranded layers of aluminum and steel will be used for 33 kV lines. Aluminum strands carry the current whereas the steel in between provides the mechanical strength for the conductor. Typically, 100 sq. mm conductors are used in 33 kV line for this Subproject which is also known as ACSR DOG conductor.

Stay/Guy Sets: Stay Wires are used to support or provide the balancing tension to the poles. These are made up of steel materials and can be used in multiples for a single pole, depending upon the requirements.

2.2.2 Substation

The proposed substation 33/11 kV is of capacity 3 MVA. The substation plays the role of lowering the 33 kV voltage level to 11 kV, which will then be strung as a distribution feeder to

supply the consumers. The major component of the substation is the power transformer, which is supported by the switchgear components and Civil Structures. The facility and components sample pictures are shown in **Annex 3**.

Transformers: Transformer is the major component of the distribution substation. It transforms power from higher voltage to lower voltage for distribution purpose. Power Transformers are used for the 33/11 kV substations. These transformers are mineral oil based with ONAN/ONAF (Oil Natural Air Natural/Oil Natural Air Forced) cooling mechanisms. In existing practice, the transformers used for 33/11 kV substation in Nepal are typical of 1 MVA, 3 MVA, 8 MVA and 16 MVA, depending upon the load supplied by the substation. This Subproject comprises of power transformer of 3 MVA ONAF type.

Electrical Switchgear: Electrical Equipment comprising of Circuit Breaker, Earth Switch, Current Transformer, Potential Transformers, etc. installed in the substation is called Electric Switchgear. They facilitate the objective of power conversion.

Civil Structures: A control building is essential for the operation of the substation. It houses the operating station, along with battery systems. Guard House and Staff Quarter are other essential buildings for the smooth operation of the substation.

Switchyard, Boundary, Roads, Drainage and Essentials: The outdoor civil structure in the proposed substation includes the boundary wall, main entrance gates and Switchyard. The power transformer and components of the power system are laid in the switchyard based on prudent engineering practice. Steel structures are used to support the components as per component-wise requirements. Roads are paved within the boundary as essential for the transport of power transformers and other components. The substation location also serves as a site store for the storage of distribution system components.

2.2.3 11 kV Lines and LT Lines

11 kV lines and LT lines take the access of electricity to the consumer households. It is why the construction of those lines is always encouraged by the local people. The line route, thus the installation of poles and lines, is envisaged to go through the edge of local roads. If any line route passes through any private lands, permission from the corresponding land owner will be taken before the construction of those lines.

The detailed line route survey for 11 kV and LT lines has not been done yet. A separate screening will be prepared for 11kV lines. The scope of detailed survey is in the scope of the construction Contractor. The construction Contractor will conduct Pre-Construction Survey (PCS) to finalize the line route of 11 kV lines and LT lines for the construction. PCS will prepare the detailed line route of those lines and submit it to PIU for approval. After the detailed line route is submitted by the Contractor and approved by PIU, the E&S team of the Project Supervision Consultant (PSC) will conduct an E&S study and submit the findings that

- Do the lines pose any adverse Environmental or Social issues?
- If there are any Environmental or Social issues, how can they be resolved? If the lines do not pose any adverse Environmental or Social issues, the lines will be cleared by PIU after seeking concurrence from AIIB.

• If the solution measures are not implementable in the field, PCS will suggest any other way to divert or reroute the lines If yes, PCS will propose an alternative line route. The lines will be cleared by PIU after seeking concurrence from AIIB, given that the lines do not pose any adverse Environmental or Social issues.

2.3 Major Construction Activities in the Subproject

Activities in the Subproject area can be sub-divided into three categories viz, Pre-Construction Phase, Construction Phase and Operation Phase. For the proposed Subproject, trees and bushes in the RoW of 33 kV lines have to be cleared whereas, no trees within the proposed substation boundary have to cleared for the construction work. The proposed Athbiskot–Vampuchaur Line Subproject intercepts forest area 3.81 ha. The estimated loss of trees species in the RoW of 33 kV lines are 856.

- I. **Preconstruction phase**: The activities to be carried out before the construction phase are:
 - Demarcation of land area for the proposed substation
 - Receive public opinion
 - Make clearance of the substation land area permanently
 - Distribution line route selection
 - Approval to cut down trees from the concerned government authorities
- II. **Construction phase**: The activities to be carried out during the construction phase are:
 - Assign the land area for the temporary storage of construction materials
 - Transportation of construction materials
 - Leveling of land area for the proposed substation
 - Cutting down of trees in RoW of 33 kV lines
 - Construction of substation structures
 - Pole erection work for 33 kV, 11 kV and low-tension distribution lines
 - Stringing of 33 kV, 11 kV and low-tension distribution line
- III. **Operation phase**: The activities to be carried out during the operation phase are:
 - Maintenance of the substation and 33 kV distribution line route

2.4 Energy to be used

During the construction period, diesel fuel will be used to power construction equipment and transport vehicles, which emit air pollutants and greenhouse gases in insignificant quantities. Use of firewood is restricted in the labor camp, whereas the Contractor shall supply LPG for cooking foods to the workers.

2.5 Land Required

The Athbiskot-Vampuchaur Subproject Subproject will require about 0.76 ha of land for the building the substation. The land is government land and will be managed by NEA to construct the substation in the designated area. The 33 kV distribution line of 25.1 km passes through Koti Simla CF, Kalika CF and Salleri CF, and Vampopatal CF.

2.6 Material Requirement and Sources

A 33/11 kV substation, 33 kV, 11 kV and low-tension distribution lines will be constructed for this Subproject. Minimal excavation at the pole locations will be done to erect steel tubular poles of 11 m and 13 m. The depth of burial for 11 m (approximately 256 kg) and 13 m (approximately 343 kg) poles are 1.8 m and 2.17 m respectively. The construction works for the substation will not produce a significant amount of spoils and thus it will not a require spoil-dumping site. Similarly, excavation works carried out for digging pit holes for poles produces insignificant spoils which do not require the management of earthworks.

Civil construction works will involve excavation for the foundation of the substation, steel reinforcement, cement, coarse aggregates and fine aggregates (sand). Materials will be procured from legally operating markets. The design team has provided the following estimate of construction materials required for 33 kV distribution line and the substation.

Table 2-2: Approximate Quantity of Material for 33 kV line

SN	Particular	Unit	Requirement
1	Amount of Steel	Ton/Km	5800
2	M15 concrete for Pole base	Cum/Km	12.5

Source: Design Report, DSUEP

Table 2-3: Approximate Quantity of Material for 33/11 kV Substation

SN	Particular	Unit	Support Structures, Road, Drainage	Control Building	Staff Quarter	Office Building	Guard House
1	M15 Concrete	Cum	100	25	224	120	5
2	M25 Concrete	Cum	300	170	125	75	27
3	Reinforcement bar	Ton	7	27	20	12	4

Source: Design Report, DSUEP

2.7 Major Equipment and Power Requirements

Major types of equipment used during the Project implementation are:

One Excavator, One Roller, One Drilling Machine, One Crane, one Grid Supply of 100 kVA Distribution Transformer, and two 50 kVA capacity diesel generators.

2.8 Workforce Requirement

Local people in the surrounding Subproject area will be encouraged for the employment. Based on the skills (skilled, semi-skilled and unskilled labor), local people will be used for the construction in such a way that both males and females will get an equal opportunities during construction. The number of human resources required depends upon the complexity of the project as well as the geographical location of the project. In case of construction of 33 kV lines and 33/11 kV substations, the workforce typically varies from terai to hilly to the mountain region. The expected number of manpower employed is enlisted hereunder.

Table 2-4: Human Resource Required for construction of 33 kV line and substation in a day of Construction

SN	Human Resource/Day	For Distribution Line	For Substation
1	Engineer (No.)	1	2
2	Supervisor (No.)	2	4
3	Foreman (No.)	3	5
4	Skilled (Lineman/Electrician) (No.)	5	7
5	Helper (No.)	3	12
6	Labour (No.)	15	20

Source: Design Report, DSUEP

2.9 Construction and Implementation Schedule

Implementation of the proposed Subproject comprises the construction of a new 33/11 kV substation, 33 kV lines, 11 kV lines, low tension lines, and installation of distribution transformers. It includes the construction and installation of components as mentioned in subsection 2.2. The estimated completion period is 24 Months.

 Table 2-5:
 Construction Schedule of Project Implementation

SN	Activities/ Months	Months (After the completion of Detailed Survey Study)							
SIN	Activities/ Worths		4-6	7-10	11-15	16-20	20-24		
1.	Invitation for tender, evaluation, and award								
2.	Implementation of Environmental and Social Safeguards								
3.	Erection of Poles								
4.	Stringing of conductor								
5.	Construction of substation								
6.	Charging and Testing								

Source: Design Report, DSUEP

3. DESCRIPTION OF THE ENVIRONMENT

3.1 Physical Environment

3.1.1 Topography and Land Use

The Subproject area lies in Ward No. 7 of Bafikot RM, Ward No. 10, 9 and 7 of Aathbiskot Municipality of Rukum West district and Ward No. 8, 9 and 10 of Tribeni Nalagad Municipality of Jajarkot, Karnali Province. The Subproject components are located within the Hilly region of Nepal. The proposed distribution line (33 kV) of 25.1 km passes by the edge of Jajarkot–Dolpa road till the proposed substation location. The tapping point is situated at Latitude 28°52'11.47"N and Longitude 82°27'0.16"E, with an elevation of 1130 masl (**Figure 3-1**). The proposed distribution line stringing route passes along the edge of Salagad Khola, Kharkhara Khola, Bheri River, Jaligad Khola, Tasu Khola, community forest, barren land and the sparse settlement area.

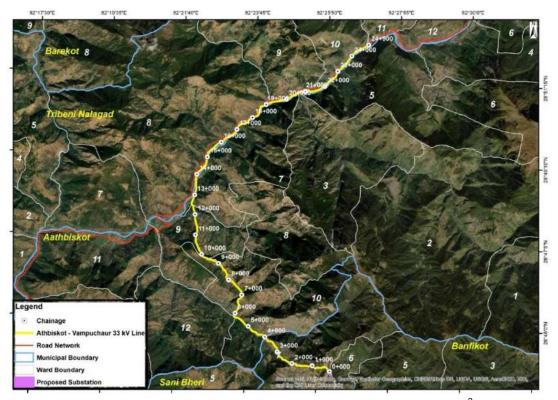


Figure 3-1: Location map and Land use details of the Subproject²

The substation lies at Latitude 28°43'45.32"N, Longitude 82°26'14.78"E and elevation of 2317 masl (**Figure 3-3**). The site lies in depressed flat land. It is a barren land owned by GoN. The proposed substation boundary lies within a 0.76 ha area. None of the private and public entities will be affected due to the implementation of the proposed Subproject, as it will be installed within the RoW of the existing road, barren land and the edges of the cultivated land. The land use map details with the components of the Subprojects are presented in **Annex 2**.

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² Source: Topographic Map, Department of Survey, 1995 and Field Study 2021



Figure 3-2: Tapping point of Subproject lies in Chaukha Substation



Figure 3-3: Land for the proposed substation at Vampuchaur, West Rukum

3.1.2 Geology

Geologically, the proposed Subproject lies on the Dali Formation composed of white to grey colored quartzite with intercalations of thin layers of slate and black phyllite. The rock consists of purple phyllite with quartz vein and purple quartzite. The line passes through silty clay soil cultivation land at the Khagenkot, Auligau, and Koth village. The line runs between Bhayauni and Maidaha village, passing through community forest and cultivation ground of cohesive soil. The line passes from the roadside alignment where there is silty clay of cohesive soil.

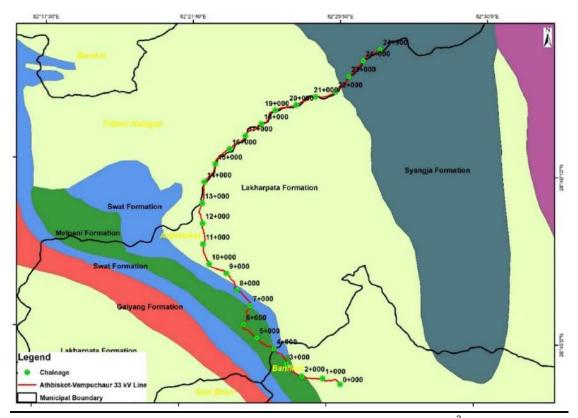


Figure 3-4: Geological Map of proposed Subproject Area³

³ Source: Department of Mines and Geology (DMG), 2020

3.1.3 Seismology

The entire country of Nepal is in a seismically active zone caused by the subduction of Indian tectonic plate under the Tibetan Plate. According to the National Seismological Center of Nepal several big earthquakes have been felt in Nepal, the earthquakes of magnitude 6 to 7 are mostly confined to the Main Himalayan Thrust (MHT) between the foot hills and the Higher Himalaya. Moreover, earthquake generation is confined to the crustal depth of 20 km. However, shallow earthquakes at depths down to 6 km are generated as a result of strikeslip faults. Therefore, the substations and distribution lines of this Subproject will be designed and operated per seismic design requirements and best engineering practice. The seismic activity in Nepal between 1964 and 2019 as in the IUSGS portal is shown in **Figure 3-5.**

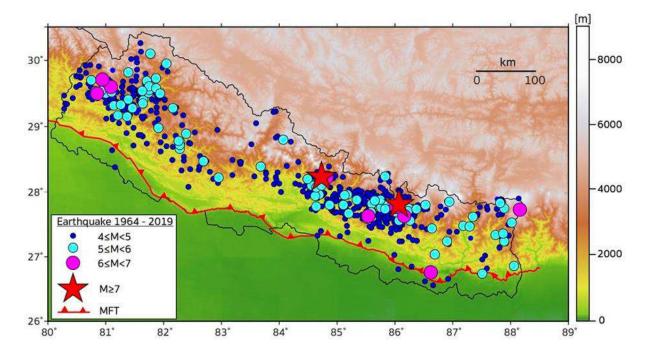


Figure 3-5: Seismicity map of Nepal from 1964 -2019⁴

3.1.4 Climate

The climate of the Subproject area is sub-tropical. According to DHM 2021, the average temperature at the project area varied from 8.0°C to 34.0°C. The relative humidity is in the range of 84% to 87 %. The average annual rainfall is estimated at approximately 1,868.5 mm per year. Almost 80% of rainfall occurs during monsoons (June to September).

3.1.5 Air, Noise, Water Quality and Polluting Sources

The major air polluting sources recorded are only vehicular emission and dust problem from plying of vehicles and high wind velocity. Noise-polluting sources noted at the time of field study are similar to the air polluting sources. Unnecessary honking along the access road of

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⁴ Source: USGS catalogue, 2019

the site is the source of noise generation. The following table shows the real-time quality of air and noise during a field study.

Table 3-1: Ambient Air and Noise Quality within the Proposed Subproject Site

		Air Quality ⁵ -Temtop Airing-1000 PM Detector (μg/m ³)					Noise Level -UNI-T UT 353 Mini Sound Meter (dB)		
SN Location/ Chainage		PM _{2.5}	Level	PM ₁₀	Level	Average Time of Measurement	Measured	Ref. ⁶	Area
1.	Tapping Point	38.5	100	35.4	200	1-hour	36	50	Residential
2.	Substation	22.7		27.9			39.1		Area

Source: Field Visit, 2021

The air quality of the SPA was found within the range of the National Ambient Air Quality Standard while noise was found above the Noise Quality Standard because of the vehicular noise nearby the settlement area.

Different crossings of streams and rivers were found along the proposed distribution line alignment. The proposed distribution line crosses the Salagad Khola at Chainage 4+000, 5+100 and 5+700, Kharkhara Khola at Chainage 12+550, Bheri River at Chainage 13+800, 17+000, 17+650, 21+000, 22+500, and 22+900, Jaligad Khola at Chainage 20+650 and Tasu Khola at Chainage 24+800. Thuli Bheri River lies about 300m far from both tapping point that is Chauka or Danipipal. The physical parameter of the Bheri River was tested nearby tapping point.

Table 3-2: Water Quality of Stream along the Distribution Line Route

			River/	Floo	DL	Pa	arameter	- EXT	ECH Ex	Stik II DO60	00
S N	DL/ SS	Location	Strea m Name	d plain width (m)	distance from Stream	Temp (°C)	Ref ⁷ .	рН	Ref.	EC (μc/cm)	Ref.
1.	DL	Tribeni Nalgad Municipality-8, Kayakhet (Ch. 10+500)	Bheri River	189	30m	24.1	<40° C	7.1	5.5- 9.0	120	1500

Source: Field Visit, 2021

The water quality of the Bheri River was found to be within the limit of acceptance for the aquatic life in the stream. The water parameter data is compared with Nepal Water Quality Guidelines for the Protection of Aquatic Ecosystem. The construction activities of the Subproject components will not have impact to the local stream.

⁵ National Indoor Air Quality Standard, 2009

⁶ National Ambient Sound Quality Standard, 2012

⁷ Nepal Water Quality Guidelines for the Protection of Aquatic Ecosystem, 2019

3.1.6 Solid Waste Management

Wastes were found littered in front of HHs and along the side of the access road near the Subproject areas. People in the nearby area were found managing organic wastes within the household premises. Recyclable wastes (large quantities) were sold to scrap collector occasionally. The estimated quantity of solid waste generation from the labor camp is shown in **Table 3-3**.

SN	Description	Calculation	Remarks
1.	Total Labors within the Campsite	= 20 Labors	
2.	Total Waste Generation to be Expected	= 20 * 123.62 g/capita/day = 2472.4 g/capita/day = 2.4724 kg/day	
3.	Organic Waste Composition Responsible for Foul Smell, and Rodents	= 1.26 kg/day	Assuming 51% organic waste

Table 3-3: Estimated Daily Solid Waste Generation from Campsite

The rest of the other waste is recyclable, and non-decomposable which could be stored for long period, and have less impact on the environment if properly managed. The amount of organic waste is manageable within the Subproject site as organic waste per day will be expected to be only 1.26 kg/day.

3.2 Biological Environment

The proposed substations area land is Government of barren type. No need to cut any trees at substation site. The proposed Subproject's distribution line passes from the edge of Koti Simla Community Forest (CF), Kalika CF lies in Rukum West while tapping from. Also, line passes from Salleri CF, and Vampopatal CF while tapping from Danipipal. The proposed Subproject lies within the elevation range from 890 to 2917 masl of Rukum West and Jajarkot District and thus is located in the upper tropical bioclimatic zone. The proposed Subproject site does not lie within any protected area and conservation area.

The vegetation species recorded during the screening field visit are Khasru (*Quercus semecarpifolia*), Chir pine (*Pinus roxburghii*), Banmasa (*Lantana camara*), Chutro (*Berberis aristata*), Utis (*Alnus nepalensis*), Rhododendron (*Rhododendron arboreum*), Banjh (*Quercus leucotrichophora*), Kafal (*Myrica esculenta*) and Buki phool (*Anaphalis contorta*). Similarly, wild animal recorded during the public consultation are: Indian Hare (*Lepus nigricollis*), and Golden Jackel (*Canis aureus*). Altogether six species of birds were noted around the surrounding project area; House Crow (*Corvus splendens*), Western Spotted Dove (*Spilopelia suratensis*), Slaty-headed Parakeet (*Himalayapsitta himalayana*), House Sparrow (*Passer domesticus*), Tree Sparrow (*Passer montanus*), and Red-vented Bulbul (*Pycnonotus cafer*). All these bird species are of least concern under IUCN categorization.

The Dhorpatan Hunting Reserve lies at a distance of 32 km from the proposed substation site, thus there will be no any impact to the protected species of the Hunting Reserve. The proposed 33 kV distribution line passes through the 8 different CF as shown in **Table 3-4**. A total of 3.81 ha of the forest area will be occupied by RoW of proposed 33 kV distribution

line. The estimated number of trees to be cleared from the Core Project Area of the distribution line alignment passes along different community forests are 856.

SN	Name of CF	Chainage	District	Municipality /RM	Ward no.		
1	Khaireni Churi	11+400-12+200	Rukum West	Aathbiskot Municipality	7		
2	Kaina Patal	12+400-12+650	Rukum West	Aathbiskot Municipality	6		
3	Rani Ban	14+200-15+600	Rukum West	Aathbiskot Municipality	9		
4	Salleri	16+000-16+600	Rukum West	Aathbiskot Municipality	10		
5	Salleri	17+500-18+800	Rukum West	Aathbiskot Municipality	10		
6	Bagi Mela	21+400-21+600	Rukum West	Bafikot RM	7		
7	Ghari Vir	22+800-23+000	Rukum West	Bafikot RM	7		
8	Tin Kholi	23+000-24+600	Rukum West	Bafikot RM	7		
9	Vampu Patal	25+920	Rukum West	Bafikot RM	6		

Table 3-4: Forest type along the proposed distribution line

3.3 Socio-economic Environment

Demography and Ethnic Compositions: The Subproject area lies in Ward No. 7 of Bafikot RM, Ward No. 10, 9 and 7 of Aathbiskot Municipality of Rukum West district and Ward No. 8, 9 and 10 of Tribeni Nalagad Municipality of Jajarkot, Karnali Province. Chaurjhari, Musikot and Khalanga are the nearest business markets nearby the Subproject area. The general demographic information of the affected Municipality is presented in Table 3-5. The major ethnic compositions within the surrounding project area i.e., Ward No. 10, 9 and 7 of Aathbiskot Municipality and Ward No. 8, 9 and 10 of Tribeni Nalagad Municipality are Chhetri (46.3%), Dalit (29.0%), Thakuri (15.2%), and Magar (6.1%) of the total population of 16,184. Majority of people follow the Hinduism and rest follow Buddhism and Christianity. The Core Project Area (CPA) of the Subproject will not affect any indigenous people.

S.N.	Name of Municipality /RM	Ward No	нн	Population		
J.IV.	Name of Municipality /Kim			Male	Female	Total
1	Bafikot RM	7	440	1204	1276	2480
2		7	307	782	795	1577
3	Aathbiskot Municipality.	9	661	1642	1696	3338
4		10	571	1401	1450	2851
5		8	560	1511	1499	3010
6	Tribeni Nalgad Municipality	9	283	809	763	1572
7		10	267	635	712	1356
	Total	3089	7984	8191	16184	

Table 3-5: General Demographic Characteristic of Subproject Municipality

Source: (CBS, Rural Municipality-Municipality Profile of Rukum West and Jajarkot District, 2018)

Road Accessibility: Subproject-Ward No. 8, 9 and 10 of Tribeni Nalgad Municipality of Jajarkot are connected to Jajarkot–Dolpa Road. The transportation facilities in this locality are medium. It is 30-45 minutes' walk to reach municipality and RM office from the Subproject area.

Electricity Beneficiaries: The implementation of the Subproject will increase the electricity beneficiaries to 3,428 HHs, 30 commercial purposes and 10 industries. This will expand the electricity supply in the Subproject area with clean energy sources.

Water and Sanitation: Tap/piped water is the main source of drinking water in the surrounding Subproject area. About 66.7% of the households in the proposed Subproject's area have access to tap/piped water. Almost all the houses in the area have some sort of toilet facility.

Health Facility: The nearest and easily accessible health facility nearby the proposed Subproject's substation area is Mangma Health Post (Bafhikot Municipality, Ward No.7) located at a distance of 1.5 km from the site.

Communication: People of the Subproject have access to communication facilities mainly through mobile telephone services. In the Subproject area, people have access to local and national FM Radio networks and local newspaper facility.

Occupation: Agriculture is the main occupation of people in the Subproject area with nearly 65% contribution; small trade and business/enterprises and services are other occupations of people in the Subproject area. Intermittent tripping and voltage drop of electricity were adversely affecting the irrigation of crops and daily household chores activities.

COVID-19: The coronavirus (COVID-19) pandemic has been defined as a global health crisis; the virus has spread in almost all parts of Nepal. Heedful of its vulnerabilities, the Government of Nepal enforced a nationwide lockdown in 2020/2021 and activated its federal, provincial and local level mechanisms to respond to the crisis. In case of any sudden surge or outbreak of COVID-19, quarantine facilities and immediate health supports should be provided to the workers and personnel involved in construction.

Other seasonal and minor diseases like dengue, fever, sneezing, cough, gastritis, diabetes and mental disorder have been reported within the Subproject area.

4. ANTICIPATED ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

The environmental and social impacts predicted during the construction of the proposed Subproject are discussed in this chapter. National Environmental Impact Assessment Guidelines (GoN, 2050) have been referred for the predicting magnitude, extent, and duration of the project-induced environmental impacts in the Subproject area. This chapter identifies the basic environmental and social impacts in the Subproject area that will arise during the construction. The detailed impacts of each domain of environmental and social safeguards have been addressed in this chapter.

4.1 Anticipated Beneficial Impacts

Construction Phase

4.1.1 Local Employment

Local employment will be created the construction phase. As mentioned in section 2.8 Workforce Requirement, the typical construction team will have 21 skilled manpower and 58 unskilled manpower for the period of 10-12 months for the erection of poles and stringing the distribution lines and 16-18 months for the building of the substation. The local people within the SPA and OPA will be encouraged for employment during construction phase. Both males and females will get equal opportunities during the construction. Based on the skill levels (skilled, semi-skilled and unskilled labor) local people will be used for the construction as far as possible. The magnitude of impact is considered moderate, the extent is local, and the duration is short-term.

Operation Phase

4.1.2 Local Economy and Enhancement in Rural Electrification

The local economy will benefit through improved reliability of electricity supply, which is a necessary condition for economic growth. Different industries within/nearby the proposed Subproject area will be established. Intermittent tripping and voltage drop problems nearby the settlement areas will be reduced. Upgrading and expansion of electricity distribution helps to way-out many electricity-related issues and promotes the use of new types of home appliances, the use of electric motors for irrigation, and the establishment of small and large industries. The magnitude of impact is considered high, the extent is local, and the duration is long-term.

4.1.3 Greenhouse Gas Emission Balance

Net Green House Gas (GHG) emissions resulting from the Subproject area are expected to be low as the distribution lines will improve and expand the electricity supply from clean energy sources. It will reduce the emission of GHG from traditional source like Guitha (made from cow dung), firewood and timber along with commercial fuel Kerosene for cooking/lighting, heating, and diesel for water pumping. The magnitude of impact is high, the extent is local, and the duration is long-term.

4.2 Anticipated Adverse Impacts

A. Physical Environment

Construction Phase

4.2.1 Change in Land Use

The Subproject requires about 0.76 ha of land for the substation. The proposed substation land area belongs to government land. The land will be managed by NEA and will be converted to the substation area surrounded by proper boundary wall. Distribution Line passes through edge of private, barren land and RoW of the Jajarkot–Dolpa road. The construction of the Subproject will bring change in land use permanently. Potential impacts caused by distribution lines will be limited to approximately 0.22 m of land for each pole, at the edge of roads and cultivated lands. The impacts due to the use of land will be moderate in magnitude, site-specific and long-term in duration.

Mitigation Measures

- Steel Tubular Pole for distribution lines will be planted at the right way of the existing road without hampering traffic movement. In the case of cultivated land, minimal land will be used at the edge for planting the poles.
- A cropping calendar will be followed while planting poles and stringing conductors so that standing crops will not be damaged.
- In case of loss of standing crops, compensation will be made to the respective land owner as per the prevailing market rate.

4.2.2 Air Quality

The impact on air quality during the construction period is expected to be insignificant, as site clearance, excavation, stockpiling of construction materials, waste burning at camp sites and equipment installation are localized and short-term. Transportation of the materials and movement of construction crew and equipment will have a minor impact on air quality. The impact on air quality will be minor in magnitude, site-specific in terms of extent, and of short duration.

Mitigation Measures

- Contractors' vehicles and equipment should meet Nepali vehicle emissions standards.
- Dust emissions will be controlled with using water sprays on earthen roads nearby settlements in the substation area.
- · Open burning of wastes should be strictly prohibited.
- Construction workers should use face masks at all times.
- All dust-generating loads carried in open trucks should be covered.

4.2.3 Noise

Noise is inevitable during construction. As noted in section 3.1.5, noise is less around the substation area as the area is rural and settlement is sparse. Construction-related noise will be limited to vehicular movement and inside-the-fence construction activities at substations sites; construction-related noise is not expected to exceed acceptable levels. The impact on noise level will be minor in magnitude, site-specific in terms of extent, and of short duration.

Mitigation Measures

- Contractors will be required to monitor noise during construction.
- For substation site, a boundary walls serve as a noise barrier, and it should be constructed as early as possible.

4.2.4 Drainage and Water Quality

Substation sites of 0.76 ha. will result in a slight alteration of drainage patterns, although the alterations in drainage will not be quantifiable. Interference with drainage patterns will be temporary during the construction phase only. The impact on water quality during the construction period is expected to be insignificant. Water will be used primarily as a cement additive for the construction of substation foundations and boundary walls, and to control dust. The magnitude of impact is low, the extent is site-specific, and the duration is short-term.

Mitigation Measures

- Storm water run-off from substation sites will be minimized and controlled by bundling temporary dikes (constructed boundary walls will also help contain run-off water).
- Proper management of ground drainage from camps as a preventive measure against the breeding places of mosquitoes, and other pests.

4.2.5 Soil and Muck

As the proposed substation land's ground level is low, filling of soil is necessary. The required filling materials shall be purchased from a nearby authorized crusher plant approved by the local government. For distribution lines the excavation activity will be insignificant. The magnitude of impact is low, the extent is site-specific, and the duration is short-term.

Mitigation Measures

- Soil required for filling shall be purchased from the nearby authorized crusher plant under local government.
- Soil shall be covered with a tarpaulin while transporting it from earth-borrowing areas.
- Simultaneous water sprinkling and compaction of spoil shall be done using the roller.

4.2.6 Solid Wastes

The wastes generated during construction within the Subproject area are cement bags, iron bars, and other leftover construction materials, and waste generated by the labor camp. It might cause an adverse impact if not properly managed. Organic wastes generated from labor camps may give a foul smell, and attract rodents if not manage properly. Inorganic wastes generated during implementation shall be managed through source segregation. The magnitude of impact is low, the extent is site-specific, and the duration is short-term.

Mitigation Measures

 Source segregation of organic and inorganic wastes in different storage areas or facilities in the designated location.

- The organic waste generated from the campsite shall be managed within the substation premises, through composting in the bin or by constructing a ground pit, and covered by a thick layer of soil on daily basis.
- Reusable waste like debris, broken brick pieces, sand, stone, waste cement, and sand mix shall be used as refills for ground leveling.
- · Packing materials used for casing components should be recyclable.
- Recyclable wastes like left out/non-usable reinforcement bars and packing materials shall be sent or sold to scrap vendors.
- Chemical waste generated from the transformer shall be collected in leakage-proof, corrosion-free, specially designed containers and sealed carefully.
- Effective coordination shall be done with the local level government for proper waste management during the construction period.

Operation Phase

4.2.7 Electric and Fire Hazard

Employees performing servicing or maintenance of substations may be exposed to electric shock, burns and injuries from the unexpected energization or release of stored energy in the equipment. The magnitude of impact is considered moderate, the extent is site-specific, and the duration is long-term.

Mitigation Measures

For this, the following mitigation measures will be practiced:

- Use of insulation, guarding, grounding, electrical protective devices, and safe work practices are advised.
- Boundary walls and security fences around the substation are recommended to prevent unauthorized access.
- Only trained and authorized personnel shall be allowed for electrical work.
- Warning signs shall be installed.

B. Biological Environment

The proposed Subproject avoided the forestland or other sensitive biodiversity areas. Hence, there will be no significant impact, due to substations and other project physical outputs to the biological environment.

Construction Phase

4.2.8 Loss of Habitat

As the proposed substation area is a barren land and no issues of tree loss in substation area, whereas the 33 kV distribution line passes through the edges of road alignments, farm lands and forest areas. The total area of the forest area that will be occupied within RoW of the proposed 33 kV distribution line is 3.81 ha. The estimated number of trees to be cleared from the Core Project Area of the distribution line alignment passes along different community forests are 856. The possible use of firewood should be restricted during the construction activities. The magnitude of impact is moderate, the extent is site-specific, and the duration is long-term.

Area (ha)			Name of species	No. of trees	
33 kV line	Substation	Total	1	33 kV line	Substation
3.81	-	3.81	Quercus semecarpifolia	109	-
			Alnus nepalensis	88	-
			Rhododendron arboreum	68	-
			Quercus leucotrichophora	395	-
			Myrica esculenta	27	-
			Pinus roxburghii	169	-
			Total	856	

Table 4-1: Detail of impacted forest area and trees loss

Mitigation Measures

- Compensatory plantation shall be done as per Forest Regulation, 2079 (2022).
- Compensatory plantation to be made in the ratio 1:10, including cost for sapling and management cost for 5 years.
- · Workers and staffs should be restricted to use firewood for cooking.
- Providing LPG based stoves in Labor camp.
- · Labors and staff shall be made aware to avoid illegal activities in adjoining forest.

Operation Phase

4.2.1 Bird electrocution and collision

The Subproject area is located in rural setting and there is no presence of critical habitat of avian fauna. Electrocution is a risk to bird species that perch on power line infrastructures (substations and distribution lines). List of birds presented in section 3.2, may collide to distribution lines and substation. Minimizing bird collision and electrocution risk is therefore a win-win for biodiversity and the power sector. The magnitude of impact is low, the extent is site-specific, and the duration is long-term.

Mitigation Measures

• Bird guards should be installed above the poles and white spirals in the conductors to improve visibility electrical structures.

C. Socio-Economic and Cultural Environment

The anticipated impacts regarding the socio-economic and cultural environment associated with Subproject are discussed below:

Construction Phase

4.2.2 Land Requirement

The land required for the proposed substation area is 0.76 ha, is the government land, that will be managed by NEA later. This has been confirmed officially through Ward Office, Banphikot RM. NEA is given the right to use the land to build and operate a substation. The construction activities of the Subproject will not involve any private land. So, there will be no land acquisition, and thus no resettlement impacts. For the construction of distribution lines, owners of private land along the route have assured and committed to

the necessary help and support during implementation. They have agreed on NEA's proposal that poles shall be installed on the edge of cultivated lands and appropriate compensation for the loss of crops shall be given (**Annex 5**). Compensation shall be made based on crops types and quantity of loss equivalent to the market price. *The impacts will be low in magnitude, site-specific and long-term in duration.*

Mitigation Measures

- A distribution pole of diameter 0.22 m should be installed on the edge of cultivated land making no loss of standing crops.
- If there is a loss of crops, appropriate compensation shall be made.

4.2.3 Public Health

Construction activities will be of small scale, causing no significant adverse impact to existing quality of air, water and sound. Local people except the workers do not involve in construction activities. Considering the COVID-19 pandemic as an example, workers will be advised to avoid unnecessary contact with local people. The magnitude of impact is low, the extent is site-specific, and the duration is short-term.

Mitigation Measures

- · Contractors shall implement health and safety plans.
- Awareness of HIV/AIDS and other sexually transmitted disease should be provided to the labors.
- Awareness of basic sanitation and waste management should be provided to the labors.
- For coronavirus (COVID-19) pandemic situation, contractor needs to handle the situation in case of any sudden surge and standardize the quarantine facilities with health aid to the labors.

4.2.9 Occupational Hazards and Safety of Workers

Occupational health hazard and the safety of workers is the major issue during the construction period. Working without adopting safety measures during excavation work, spoil management work, mechanical and electrical equipment handling activities, chemical handling, etc. during construction may call the risk of accident. The primary victims are the workers involved in the construction. So, the envisaged direct impact is high in magnitude, site-specific in extent, short-term in duration.

Mitigation Measures

- The contractor shall prepare the Environmental, Health and Safety plan and take approval from the Client (NEA/PIU). The contractor shall employ Safety officer during construction period.
- All employees shall be provided with the necessary training, and safety equipment as required for their responsibilities and duties. The Contractor will adhere to labor Act 2074 and Labor Rules 2075.
- The basic facilities of drinking water, sanitation & clean resting place, canteen, and first aid are required for the campsite.
- All the workers shall have health insurance throughout construction.

- Installation of warning signs (High Voltage, Fire Safety Signs, and Emergency Signs) as shown in ANNEX 7.
- NEA will be responsible to supervise the EHS performance of the construction Contractor, and workers' health and safety.

4.2.10 Child Labor, and Gender Issues

During the construction period, people employed on daily wages for excavation, transportation of construction materials, and other construction-related works should avoid the involvement children and should avoid gender discrimination. Gender discrimination may occur as the Contractor may not be sensitive towards gender equity. Contractors should equally pay men and women workers. Construction area should be gender friendly with required facilities. The envisaged impact is high in magnitude, site-specific in extent, and short-term in duration.

Mitigation Measures

The Subproject will ensure to:

- Provide equal wage to male and female for similar nature of work.
- Prohibit the use of child labor i.e., below 16 years of age (which is as per government and ILO guidelines).
- Provide female friendly construction environment with separate cabins and toilet for women in the camp.
- · Prepare suitable work categorization for women.

4.2.11 Socially Undesirable Activities

The workers may use alcohol and other forms of intoxication, gamble and quarrel with locals, disrespect local culture and religion, and may promote socially undesirable activities in and around the project area. So, the envisaged impact is low in magnitude, local in extent, and short-term in duration.

Mitigation Measures

- Restrict movement of workers out of camp after dinner time at the night.
- Prohibit the use of alcohol and gambling in the camp.
- Supply water supply, daily consumable items, and communication facility in the camp so as not to create additional pressure on the local services.
- Orient workers to show respect for local tradition and culture.
- Prepare a code of conduct for all project staff, orient them and monitor that these are effectively followed by all.
- Assign a public relation officer to keep close and regular consultation and coordination with local communities.
- Regular monitoring of workers' behavior and taking appropriate measure on rule violators.

Operation Phase

4.2.1 Hazards and Safety

Occupational health hazard and the safety of staff are the major issues during the operation phase of the substation. The possible electric shock and fire hazard might cause

injury or death to working staff thus protection measures should be taken all the time. The envisaged direct impact is high in magnitude, site-specific in extent, and long-term in duration.

Mitigation Measures

- There will be the use of insulation, guarding, grounding, electrical protective devices, and safe work practices.
- Boundary walls and / or security fences around substations to prevent unauthorized access
- Only trained and authorized personnel will be allowed for the electrical works.
- No electric wire shall be stringed above the house.
- · Security fences around the substation.
- · Establishment of warning signs
- Shutdown shall be taken during work on the DL route

4.2.2 Electric and Magnetic Field Effect

Electric power distribution lines create electric and magnetic fields together, referred to as electromagnetic fields (EMF). Electrical flux density declines in inverse proportion to the square of the distance and magnetic fields decline in inverse proportion to the cube of the distance; so, there will be no impact outside of the substation boundaries. ⁸ Research on the long-term effects of EMF associated with distribution lines is inconclusive for health risks. As noted in the World Bank EHS guidelines for transmission and distribution systems, there is no empirical data demonstrating adverse health effects from exposure to typical EMF levels from power transmission lines and equipment.

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⁸ E.g., at a distance of 10 meters from a single distribution line or conductor, electrical flux density drops to 1% of the field strength at a distance of 1 meter from the conductor: 1/(10*10) = 1%. Likewise, the magnetic field drops to 0.1% of the field strength at the conductor: 1/(10*10) = 0.1%.

5. INFORMATION DISCLOSURE, CONSULTATION, AND PARTICIPATION

5.1 Methodology in Information Disclosure, Consultation and Participation

The following methodologies were followed for information disclosure, consultation and participation:

i. Identification of the stakeholder is important to understand how the Subproject activities will relate different institutions/groups/individuals. Stakeholders are the groups that might be affected by the Subproject or might influence Subproject outcomes. The identified stakeholders are considered into three groups (**Figure 5-1**).

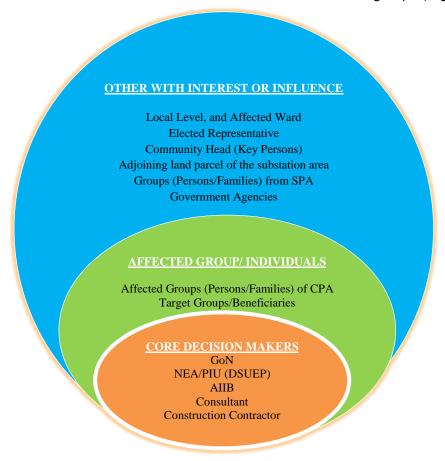


Figure 5-1: Identified Stakeholder in the Subproject9

- ii. The notices with the subject of consultation, venue, and time were pasted at the Subproject footprint area, local level and affected Ward office in presence of concerned local stakeholders. People were explained about the notices and their views were noted and agreed upon as Minutes.
- iii. Study team members visited all the local government offices within the Subproject influence area. Representatives from each local body were also consulted. All local governments were given request letters for their active support in project implementation. Municipalities were requested to provide written suggestions. The

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⁹ Referenced Meaningful stakeholder engagement: a joint publication of the MFI working group on environmental and social standards / Reidar Kvam, PP-19, 2019.

- deed of inquiry (Muchulkas) and Letter of Declaration from the stakeholders are presented in **Annex 6**.
- iv. Local communities nearby the substation area and along the distribution line routes were consulted, and were briefed about the Subproject activities and likely benefits with their suggestions (includead in the Minutes).
- v. During the Subproject construction phase, booklets informing about the Subproject activities, likely impacts, and mitigation measures together with the complaints handling mechanisms will be developed and distributed in the Subproject area.

5.2 Consultation and Information Disclosure

The consultation aims to encourage the participation of stakeholders and communities of the Subproject area in the identification of issues, comments, and suggestions. The Subproject affected groups (persons/families) were given more emphasis during the field consultations. Public consultations were conducted at Athbiskot Municipality, Ward No. 9, Radijiula, Nalgad Municipality, Ward No.10, Radijiula and Nalgad Municipality, Ward No.11, Chaukha on 11th February, 2022 (**Figure 5-2**). The concerns expressed and issues/ raised during the consultation were documented as in the form of minutes (**Annex 5**).

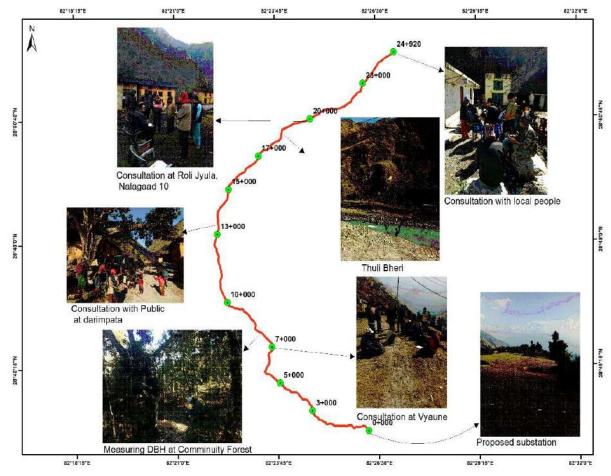


Figure 5-2: Consultation with the stakeholders and communities in the Subproject Area. 10

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¹⁰ Field Study, 2021. Used SW Map and GIS

Major benefits expected from the implementation of the Subproject through the perspective of local people were identified from public interaction, and that included improvement in the rural electrification facilities ensuring uninterrupted electricity in the households and better functioning of industries in the locality. The issues, comments and suggestions received in the consultation are presented in **Table 5-1**.

5.3 Comments and Suggestion Received

Table 5-1: Summary of issues, comments and suggestions received in Consultations

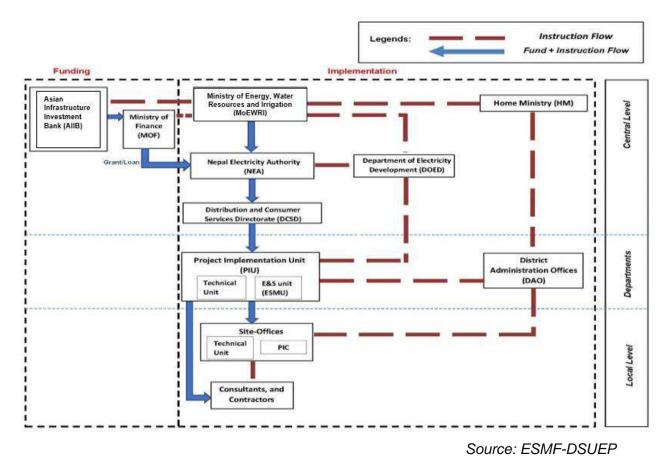
Source: Field Visit, 2021

Date	Location	Issues, comments and suggestions received	Participants
	Athbiskot Municipality, Ward No.10, Radijiula	 The distribution line should be installed away from the settlements area and private land. In case if it has to be passed through the private land, the pole should be installed at the edge (the up and down the side of the land). The local people should be given priority for the employment based on the knowledge and skill in the construction of the project. While constructing the sub-project, there should not 	18,3F-15M
11th February, 2022	Nalgad Municipality, Ward No.10, Radijiula	 be any negative impacts on archaeological, religious momentous, or to any structures of public importance. If case of any negative impacts, the project should have to manage it appropriately It is informed that there are no residences of indigenous people within the direct project affected area. There is electricity supply with inadequate voltage supply in this area. It is requested that the project should start its construction immediately to ensure reliable electricity service to the local people. 	19,5F-14M
	Nalgad Municipality, Ward No.11, Chaukha	 It is informed that there is no difficulty if in case of the proposed Subproject has to be passed through the private land; the local level will consult and coordinate with landowners. The construction of this proposed sub-project will have the support and cooperation of local level and stakeholder. It is informed that there are no any places of ritual and cultural importance in the project area. 	22,3F-19M

6. INSTITUTIONAL ARRANGEMENT AND GRIEVANCE REDRESS MECHANISM

6.1 Institutional Arrangement

The Ministry of Energy, Water Resources and Irrigation (MEWRI) is responsible for the overall planning and execution of the plans for the overall development of the water and energy sector in Nepal. Nepal Electricity Authority (NEA) under MEWRI is the responsible agency for the implementation of the DSUEP. The project comes under the Distribution and Consumer Services Directorate (DCSD) of NEA. Project Implementation Unit (PIU) under DSUEP is the implementing unit of the project. The Environment and Social Management Unit will be within PIU. All the resources needed for the EMP implementation for the construction and operation phase will be provided by the PIU. The site offices under PIU will have a supervision consultant with an environmental and social safeguard specialist, who will be responsible for compliance monitoring activities during the construction phase. He will also provide technical support in preparing the monitoring report.



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Figure 6-1: Institutional Arrangement for Environmental and Social Management

The contractor shall have the main responsibility to ensure compliance. The Contractor shall prepare an Environment, Health and Safety (EHS) report that would be approved by DSUEP/PIU before field mobilization. They need to strictly follow the EHS plan requirements. The contractor shall urgently comply with corrective actions for any noncompliance as instructed by PIU. The ESMU of PIU shall provide safeguard

compliance orientation to all environment monitors and safeguard team of the contractor, one month before the construction works start.

6.2 Grievance Redress Mechanism

The Grievance Redress Mechanism (GRM) has been established to receive, evaluate, and facilitate the resolution of affected people's concerns, complaints, and grievances about social and environmental-related issues at the subproject level. The GRM is designed to be simple, transparent, and responsive. GRM shall address only the concerns arising due to the project implementation activities, mainly during the construction stage. Social Comment Addressed -In each subproject, three levels of Grievance Redress Mechanism will be established. During the ESMP study period, NEA disseminated letters to the local level stakeholders regarding the formation of the GRM at the subproject level. To date, NEA has established Tier-I and Tier-II GRM has been established at the local wards level and Municipality/RM level. Tier-II will be established before construction work starts.

GRM process entails the concerned party submitting a grievance either in-person, via phone, letter, or email to the Site-Engineer or the concerned Municipality Chief or the concerned Ward Chair. The Site-Engineer will record the complaint. In cases where Ward Chair has received such a grievance, he/she should forward the grievance to the field office Engineer. The Site-Engineer shall notify the committee members of Tier-I and arrange a meeting to resolve the received grievances. If not resolved such grievances will be carried to Tier II and Tier III. The three levels of GRM will be based on time-bound schedules as mentioned in **Table 6-1**. The subproject will carry the regular meeting for Tier-I, once a month to follow up if any grievances are received or not and to resolve the grievances received and update its status to PIU. **Figure 6-2** describes the Workflow Diagram of GRM for the Subprojects.

Table 6-1: Levels of Grievance Redress Mechanism Based on Time Bound

5		Levels of Grievance Redress Mechanism						
Provisions	First Level (Tier-I)		Second Level (Tier-II)		Third Level (Tier-III)			
Level	Local Level	Local Level		headed by the ct Implementation	District Level			
Supervisory	NEA Site-Engineer		PMO		Chief District Officer (CDO)			
Assistance	Chief/Mayor of Concerned Local Level and Chairperson/ Representative of Ward, Construction Contractor's (CC) Representative and Project Supervision Consultant's (PSC) Safeguards Officer		NEA Site-Engineer and PSC's Social Expert, and Construction Contractor		PMO, affected persons, representative from Rural Municipality/Municipality, Site-Engineer, PSC's Social Expert. If deemed necessary, representative from Forest Office, representative from Land Revenue Office, and representative from Land Survey Office are invited.			
Days for Resolving Complain	7 days of receipt of a com	plaints/ grievance	15 days of complaints forwards	ed by Site-Engineer	15 days			
	Committee Member	Designation	Committee Member	Designation	Committee Member	Designation		
	Municipality Chief	Coordinator	Project Manager	Coordinator	Chief District Officer (CDO)	Chair		
	Site-Engineer-NEA	Member secretary	Site-Engineer	Member Secretary	Project Manager	Coordinator		
Committee	Safeguards Expert from Consultant	Member	Municipality Chief	Member	Site-Engineer	Member Secretary		
Members	Contractor Engineer	Member	Safeguards Expert from Consultant	Member	Municipality Chief/Ward Chair	Member		
	Ward Chair	Member	Contractor Engineer	Member	Safeguards expert from consultant	Member		
					Contractor Engineer	Member		
					Representative from affected people	Member		

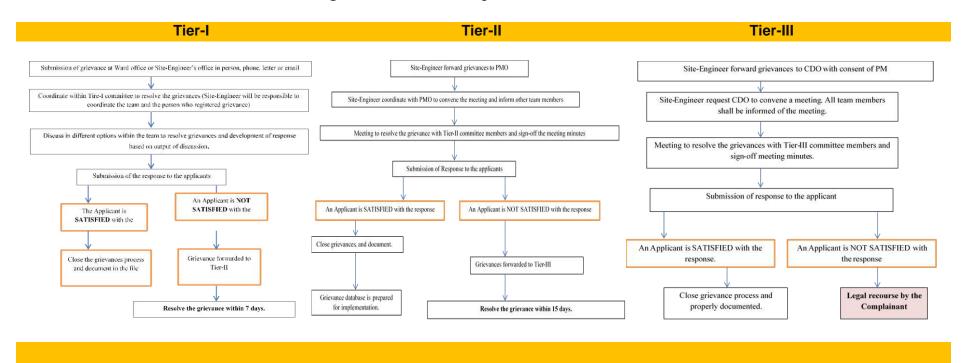


Figure 6-2: Workflow Diagram for GRM from NEA¹¹

* Affected People (AP) have the right to refer the grievances to appropriate courts of law if not satisfied with the redress at any stage of the process i.e., the AP will have the choice to approach country's judicial system.

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Grievance Redress Mechanism (GRM) Prepared for the sub-projects financed by Asian Infrastructure Investment Bank (AIIB) under Distribution System Upgrade and Expansion Project (DSUEP), Nepal Electricity Authority (NEA), May 2021.

7. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7.1 Environmental and Social Management Plan and Mitigation Measures

Table 7-1. The ESMP will be implemented in three stages: (i) pre-construction (ii) construction, and (iii) operations and maintenance. This ESMP is a living document and will be updated and modified under the supervision of ESMU of PIU.

Table 7-1: Environmental and Social Management Plan (ESMP)

			Mitigation Cost	Respons	sibility
Project Activity	Environmental and Social Issues	Management/Mitigation Measures		Planning and Implementation	Supervision and Monitoring
Pre-construction Ph	nase		,	-	
Approvals, permits and clearances	Installation of poles along the edge of private farm lands	Site office and the contractor must inform the community prior to the installation of poles and stringing of the line along DL route		Site Office/ Contractor/	DSUEP (PIU)/NEA
Construction Phase	•				
	Inadequate/unsafe working conditions	 Appropriate contract clauses to ensure satisfactory implementation of contractual environmental, health, and safety measures. 		Site Office/Contractor	PIU/NEA
Construction work in substation area and distribution line alignment	Accident may arise if the pit hole (depth-2m and diameter-0.22 m) prepared for steel tubular poles remains open for long time	 Pit holes for the steel tubular pole shall not be left open and should be filled instantly by erecting poles and concrete-cement around the base, should be used to strengthen the pole erection Contractors should follow the guideline provided by the PIU 	Project Cost	Contractor/ Site Office	PIU/ESMU/ PIU
	Dust emission - transportation of materials and movement of construction crews	Water sprays to be used for dust control as necessary in the earthen roads of the settlements nearby the substation area and proper storage of the construction materials (sand, cements, aggregates and spoil) to be stored in substation	Air Quality Monitoring- 1,50,000.00 (NRs.) Sprinkling water (Dust Management)	Contractor/ Site Office	PIU/ESMU

and equipment will cause minor impact	 Steel poles firstly stocked in the substation area and secondly in the open barren area in coordination with Municipalities and Rural Municipalities. No social and environmental issues for the stockpiling of the steel poles and stringing wires 	2,00,000.00 (NRs.)		
Noise emission- Construction related noise will be limited to vehicular movement and inside-the-fence construction activities at substations sites	 Boundary walls serves as a noise barrier, and these shall be constructed as early as possible. Construction equipment to meet national emissions and noise control standards. 	Noise Level Monitoring-50,000.00 (NRs.) Provision of PPE in Project Cost	Contractor/ Site Office	PIU/ESMU
Interference with drainage patterns will be temporary at substation during construction phase	 A proper drainage system should be managed within the substation area. Storm water run-off need to be minimized and controlled with bundling temporary dikes Drainage management as a preventive measure against breeding of mosquitoes and other pests 	Project Cost	Contractor/ Site Office	PIU/ESMU
Construction associated wastes generated within substation area and campsite location	 Organic waste generated from the campsite shall be managed within the substation premises, through composting in the bin or by constructing a ground pit, and covered, by a thick layer of soil Reusable waste like debris, broken brick pieces, sand, stone, waste cement, and the sand mix should be used as refills for ground leveling. Recyclable wastes like left out/non-usable 	Solid wastes management – 1,00,000.00 (NRs.)	Contractor/ Site Office	PIU/ESMU

	Illegal fishing and bird hunting by the labors	reinforcement bars and packing materials to be sent or sold to scrap vendors. • Effective coordination with the local level government for the proper waste management • Discouraged by supplying adequate food item (poultry) requirement within the camp. • Awareness on legal provisions upon illegal hunting of biodiversity need to be disseminated	Project Cost	Contractor/ Site Office	PIU/ESMU
	 About 3.81 ha. of forest area occurs within RoW of the DL Estimated number of trees that need to be cleared from the Core Project Area of the proposed DL alignment are 856 	 Compensatory plantation shall be done as per Forest Regulation, 2079 (2022). Compensatory plantation to be made in the ratio 1:10, including cost for sapling and management cost for 5 years. 	The total enumeration of the loss trees and mitigation cost will be incorporated in the Brief Environmental Study (BES) report		
	Use of firewood from nearby forests	 Workers and staffs should be restricted to use firewood for cooking. Providing LPG-based stoves in Labor camp. 	Project Cost	Contractor/ Site Office	PIU/ESMU
	Loss of standing crops at pole installation locations (depth- 2m and diameter- 0.22 m)	 Poles are to be installed at the edge of cultivated land making no loss of standing crops. Need to make prior consultation with landowners before installation of the poles. If there is a loss of crops, appropriate compensation shall be provided. 	Project Cost	Contractor/Site Office	PIU/ESMU
Environment, Health and Safety	 Injury and sicknesses workers and members of the public 	Contractor shall prepare the Environmental, Health and Safety plan and take approval from the client. Provision of a safety officer in the work team shall be made during the construction		Contractor/Site Office	PIU/ESMU

Management of	Potential fecal coliform contamination in drinking water Possible spills	 All employees shall be provided with the necessary training, and safety equipment as required for their responsibilities and duties. Basic facilities of drinking water, sanitation & clean resting place, canteen, and first aid shall be made available for the campsite. Provision of health insurance to employees. Security fences around the substation. Installation of warning signs (High Voltage, Fire Safety Signs, and Emergency Signs). Awareness of HIV/AIDS and other sexually transmitted disease. Awareness of providing basic sanitation facilities and waste management control to the labors. For coronavirus (COVID-19) pandemic situation, Contractors should arrange for quarantine and health services for infected workers. Chemical waste generated from the transformer 	Establishment of Labor Camp with basic facilities — In Project Cost EHS Awareness Trainings -1,50,000.00 (NRs.) COVID-19 measures 2,00,000.00 (NRs.)		
electric equipment, toxic materials of chemical wastes	resulting in contamination of soil, water, and air	shall be collected in leakage-proof, corrosion- free, specially designed containers, and sealed carefully	1,00,000.00 (NRs.)	Contractor/ Site Office	PIU/ESMU
Operation and Main					
Electric shock and fire hazard	Injury or death to the workers and public	 Use of insulation, guarding, grounding, electrical protective devices, and safe work practices. Boundary walls and / or security fences around substations to prevent unauthorized access. Only trained and authorized personnel shall be allowed for the electrical works. No electric wire is to be strung above the house. Installation of warning signs. 	Project Cost	NEA	NEA
Routine operations and	Potential disturbance to	 Maintain warning / advisory signs in the good and visible condition 	Project Cost	NEA	NEA

maintenance	other utility	Visual and technical inspection			
	functions and				
	vehicular traffic.				
Oil spillage	Contamination of land/nearby water bodies	Substation transformers should be stored within secure and impervious bundled areas with a storage capacity of at least 110% of the capacity of oil in transformers and associated reserve tanks.	Project Cost	NEA	NEA
Bird electrocution and collision	Electrocution can cause a risk to bird species that perch on power line infrastructures	Provision of bird guards above the poles and white spirals on the conductors to improve visibility	Project Cost	NEA	NEA

(The provision of an environment and social management cost should be included in the project cost making each items visible in BOQ of bidding document for the safeguard compliance by the construction contractor)

7.2 Proposed Monitoring Plan

The monitoring proposed in

Table 7-2 will be of value primarily for establishing baseline conditions in the Subproject area, and then for ambient quality monitoring. **Table 7-2:** Minimum Provisions for Environmental Monitoring

Parameters to be	Location	Measurements	Frequency	Responsibility
Monitored				
Construction Stage				
Clearing of construction site	Substation boundaries	Field inspection of Subproject Sites and ensuring that appropriate safety measures are implemented	Clearing and restoration: Weekly	Contractors to implement corporate EHS plan, drainage management and solid waste control in the substation area.
Use of forest area and loss of trees	33 kV DL alignment	 Field inspection of Subproject sites and ensure the compensatory plantation of 1:10 Related approval document for tree clearance 	Prior to the construction work	Contractor responsibility under the supervision of PIU/DFO
Air: SPM, Noise: dB	Substation boundaries and nearest receptor to substation		Air, and noise: quarterly during construction period	Contractors need to conduct air and noise monitoring during the construction period at the substation location

Construction wastes: on-site inspection	Visual inspection of active construction areas, including equipment staging areas and camps	 Spot check / visual inspection of solid waste (spoil, muck etc.) generation and disposal. Analysis of transformer oils to determine if polychlorinated biphenyls are present. 	Monthly spot checks for construction waste management	PIU safeguard officers to provide oversight via regular field inspections, and submit monitoring reports to the Bank
Occupational health and safety Child involvement in	Substation boundaries Substation work	No. of Toolbox talk and safety orientation to the workers No. of workplace accidents Use of PPE by workers	Daily Inspection during construction Monthly Inspection during the operation phase	Inspection of the construction site by the safety officer and PIU safeguard officer Site Office
construction work (needs to be prohibited)	Substation work	Spot inspection at construction sites	Monthly Inspection during construction	Site Office

7.3 Environmental and Social Mitigation and Monitoring Cost

Preliminary cost estimates for the ESMP implementation are shown in **Table 7-3**. These estimates cover the basic monitoring activities and the mitigation measures to be complied from the contractor's side. The ESMP cost estimated for the **Athbiskot–Vampuchaur Distribution Line** is NRs 13,00,000.00. The community support activities and the costs will be presented in the Community Development Plan (CDP). NEA has agreed to the effective implementation of the mitigation and monitoring cost items as mentioned in table below.

Table 7-3: Mitigation Measures and Monitoring Activities Cost Estimates

SN	Budget Items	Unit	Rate (NRs.)	Total Amount (NRs)
1	Air Quality Monitoring (at substation)	6 (Times)	25,000.00	150,000.00
2	Noise Level Monitoring (at substation)	6 (Times)	8,334.00	50,000.00
3	Sprinkling of water to be used for dust control necessary in the earthen roads of the settlements nearby the substation area and proper storage of the construction materials (sand, cements, aggregates and spoil)	200 (Times) During Excavation and Civil works	1000.00	2,00,000.00
4	Management of electric equipment's, toxic materials of chemical wastes	-	L.S.	1,00,000.00
5	Segregation and management of solid wastes	-	L.S.	1,00,000.00
6	COVID-19 measures (considering pandemic situation) standardize the quarantine facilities with health aid to the labors	-	L.S.	200,000.00
7	EHS Awareness raising training to the labors	10 (Events)	15,000.00	1,50,000.00
8	Meeting of Safeguard Desk and Grievance Redress Committee at Field Level	24 (Months)	14,583.00	3,50,000.00
	Total			13,00,000.00

8. CONCLUSION

Potential environmental impacts of this Subproject are not diverse and are all site-specific i.e., confined to the Core Project Area. Civil works will have minimal temporary impacts on air, noise and water quality. Erection of poles during construction shall follow the RoW of existing roads and the edge of farmlands. The PIU should give prior information before the installation of the poles. In the ESMP consultations conducted in the settlement area, people have agreed for the implementation of the Subproject and have suggested installing poles on the edge of farm-lands, without affecting any private structures along the distribution line. If there is a loss of crops, appropriate compensation shall be provided. The implementation of the proposed Subproject needs 3.81 ha of forest area with estimated loss of 856 trees. The total enumeration of the loss trees and mitigation cost will be incorporated in the Brief Environmental Study (BES) report. Mitigation measures are suggested in this ESMP to avoid any possible environmental and social impacts. The total ESMP cost for this Subproject is NRs. 13,00,000.00. NEA Project Implementation Unit has agreed to implement the estimated cost for the mitigation measures and monitoring activities.

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ANNEXES

Annex 1: SAMPLE NOTICE FOR PUBLIC CONSULTATION AND GRM FORMATION LETTER TO STAKEHOLDERS



नेपाल विद्युत प्राधिकरण

(नेपाल सरकारको स्वामित्व)

फ्याक्स: ०१-४१५३१४४ फोन नं : ०१-४१५३१४५ दरवारमार्ग, काठमाण्डौं।

वितरण तथा ग्राहक सेवा निर्देशनालय

नेपाल वितरण प्रणाली स्त्रप्रेजनी सूथा विस्तार आयोजना

नेपाल वितरण प्रणाली रतरोन्नित विश्वा विक्तार आयोजनाको वातावरणीय तथा सामाजिक अध्ययन प्रतिवेदन तयारी सम्बन्धि सूचना

	सूचना प्रकाश	न मिति:		
मा एसियन इन्फ्रास् वितरण तथा ग्राहर प्रस्तावक अघि सो आयोजन	स्ट्रकचर इन्भेस्टमेन्ट क सेवा निर्देशनालय रही ाले त्यस क्षेत्रको वात	लेका/गाउँपालिका/मा बैंकको ऋण सहयो १, वितरण प्रणाली व कार्यान्वयन 	हानगरपालिका/उपमह ोग भएको नेपाल विद् स्तरोन्नति तथा विस् गर्न आयोजना कार्यान् क पक्षहरुमा के-कस्त	युत प्राधिकरण, तार आयोजना लागिएको वायन हुनुभन्दा तो प्रभाव पार्दछ
भनि स्थानीय सरोकारवालाहरूक	सराकारवालाहरू स् ो निम्न स्थान तथा र	नग छलफल गन तमय उपस्थितिका ल	आयोजना क्षेत्रका नागि यो सूचना प्रकाशि	ात गरिएको छ ।
सार्वजनिक छलफ स्थान: मिति: समय:	<u>ल हुने स्थान, मिति</u>	<u>र समयः</u>		





नेपाल विद्युत प्राधिकरण

(नेपाल सरकारको स्वामित्व)

वितरण तथा ग्राहक सेवा निर्देशनालय

एयाक्सः ०१-४१५३१४४ फोन नं : ०१-४१५३१४५ दरवारमार्गं, काठमाण्डौं ।

नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना (ए.आई.आई.बि.)

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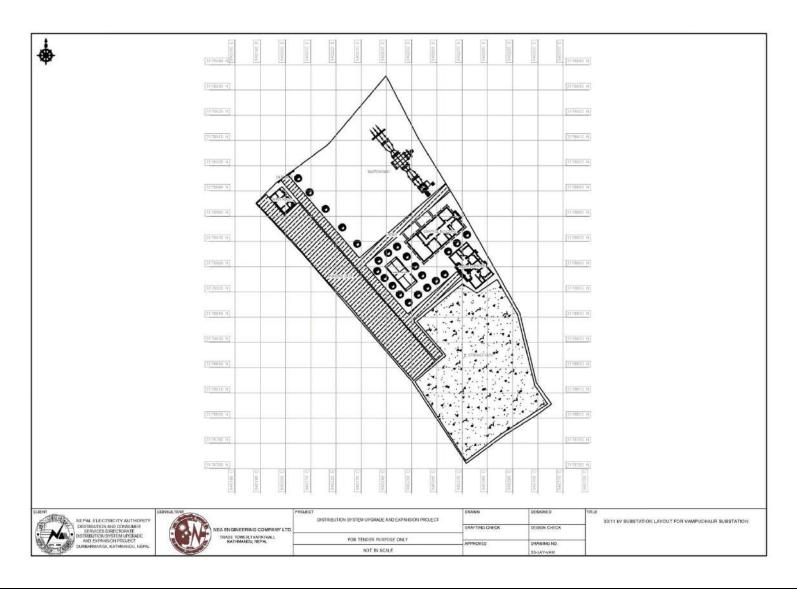
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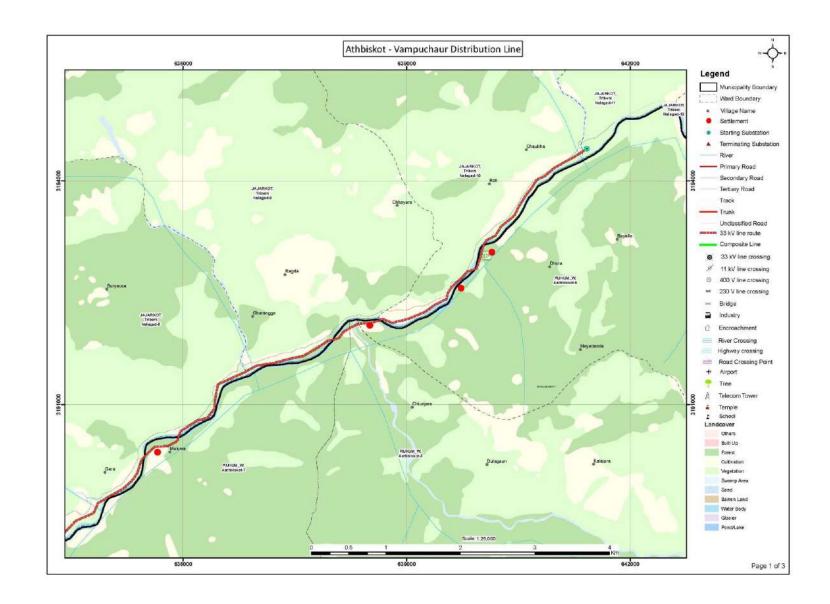
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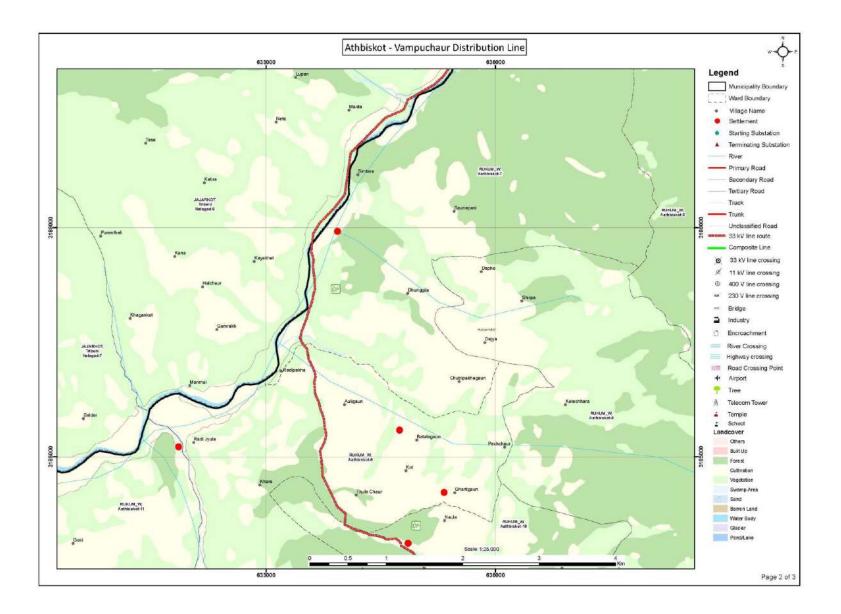
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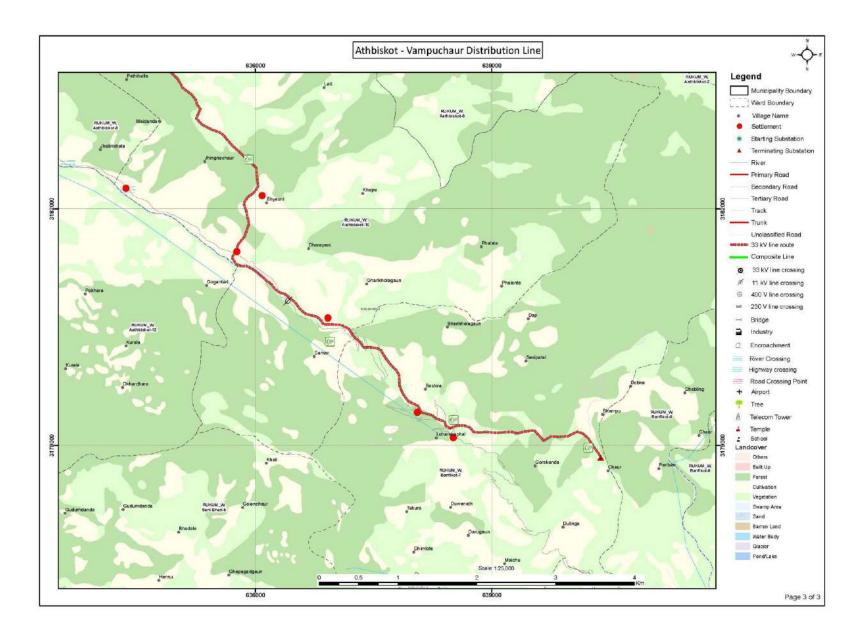
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Annex 2: LAYOUT MAPS OF SUBSTATION AND DISTRIBUTION LINE ALIGNMENT









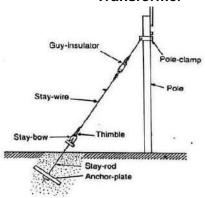
Annex 3: FACILITY AND COMPONENTS



Transformer



Switch Yard



Stay/Guy Sets



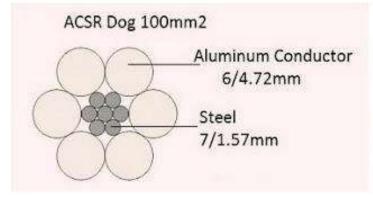
Steel Tubular Pole



Insulator

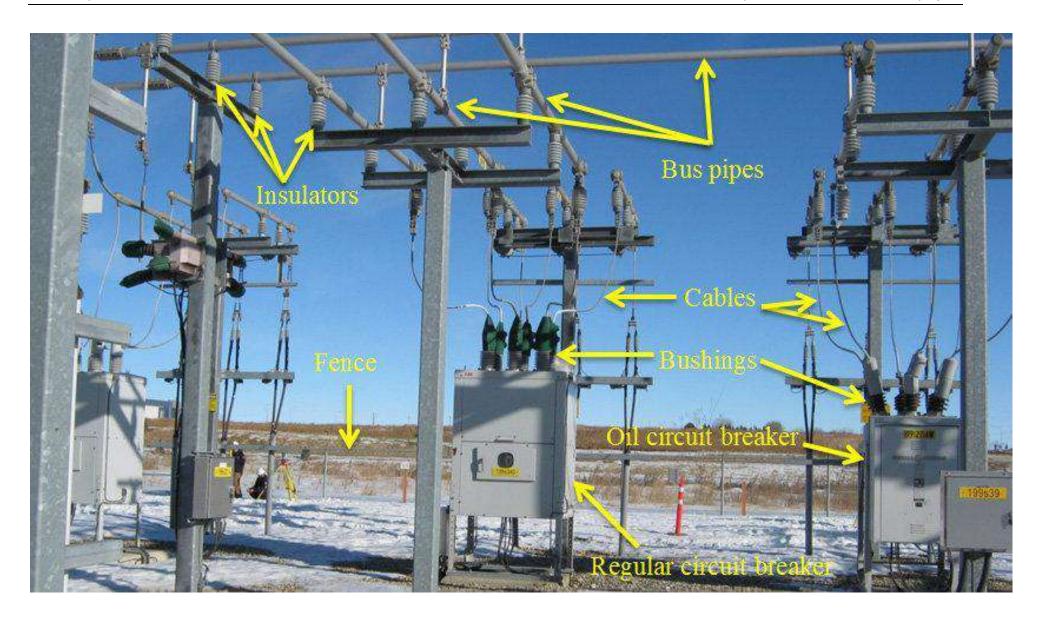


Civil-Structures Supporting Electrical Components



Conductor



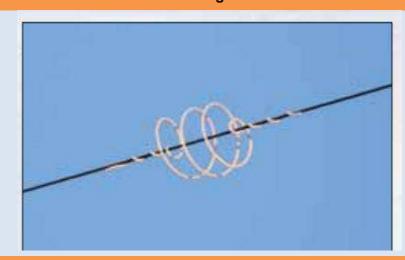


Possible components within 33 kV/11 kV Substation



Bird Diverting Reflector

Wishbone Prevents Bird Landing on Wire



White Spiral in Wire Improves Visibility of Wire



Construction of Nest at Poles also divert Brid not sitting at Wires

Annex 4: LEGISLATIVE PROVISIONS

S N	Legal Provisions	Description	Relevancy concerning Project
1.	Constitution of Nepal	 The Constitution of Nepal is the main legal document, which emphasizes the right to a clean environment of the people, natural resources protection, preservation, and its prudent use. Rights regarding the clean environment, under article 30: It includes making multi-purpose development of water resources, while according priority to domestic investment based on public participation to ensure a reliable supply of energy affordably, and easily, and make proper use of energy for the fulfillment of the basic needs of citizens, by generating, and developing renewable energy in article 51 (g). 	DSUEP helps to fulfill the rights of people to live in a clean environment along with fulfilling the basic needs by providing access to sufficient energy.
2.	Environment Protection Act 2076 (2019 AD)	• Section 3 of the Act requires the proponent to conduct environmental studies concerning the prescribed proposals of any developmental works. Subsection 2 of this act provides the framework for the environmental study report prepared according to sub-section (1) shall, in fulfillment of the process as prescribed, be submitted to the relevant bodies of the Government of Nepal for approval.	Environmental Studies, and approval of the report from the authorized body before construction of any project is mandatory to minimize the negative impacts in Nepal which is addressed in EPA, 2076.
3.	Environmental Protection Rule, 2077 (2020 AD) [First Amendment	 Under the Environmental Protection Rules (2020) first amendment (2021), rule (3) as mentioned in annex (1), Section (F) (Energy, Water Resources, and Irrigation Sector) sub-section (1), a proponent shall be required to carry out the Brief Environmental Studies for construction of transmission line project less than 66 kV in forest land for another purpose. 	This rule provides the overall guidance to what type of environmental studies is required according to the project by the Government of Nepal.
	on 2078 (2021)]	 Pertaining to Rule 3(1), Environment Protection Act (EPA), 2019 describes to complete Environmental Studies as per Schedule 1(Cha) Energy, water resources and irrigation sector (1) under Environment Protection Regulation 2020 (First Amendment in 2021/05/24 on Nepal 	The proposed Subproject will use the of Khaireni Churi Community Forest (CF), Kaina Patal CF, Rani Ban CF, Salleri CF, Bagi Mela CF, Ghari Vir CF, Tin Kholi CF, and Vampu Patal CF land for

		Gazette) state "use of forest area for the electricity distribution line project up to 66 KV"	the purpose of 33 kV distribution line extension and substation construction. For which, BES is mandatory.
4.	Nepal Environmental Policy, and Action Plan, 2050(1993)	 The aims of NEPAP are: To manage natural, and physical resources efficiently, and sustainably To balance the development efforts, and environmental conservation for sustainable fulfillment of basic needs To preserve endemic, and endangered species, and their habitats; the promotion of private, and public institutions for biological resources inventory, and conservation To safeguard national heritage To mitigate the adverse environmental impact of development projects, and human actions To integrate environment, and development through appropriate institutions, adequate legislation, and economic incentives, and sufficient public resources 	DSUEP should follow the aims of NEPAP to protect, and conserve the physical, biological, and social environment during the construction of a 33 kV distribution line along with a substation.
5.	Forest Act 2076 (2019)	 Pertaining to the chapter 12, Section 42(1), if there is no other alternative to the using of forest area for the operation of a national priority project, plan of which investment is approved by the Investment Board, project of national pride and it appears from the environment examination referred to in the prevailing law that the operation of such plan does not result in significant adverse effects on the environment, the Government of Nepal may give approval, as prescribed, to use any part of the national forest for the purpose of operating such plan, Similarly, In providing the forest area for the operation of a plan pursuant to sub-section (1), to the extent possible, a land that is adjoining to the national forest area near the project site and situated in the same geographical and ecological belt and has such landscape where forest can be developed shall be provided for the purpose of planting trees at least in the area equal to the forest area that has to be used. 	 About 3.81 ha of forest area occurs within RoW of the proposed 33 kV distribution line Estimated number of trees that need to be cleared from the Core Project Area of the proposed DL alignment are 856. Total estimation of tree and approval of tree clearance will be proceeded after the approval of BES report.

- Pertaining to Rule 87 (2) in case of the development project related to the use of forest land, the coordination has to be done with the concerned division forest office during the feasibility study and environmental study.
- Rule 88, Application need to be submitted in case of use of national forest land from the feasibility study and application need to submitted to the Ministry of Forests and Environment through the subjective ministry
- Rule 89, following the Rule 88, the Ministry of Forests and Environment direct Division Forest Office through its respective department for the detail field information and the that information should also be submitted to provincial ministry.
- Rule 90, following the Rule 89, Division Forest Office should submit the information with field monitoring (if necessary) to the Ministry of Forests and Environment. The ministry will ensure the use of forest land if the applicable information and letters are received, and give permission to the respective project by binding in the rules states in the Forest Regulations.

Rule 91, following the Rule 90, after the decision made by the government of Nepal for the permission to use the forest land, development project should made the availability of the applicable land for the forest development as per the Forest Act (2076), Section 42 (2).

- Rule 92, following the Rule 91, in case of failure in the availability of the applicable land, it has to go through the Land Acquisition Facilitation Committee in the district level
- Rule 93, following the Rule 92, in case failure of the land acquisition through the Committee respective department should give permission to the project for the Collection of amount in the government fund as per the land purchases for development project specified in Shedule-51.

Rule 93 (5), the amount should base on the cost of the trees in the ratio of 1:10 and Rule 93 (5), the amount must include biannual production or purchase of trees, trees transportation, afforestation of 1600 trees per hectare, fencing and boundary for the protection of trees and require number of people for look after.

- About 3.81 ha of forest area occurs within RoW of the proposed 33 kV distribution line
- Estimated number of trees that need to be cleared from the Core Project Area of the proposed DL alignment are 856.
- Total estimation of tree and approval of tree clearance will be proceeded after the approval of BES report.

Forest 6. Regulations, 2079 (2022)

7.	Electricity Act 1992	 No person shall be entitled to conduct survey, generation, transmission, or distribution of electricity without obtaining a license under this act. The Electricity Act of 1992 has the provision of land procurement for the development of Subprojects that involve electricity generation, transmission, or distribution. The Act states that the licensee may apply to GoN to purchase the land or house of any person if it is required for the generation, transmission, or distribution of electricity. Upon the receipt of such an application, GoN may make the land or house, so requisitioned, available to any corporate body under the prevailing laws. 	The main goal of this project is to distribute a sufficient amount of electricity by constructing a 33 kV line, and substation by surveying to minimize the impacts.
8.	Rural Energy Policy, 2006	The rationale of formulating, and implementing this policy is to create a conducive environment that will self-motivate, and mobilize local institutions, rural energy user groups, non-government organizations, cooperatives, and private sector organizations for the development, and expansion of rural energy resources. The government will facilitate, and promote to involve private development, and expansion of new technologies. It has also envisioned subsidy provision for the promotion of such renewable energy technologies.	This project helps to improve the distribution, and motivate use the of electricity in rural areas of western Nepal.
9.	Labor Act, 2074 (2017 AD)	This labor Act was made under the management of parliament under subclause 1 of clause 296 of the Constitution of Nepal. Sub-section 3 of Section 2 states that the employees should not be compelled to other work other than they are assigned for. In addition, Sub-section 5 of Section 2 states about the prohibition of child labor in any organization, and sub-section 6 of Section 2 states that there should not be any kind of discrimination among the employee's regard of religion, ethnicity, gender, origin, language, or intelligence or other kinds of characters.	The construction of a project is only possible when the rights of labor are secure. In this project, the Contractor should follow this act strictly.

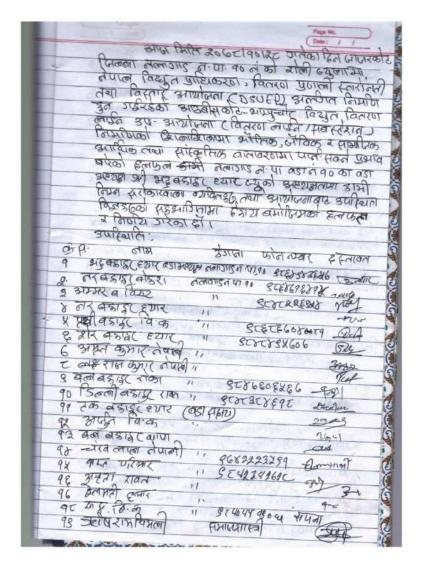
10.	Child Labor (Prohibition, and Regulation) Act, 2056 (2000 AD)	As per section 3 of this act, no child has not attained the age of 14 years shall be engaged in works as a laborer.	Child labor is strictly prohibited in this project, and Contractors should follow this act.
11.	Solid Waste Management Act, 2068 (2011 AD)	This act has been formulated to minimize solid waste products from the target area by setting rules, and regulations on solid waste management (SWM) in the country to develop a better environment for the systematic, and effective management of solid waste, and to involve all the concerned stakeholders in SWM practice. The main features of this act are the discussion of the 3R principle (Reduce, Reuse, and Recycle). 3R principle seems to be very beneficial as it not only increases the life of landfill site but also saves the money which could be used for other infrastructure development. Section 4 of the act assigns the local body to manage or use the solid waste discharged or dumped in the collection center, transfer station, or treatment plant or collected during cleaning.	These acts provide the overall framework to manage the solid waste generated from households to the project level. Also, the proponent should manage the waste generated during construction.
12.	Solid Waste Management Rules, 2070 (2013 AD)	The solid waste management rule was formulated as per the provision made in article 50 of the Solid Waste Management Act, 2068. This regulation has emphasized the segregation of waste at source, and mentioned that the responsibility of proper disposal, and management of source belongs to the producers themselves. Section 3 of the rule describes the segregation, and management of solid waste. It has been mentioned that it is essential to segregate degradable, and non-degradable solid waste at the source.	These rules provide the overall framework for how to reduce the volume of waste disposed of at the source during the construction of the substation.
13.	Fifteenth Plan	The vision of the 15th plan is to contribute to the prosperity of the nation through sustainable, and reliable development of hydropower by setting the goal which is to ensure energy security through intensifying hydropower generation. In addition, one of the strategies of the government of Nepal in the 15th plan is to make the distribution system effective, and reliable to increase	This 5-year interim plan sets the goal about the generation, and distribution of hydroelectricity in Nepal which is directly related to this project.

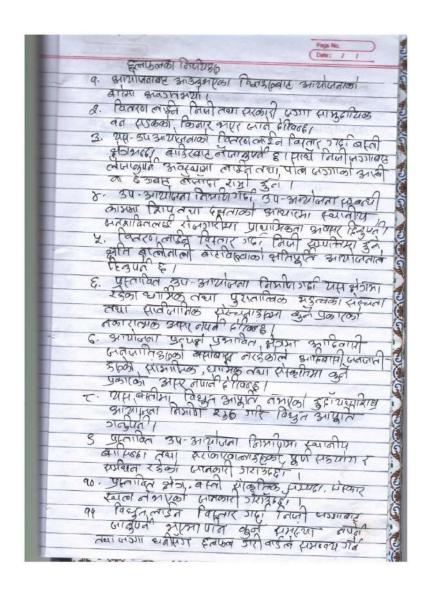
		energy efficiency, and increase power consumption by expanding access to electricity by formulating the required policies:	
14.	United Nations Framework Convention on Climate Change (UNFCCC), 1992	UNFCCC, Signatories: 165. Parties: 195. (1), Article (4), commitment (f) states climate change considerations into account, to the extent feasible, in their relevant social, economic, and environmental policies, and actions, and employ appropriate methods, for example, impact assessments, formulated, and determined nationally, to minimize adverse effects on the economy, on public health, and the quality of the environment, of Subprojects or measures undertaken by them to mitigate or adapt to climate change. After it entered into force on 21 March 1994, it mandates the individual state for prioritization of resource conservation with development.	The goal of this project is to replace the traditional form of energy with clean energy i.e. electricity which ultimately reduces air pollution, and smoke.
15.	ILO 169	The main objective of this convention is to secure the rights of indigenous, and tribal people along with the gender equality, and non-discrimination of workers during work. Article 1 on the First Part of this convention mainly focused on the following points: (a) the social, cultural, and economic conditions of tribal peoples in independent countries differentiate from other parts of the national community, and their status is managed fully or partially by their customs or traditions or by special laws or regulations; (b) peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries, and who, irrespective of their legal status, retain some or all of their own social, economic, cultural, and political institutions. • Self-identification as indigenous or tribal shall be regarded as a fundamental criterion	Nepal is the part of ILO convention that's why ILO 169 should strictly follow during construction, and implementation of any types

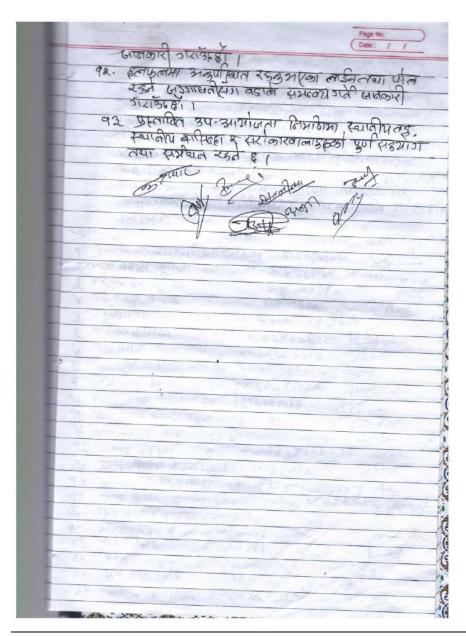
16.	Environment and Social Management Framework	for determining the groups to which the provisions of this Convention apply. The use of the term people in this Convention shall not be construed as having any implications as regards the rights which may attach to the term under international law. ESMF is to guide DSUEP sub-projects in the area of E&S management using appropriate instruments, methodologies, procedure and responsibilities during the project cycle. NEA and the project partners shall apply during design and development of the sub-projects in order to comply with the Government of Nepal E&S regulations and the Financiers' standards on E&S assessment and management, Involuntary Resettlement, Indigenous People, Gender, etc.).	Main guiding document for E&S study to identify issues and recommending appropriate practical augmentation/ mitigation measures
17.	Environmental and Social Policy (ESP)	 This policy speaks for the mandatory E&S requirements for each Project like, screening, DDR, E&S Assessment, ESMP, ESMF, Information Disclosure, Consultation and Monitoring and Evaluation. 	Mandatory requirement for ESMP study
18.	Environmental and Social Standards of AIIB ¹²	Three associated mandatory environmental and social standards (ESSs) set out more detailed environmental and social requirements relating to the ESMP	ESMP requirement

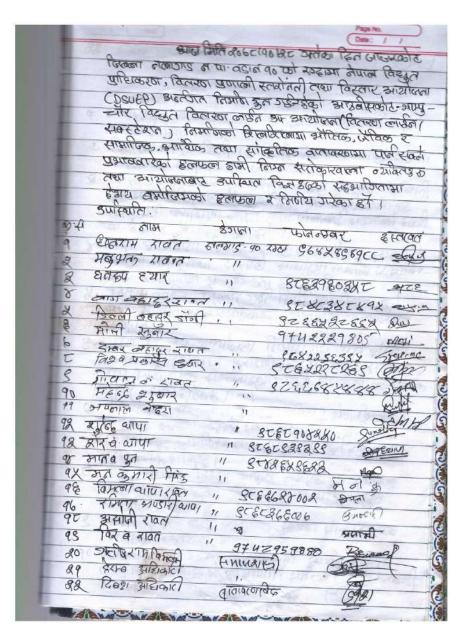
¹² https://www.aiib.org/en/policiesstrategies/download/environmentframework/20160226043633542.pdf

Annex 5: CONSULATATION MEETING MINUTES



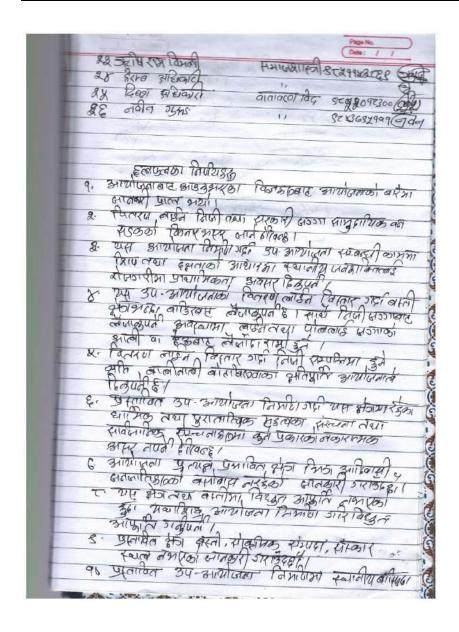


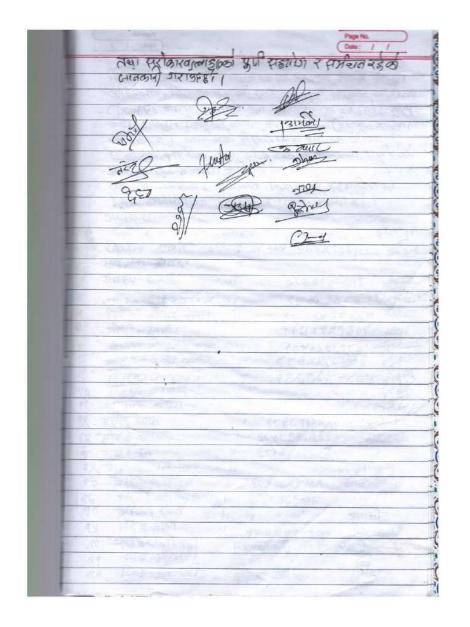




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Annex 6: DEED OF INQUIRY (MUCHULKAS)



_{आठविसकोट नगरपालिका} ९ नं वडा कार्यालय

<u>सम्पर्क नं.</u> ९८६१३९५८२१ ९८५७८६६३४८

राडीज्यूला क्रुम (पश्चिम) कर्णाली प्रदेश, नेपाल

पत्र संख्याः २०७८/७९ चलानी नः १०७८ मितिः २०७८/११/०२

श्री नेपाल विद्युत प्राधिकरण , वितरण तथा ग्राहक सेवा निर्देशनालय , नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना ,दरबारमार्ग काठमाडौँ नेपाल ।

विषयः जानकारी गराईएको सम्बन्धमा।

प्रस्तुत विषयमा एसियन इन्फ्रास्ट्रकचर बैँक लि.को आर्थिक सहयोग र त्यस कार्यालयको प्रस्तावनामा कार्यान्वयन हुन लागेको यस आठविसकोट न.पा वडा न. ९ हुदै वितरण हुने आठविसकोट भाम्पुचौर विद्युत वितरण लाईन प्रणाली कार्यान्वयन हुदा आयोजनाको वातावरणीय तथा सामाजिक प्रतिवेदन तयारीको छलफलमा यस वडा भित्र निर्माण हुने लाईन तथा पोल पर्ने जग्गा धनिहरु अनुपस्थित भएमा यस वडा कार्यालयले समन्वय गरिदिने व्यहोरा जानकारीको लागि अनुरोध छ।

तारक बहादुर शाही

"समृद्ध गाउँ शहरको रहरः स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmunward9@gmail.com



आठविसकोट नगरपालिका **९ नं वडा कार्यालय**

सम्पर्क नं. १८६१३९५८२१ १८५७८६६३४८

राडीज्यूला (पश्चिम) कर्णाली प्रदेश, नेपाल

पत्र संख्याः २०७८/७९ चलानी नः*9*०*७ १* मितिः २०७८/११/०२

श्री नेपाल विद्युत प्राधिकरण , वितरण तथा ग्राहक सेवा निर्देशनालय , नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना ,दरबारमार्ग काठमाडौँ नेपाल ।

विषयः जानकारी गराईएको सम्बन्धमा।

प्रस्तुत विषयमा एसियन इन्फ्रास्ट्रकचर बैंक लि.को आर्थिक सहयोग र त्यस कार्यालयको प्रस्तावनामा कार्यान्वयन हुन लागेको यस आठविसकोट न.पा वडा न. ९ हुदै वितरण हुने आठविसकोट भाम्पुचौर विद्युत वितरण लाईन प्रणाली कार्यान्वयन हुदा यस वडामा आदीबासी जनाजातीको बसोबास नभएकाले आदिबासी जनाजातीको परम्परा रहन सहन आदिमा कुनै पनि नकरात्मक असर नपर्ने व्यहोरा जानकारीको लागि अनुरोध छ।

तारक बहादुर शाही बडा अध्यक्ष

"समृद्ध गाउँ शहरको रहरः स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmunward9@gmail.com



आठविसकोह कारपालिका ९ नं वडा कार्यालय

सम्पर्क नं. { ९८६१३९५८२१ { ९८५७८६६३४८

राडीज्यूला (पश्चिम) कर्णाली प्रदेश, नेपाल

पत्र संख्याः २०७८/७९ चलानी नः ११७७८ मितिः २०७८/११/०२

श्री नेपाल विद्युत प्राधिकरण , वितरण तथा ग्राहक सेवा निर्देशनालय , नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना ,दरबारमार्ग काठमाडौँ नेपाल ।

विषयः गुनासो समाधान संयन्त्र गठन भएको जानकारी सम्बन्धमा।

प्रस्तुत विषयमा एसियन इन्फ्रास्ट्रकचर बैँक लि.को आर्थिक सहयोग र त्यस कार्यालयको प्रस्तावनामा कार्यान्वयन हुन लागेको यस आठविसकोट न.पा वडा न. ९ हुदै वितरण हुने आठविसकोट भाम्पुचौर विद्युत वितरण लाईन प्रणालीमा विविध गुनासो सम्बोधन गर्न गुनासो समाधान संयन्त्र गठन भएको जानकारी तँहा कार्यालयको मिति २०७८/१०/७ चलानी न. १३८ भएको पत्रबाट भएको व्यहोरा जानकारीको लागि अनुरोध छ।

तारक बहादुर शाही

तारक वड़ा दुअध्यक्ष वडा अध्यक्ष

"समृद्ध गाउँ शहरको रहर: स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmunward9@gmail.com



आठविसकोट नगरपालिका नगर कार्यपालिकाको कार्यालय

आठविसकोट, रुकुम (पश्चिम) कर्णाली प्रदेश, नेपाल

फोन नं. १७४८५८३१३८, ९८४८११२८१७ Website: www.aathbiskotmun.gov.r

मितिः २०७८/११/०२ गते

पत्र संख्याः २०७८/०७९ (योजना)

चलानी नम्बर : 9668

विषयः-जानकारी सम्बन्धमा।

श्री नेपाल विधुत प्राविकरण, वितरण तथा ग्राहक सेवा निर्देशनालय, दरवारमार्ग, काठमाडौं। (नेपाल वितरण प्रणाली स्तरोन्नती विस्तार आयोजना)

प्रस्तुत विषयमा तहाँ प्राधिकरणको च.न. १३८ मिति २०७८/१०/०७ गते गुनासो समाधान संयन्त्र गठन भएको सम्बन्धमा लेखिएको पत्र व्यहोरा अवगत भयो । सो सम्बन्धमा यस आठविसकोट नगरपालिका, रुकुम(पश्चिम) स्थित आठविसकोट- भाम्पुचौर विधुत वितरण लाईन आयोजना सम्बन्धी गुनासो समाधान संयन्त्र पूठन भएको पत्र मिति २०७८/११/०२ गते प्राप्त भएको व्यहोरा अनुरोध छ।

नि.प्रमुख प्रशासकीय अधिकृत

नि. प्रमुख प्रशासकीय अधिकृत

"समृद्ध गाउँ शहरको रहर: स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmun073@gmail.com info@aathbiskotmun.gov.np ito.aathbiskotmun@gmail.com





पत्र संख्याः 266 ८ । 068 बलानी नम्बरः ४१६

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बंफिकोट गाउँपालिका ७ **नं. वडा को यो लया**

कर्णाली प्रदेश मेंपील

पत्र संख्याः 206 (106) चलानी नम्बरः ४ 98

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विषयः आधीतमाले अमिहवापी जनतानितलाई अस्तर नागर्ने

अर्ग तेपाल विन्द्रत पाधिकरण वितरण तवा जाहक रोका निर्देशलाम्य नेपाला वितरण प्रणाली स्तरोक्ती तथा विस्तार आचीजता हतार मार्जी, काठमाली

पति विषयमा तहा नियान कार्यालाय र कार्यालाय उत्तर लागिरको आहमीको इने विलाका लाहीन कार्याका कार्याका अग्रात्मा अल्किम किमान इने विलाका लाहीन कार्याका अग्रात्मा आहमानी जतकारित्रका वसावादा लोहकात्म आहमा अग्रात्माकार कुने लाग्यात्मक असर नगर्ने भाषा, मेरक्रि आहमा लागिर अक्रेस ६।

> ता बडाडा (का) वडा अस्पन डा अस्पन



बाँफिकोट्गाइँपालिका ७ **नं. वडा कार्याल**य

पत्र संख्याः २०६८/०५९ चलानी नम्बरः ४९५

मिति 20GT 199(03

विषयः गुनासी समाधान स्यंन्त्र गठन भएकी पत्र प्राप्त

भी नैपाल विद्युत प्राचिक्ता वित्रां तिया ग्राहक सेवा निर्देशनालय कैपाल विवरण प्रणाली स्तरीन्नती तथा विस्तार आयाणना

पूर्त विषयमा तहाँ कार्यालयकी मिली 2062 (90106 ठाटी यहाँ. 93८ की प्राप्त पत्रप्रमुसाट आरुविसकोर मात्रप्रसीर विद्युत विवरण लाईन आयोजनाकी जुनासी समाधान संयन्त्र गठन मण्नी व्यक्तिरा प्राप्त भएकी जानकारी जारहिन्छ।

तर बहादुर रवना



नलगाड नगरपालिका **११ नं वडा कार्यालय**

चौखा, जाजरकोट कर्णाली प्रदेश

नत्र संख्या : २०७८।०७९

वलानी नं : 99 ह

मिति:

वषय: जुनासी समाधान र्ययान अपिन अपिन जिल्ला हिल्ला अनेपाल विद्युत प्रान्धित है। सम्बन्धिमा नेपाल वितारण प्रणाली स्तरोत्नली तथा। विस्तार भाषोजन। इस नारमार्जी स्तरोत्नली है

प्रस्तुत निषम प्रवृद्धमा तहा कार्याकपत्री प द्वापिष्ठ यन १३८ के प्राप्त प्रशासना कार्याकरोट आपपुर्यो विद्युत्रकाल लाइन भाषाज्ञाको स्वासी स्वासान संस्कृत जदन अपूर्वी जातवादी प्राप्त भाषी करहोरा जातवारी सेंग्रहा जदन अपूर्वी जातवादी

500019012t

Distribution System Upgrade and Expansion Project (DSUEP)



नलगाड नगरपालिका ११ नं वडा कार्यालय

चौखा, जाजरकोट कर्णाली प्रदेश

पत्र संख्या : २०७८।०७९

चलानी नं : 496

THA: JUN 90/20

विषयः सुन्वता रोष् उदि। जातवादी पढाइएको वारी

श्र नेपाल विद्युत प्रतिच्छुरण। नेपाल वितरण प्रमाली स्तरो नाती तथा विस्तार् श्रापीजना द्रश्यायमार् छादमाइण्डे ।

प्रस्तुत विसम यम्बन्द्रमा तहा कार्याक्रमे प्रविद्याणि यतं १२९ की प्राप्त प्रा अगुर्य कार्याक्रमें विस्तृत वितरण लाइन आपोजाना कार्याक्रमा हुन भन्दा अगाडी आपोजानो विद्या प्रमानिक कार्या हुन भन्दा अगाडी आपोजानो प्रकार प्रमानिक कार्या हुन भन्दा अगाडी आपोजानो प्रकार प्रमानिक कार्या हुन अगाडी प्रकार प्रकार प्रमान कार्या प्रमानिक भाग कार्या प्रमान कार्या कार्या कार्या कार्या कार्या कार्या कार्या कार्या कार्य कार्या का





नलगाड नगरपालिका ११ नं वडा कार्यालय

चौखा, जाजरकोट कर्णाल कर्णाली प्रदेश

पत्र संख्या : २०७८।०७९

चलानी नं : 29 र

मिति :

विषय: आयोजनाले अविवादी अन्नानीलाह अत्य नार्जी अनेपाल विद्युत प्राव्याकरण।
अनेपाल विद्युत प्राव्याकरण।
नेपाल वित्या प्राप्ति स्तरोहत्वी व्या विस्ता आयोजना
व्यवस्मार्ज कार मार्वेड
प्रदेश विद्युप सम्बन्धमा य ई. करा व्यड स्त १३६ की प्राप्त

पन अल्या एरियम इन्प्रास्त्र च इन्वे हिमार केंब्र (ए आइ आह की की किए वर मोजामा नेपाल किल्न प्राचिक्त कित्र का कित्र का ग्राह्य हैवा निर्देशनाला कित्र का प्रवास किल्न निर्देशनाला कित्र का प्रवास का प्रवास प्रदेशनाला कित्र का प्रवास का प्रवास प्रदेश प्रवास का प्रवास क



पत्र संख्या :-०७८।०७९ चलानी 953

कर्णाली प्रदेश नेपाल मिति:- २०७८ 19012र

अती : तेपाल विद्युत प्राचित्रण तेपाल वितर्ग्यणाली स्तरो त्वर्ती तथा विस्ता(आप्रोज्ञत) दर्वात्मार्ग

विषय गुतासी स्थान्द्राल सम्बन्ध गढत अएको नावकारी पात मळी सम्बन्धम

प्रस्तुत विषय सम्बन्धमा त्यहाँ कार्यात्यकी व १ ०६८/०६९ सन ते 98 ट की पादन पत्र अगुरां आहिनिकोर आम्पुचोर विद्युत नित्र लाहन आको जाताको जुना से। स्मान्यात खप्रका जाता अर्को जातकारी प्रात अरको जाताकारी गराइक ।

वहा अध्यक्ष



कर्णाली प्रदेश नेपाल मिति :- २०७८/१६/2८

स्त्री! तेणल विद्युत प्राच्यिक्त्ण तेवाल वितर्ण स्त्रोटती तथा विस्तार कायोजना इरवार्त्मा कार्रमांडे)

विषय ! द्वायोजना के ब्हादिवादी जन जा तीलाई अवर्ताते

प्रतित विद्यमा ए. सं. १६८ १०६८ सा १९६७) बादन एन प्रमुखार स्विमन - इन्छा ५००० (इन्बेट्टेंग्नल वेड (ए प्राई की) हो नमण स्ट्र्योग्नमा तेपन विद्युत प्राचित ए। वित्र (वित्र ए प्राई की) हो नमण स्ट्र्योग्नमा तेपन विद्युत प्राचित ए। वित्र (वित्र प्राचित प्रति । वित्र (वित्र प्राचित प्रति । वित्र वित्र प्राचित वित्र वित्र







पत्र संख्या :-०७८१०७९ चलानी १९४

कर्णाली प्रदेश नेपाल मिति :- २०७८ /१६/ १८८

श्ती विषात चित्रत प्राच्चित्रश्चेत्रका वित्रश् पुणाली स्तरे। तती तथा विस्ता स्तरे। तती

विषयः सूचता हां स गरी जातवारी परादर्श मारेन

प्रस्तुत निषप यावव्यामा त्यहाँ कार्यात्मण्डी प्रमाणवार प्रविश्व प्राविश्व प्रदेशकी
प्राण प्रमा क्ष्माह प्राणिवार्की र भागपूर्वो (विष्णुत विताल) त्याद मार्या मार्गा मार्गा कार्या व्यव कृत काव्हा क्ष्माही कार्या कार्या क्ष्माकी वातावला तथा क्ष्मानिक क्षेत्रमा के कल्ता पृथ्माव प्रदेश अति नातावला तथा समानिक क्ष्माकिक क्षेत्रमा के कल्ता पृथ्माव प्रदेश अति नातावला तथा समानिक क्ष्माकिक क्षेत्रमा के कल्ता प्रतिवेद्द्रत तथादीका नामी क्रवातिय स्रोकार नानाहहू क्ष्मा हन्या मार्गे राज्यक्षीव यसे निवेदन खाद्य खेळान खुन्यता मिती 2067 विशेश 6 मार्गे मार्ग वदा कार्यात्मण खुन्यता चार्ये खुन्यता कार्ये गरिती

> भद्र वहातुर ध्यार वडा अध्यक्ष



आठविसकोट नगरपालिका ७ **नं वडा कार्यालय**

स्वारास्वारा, रुकुम (पश्चिम)

पत्र संख्या *3*86८ 1986.९ चलानी नं. **९**९८

B.1.99.1.306E.199.1.8

विषयं :- समल्वरा जानिहिन सम्बद्धामा

क्षेपाल विद्वल प्राधिकर्ठा क्षेपाल वित्तव प्रणाली स्टारीव्यती तथा विद्तार आयोजना हरवएमार्ज, काउमाडी

प्रात्न विषयमा स्मियान इत्यान्त क्रिकामान क्रिकान क्र



आउविसकोट नगरपालिका ७ **नं वडा कार्याल**य

स्वासंस्थारा, रूकुम (पश्चिम) २०७३

पत्र संख्याः २८७८ १८६९ चलानी नं. ६९६

मिति: 206T19918

विवयः - अग्योत्तालाले अगिद्वासी भगानातिलाई असर् गति काले

क्षेपाल विस्तुत प्राम्धिक्यण लेपाल वित्यका प्रणाली स्तारोहलली तथा विस्तार आसीपला हरवारमाजी कारमार्थ

उपरोवत राज्यहराजा तेणल विश्व प्राधिकरून, वितरण तथ जाइक सेवा तिर्देशलालाश, वितरण प्रणाली मध्य बत्तोहतती तथा वित्ता आशीपाशाङ्कारा कार्यह्वयम् जात लाजिएको आशिव्यक्तिर-अपपुन्तेर विश् वितरण लाखी आयोपाला उन्हर्तिल सम् आसिव्यक्तिर भे पा ६ में वडा हुई वितरण लाखी जाजी जाती हात्वीहाला आहिवासी जातातिहरूको द्वामीया तरहेको द्यहोरा अजकारीको काणि। अजुनीस है।





आठविसकोट नगरपालिका ७ **नं वडा कार्यालय**

स्वास्थितारा, रुकुम (पश्चिम)

पत्र संख्या ३८७८/३८६९

चलानी नं. ६९८

開宿:. 306で1991名

विषय :- गुनामी ममाशात सेयहन जारत भएका जातामी सम्बद्ध

भा तेपाल विद्युत प्राध्यिक्यन तेपाल वितरण प्रणाली स्तरील्मती तथा विस्तार आयोजना हरवार्यका, काठमाडी

पतित विषयमा तंडा दियत कायनियको मितिअ०६०१००। न्यं विश्वत कियामा उतार अग्विमकोर-अम्पूर्णे विश्वत वितरण लाह आयोपताको जुलासी प्रमाधान स्वयं जाउत अश्वको व्यडीर। प्रात्त भरको ध्याको ध्याको जाराई हरू।





आठविसकोट नगरपालिका १० नं वडाह्यकार्यालय

सम्पर्क नं. ९८५१२१६२३१ ९८५११७१७३८

भयाउने, कुम् (पश्चिम कर्णाली प्रदेश, नेपाल

<u>Website:</u> www.aathbiskotmun.gov.np

पत्र संख्याः २०७८।०७९ चलानी नम्बर ९९७ मिति: २०७८।११।०३

विषयः आयोजनाले आदीबासी जनजातीलाइ असर नगर्ने सम्बन्धमा।

श्री नेपाल विद्युत प्राधिकरण, वितरण तथा ग्राहक सेवा निर्देशनालय नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना दरवार मार्ग काठमाण्डौ

प्रस्तुत विषयमा तहाँ कार्यालयबाट कार्यान्वयन गर्न लागिएको आठबिसकोट भाम्पुचौर विद्युत वितरण लाईन आयोजना अन्तर्गत निर्माण हुने वितरण लाईन जाने यस वडाका बस्तीहरुमा आदीबासी जनजातीहरुको बसोबास नरहेकाले आदीबासी जनजातीहरुको परम्परागत रहनसहन, धर्म, भाषा, सस्कृती आदीमा आयोजनाबाट कुनै नकरात्मक असर नगर्ने ब्यहाँरा जनकारीको लागि अनुरोध छ ।

> ग्रम बहादुर महिल प्रामासन महायक

"समृद्ध गाउँ शहरको रहर: स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmun073@gmail.com info@aathbiskotmun.gov.np ito.aathbiskotmun@gmail.com



आठविसकोट नगरपालिका

सम्पर्क नं. ९८५१२१६२३१ ९८५११७१७३८

भयाउने क्रम्म (पश्चिम) कर्णाली प्रदेश, नेपाल

Website: www.aathbiskotmun.gov.np

पत्र संख्याः २०७८।०७९ चलानी नम्बर ९९८ मिति: २०७८।११।०३

विषयः गुनासो समाधान संयन्त्र गठन भएको पत्र प्राप्त सम्बन्धमा।

श्री नेपाल विद्युत प्राधिकरण, वितरण तथा ग्राहक सेवा निर्देशनालय नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना दरवार मार्ग काठमाण्डौ

प्रस्तुत विषयमा तहाँ कार्यालयको मिति २०७८।१०।०७ गते च न १३८ को प्राप्त पत्रअनुसार आठबिसकोट भाम्पुचौर बिद्युत वितरण लाईन आयोजनाको गुनासो समाधान संयन्त्र गठन भएको ब्यहोरा प्राप्त भएको जानकारी गराईन्छ।

> रामा बहादुर्द्धम्मल प्रशासमा सहस्रकान

"समृद्ध गाउँ शहरको रहर: स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmun073@gmail.com info@aathbiskotmun.gov.np ito.aathbiskotmun@gmail.com



आठविसकोट नगरपालिका ______

सम्पक न. १८५१२१६२३१ १८५११७१७३८

भयाउने, रुकुम (षश्चिम कर्णाली प्रदेश, नेपाल

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पत्र संख्याः २०७८।०७९ चलानी नम्बर ९९९

मितिः २०७८।११।०३

विषयः समन्वय गरिने सम्बन्धमा।

श्री नेपाल विद्युत प्राधिकरण, वितरण तथा ग्राहक सेवा निर्देशनालय नेपाल वितरण प्रणाली स्तरोन्नती तथा विस्तार आयोजना दरवार मार्ग काठमाण्डौ

प्रस्तुत विषयमा आठबिसकोट भाम्पुचौर विद्युत वितरण लाईन आयोजनाको वातावरणीय तथा सामाजिक ब्यबस्थापन योजना प्रतिवेदन तयारीको क्रममा यस वडाका बस्तीहरुमा वितरण लाईन जाने निजी जिमनका जग्गाधनी हरुसंग तहाँ आयोजना बाट गरिएको छलफलमा अनुपस्थित रहेका जग्गाधनी हरुसंग यस वडा कार्यालयले समन्वय गर्ने ब्यहोरा जानकारी गराईन्छ।

प्रशासन सहायक

"समृद्ध गाउँ शहरको रहर: स्वस्थ, सफा, सुशासनयुक्त, समन्यायीक र समाजवाद उन्मूख आठविसकोट नगर" E-mail: aathbiskotmun073@gmail.com info@aathbiskotmun.gov.np ito.aathbiskotmun@gmail.com

	वडामा ने <mark>पाल विद्युत प्राधि</mark> निग" को नातावरणीय तथा स			
lanagement Plan) प्र आञ्चलसकार	गतिबेदन तयारी सम्बन्धि स	पार्वजनिक सूचना यस का वार्ड नं <u></u>	। <u>रुकुत्र पक्</u> , रेपायकार ।	च्या जिल्ला मा
	तः	गसिल		
इ.स. नाम	ठेगाना	पेशा	सम्पर्क नम्बर	हस्ताक्षर
	बोहरा अग है। र वाहरा आ के			
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तथा विस्तार आयो	.वडामा नेपाल विद्युत प्रा जना"को बाताबरणीय तथा प्रतिबेदन तयारी सम्बन्धि गाउँ/नृगर पारि	सामाजिक व्यवस्थापन	योजना (Environme	ent and Social
आज २०७८ <u>। १०। २१</u> गरिदियौं।	गते हामी तपसिलका व	यक्तिहरूको रोहवरमा टाँ	स गरिएको प्रमाणित	गर्दै यो मुचुल्का
क्र.स. नाम	ठेगाना	तपसिल पेशा	सम्पर्क नम्बर	हस्ताक्षर

क्र.स. नाम	ठेगाना	पेशा	सम्पर्क नम्बर हस्ताक्षर
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Annex 7: SAFETY RELATED SIGNS AND WASTE MANAGEMENT PRACTICES

SIGNAL NOTICE









DANGER SIGNS









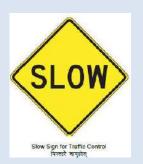
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INSTRUCTION SIGNS









SAFETY AND SAFETY INSTRUCTION SIGNS







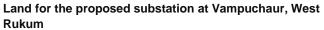


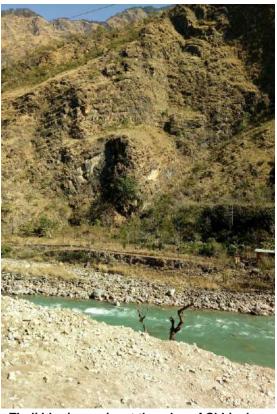




Annex 8: PHOTOGRAPHS







Thuli bheri crossingat the edge of Chhinchu
- Jajarkot – Dunai Road



Public consultation at Chaukha, Nalagad Municipality, Ward No. 11



Tashu khola crossing of the proposed distribution line



Crossing in Thuli Bheri River



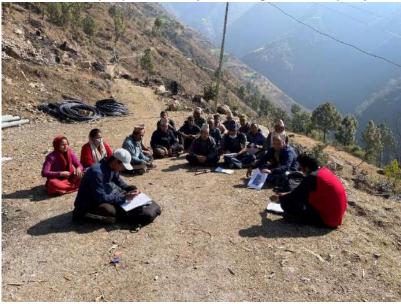
Line allignment from kharkhara towards Aulligaun



Bheri crossing near Kayakhet, Nalagaad Municipality Ward No. 8



Consultation with local people at Roli Jyula, Nalagaad Municipality, Ward No. 10



Public consultation at Bhayaune, Aathbiskot, Ward No. 10

Environmental and Social Screening

Annex 9: ENVIRONMENTAL AND SOCIAL SCREENING AND RAPID ASSESSMENT GUIDANCE FOR DISTRIBUTION LINE

9.1 Screening Guidance – to be filled up per subproject (11kV line)

Province:
District/Municipality:
Subproject Name:
Subproject Location: name of locations of distribution line (start from/ward/municipalityend to..... (ward/municipality),
Total length of distribution line:.....km/m

Project Requirement

Environmental and Social Screening Criteria	Project Requirement				
Environmental Impact Assessment Requirement					
EIA/IEE.					
As per national requirement (as per Environn	nental Protection Act 2019) does the				
subproject require assessment of BES/IEE o					
1.	If "Yes", the subproject needs to prepare				
	ESMP as per AIIB requirement.				
Natural Habitat					
Defined as the type of natural environment in					
lives. It is characterized by both physical and					
has not essentially changed the main ecologi					
4. Is the subproject located in a legally	If "Yes", please indicate what type of				
protected area based on Forestry Map?	permission it will requires				
5. Does distribution line route/poles close to					
any touristic view points, wetlands, and	If "Yes" please indicate what impact it will				
sites of cultural / religious / archeological /	entail.				
historic significance?					
6. Will the subproject significantly make	If "Yes", please indicate what impact it will				
impact of degradation or change of the	entails including cutting down trees etc.				
natural known habitat/migration movement					
route of protected rare and endangered					
species and/or forest in the protected area,					
proposed protected area or area					
considered with special ecology? 7. Does the distribution line/ route and	If "Yes" please indicate what impact it will				
locations of poles are falling in any	entail.				
landslide & erosion prone/ risk spot where	Gillan.				
geological avoidance is not feasible					
Indigenous Peoples (IPs)					
Identification of the evictoria IDe is simpled to	average to a that IDs would be treated as well				

Identification of the existence IPs is aimed to guarantee that IPs would be treated as well as other community members and given opportunity to participate and get access to the benefit of the project with ways that would not threat their exclusive culture and welfare. The project has to give correct and detail information of the objective and plan (design, schedule etc) of the subproject with consultation with the IPs before any construction activity in the area started.

The term IPs is used generally for an ethnic individual or group that: (i) are considered by

national or local laws or policies as well as anthropological researches/studies as belonging to ethnic minorities or Indigenous Peoples defined by Nepal Federation of Indigenous Nationalities(NEFIN); (ii) identify as being part of a distinct social and cultural group; (iii) self-identify as being part of a distinct social and cultural group; (iv) maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories; (iv) maintain cultural, economic, social, and political institutions distinct from the dominant society and culture; (v) speak a distinct language or dialect; (vi) have been historically, socially, and economically marginalized, disempowered, excluded, and/or discriminated against; (vii) represented as "Indigenous Peoples" or as "ethnic minorities" in any formal decision-making bodies at the national or local levels.

- 7. Is the subproject area affected community:
- (i) Are considered by national or local laws or policies as well as anthropological researches/studies as belonging to ethnic minorities or Indigenous Peoples defined by Nepal Federation of Indigenous Nationalities(NEFIN)?
- (ii) Identify as being part of a distinct social and cultural group?
- (iii) Self-identify as being part of a distinct social and cultural group?
- (iv) Maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories
- (v) Maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?
- (vi) Speak a distinct language or dialect?
- (vii) Have been historically, socially, and economically marginalized, disempowered, excluded, and/or discriminated against?
- (viii) Represented as "Indigenous Peoples" or as "ethnic minorities" in any formal decision-making bodies at the national or local levels?
- 8. Is there any adverse impact on any groups identified (by answering "Yes") on the point 5?

If "Yes" in any of the question no 7, consultation should be conducted as described above. This should be documented as followed: (i) proof of dissemination of the notice for consultation; (ii) notes on when is the consultation being held, who attend the consultation, what is the result, and documentation of every consultation, with list of attendance segregated by gender. The form of attendance list and notes of meeting is attached in Appendix 11

If "Yes", the subproject is not qualified to be included. Realign.

Cultural Resources

Cultural resources include tangible culture (such as buildings, monuments, landscapes, books, works of art, and artifacts), intangible culture (such as folklore, traditions, language, and knowledge), and natural heritage (including culturally significant landscapes, and biodiversity)

9. Is the subproject temporary or permanently causing relocation or any other negative impacts to cultural heritage that has important significance for local, regional or national based on provincial or national list, proposed provincial or national list, and/or just has been identified when the

If "Yes", the subproject is not qualified to be included

public consultation with project affected people was held?	
10. Is there any cultural heritage especially with important value for local community (eg. ancestral tomb) being negatively affected by the subproject?	If "Yes", the subproject is not qualified to be included
Land Use The development of or erection of distribution requirement would be optimized by using governorment for Right of Way, private land might be affect available, and/or necessary to connect to private of their land and people whose non-land secured using written documentary evidences. During the construction phase, there would be activities. The contractor on behalf of NEA stroadside, and will rent private land with budge public land is not available.	vernment owned land. ted if there is no existing Right of Way vate customers. Consent of landowners for assets impacted by the project would be s as in Appendix 11. e land to be used temporary for construction hould maximise the usage of public land like
11. Is there any land owned by individual or organisation to be affected because of the subproject?	If "Yes", the consent form has to be filled and collected. Keep all written letter request and filled consent documentation in hard copies
12. Is there any subproject activity that would restrict or close access to the community usual activities, facilities and services, productive assets and natural resources permanently or temporarily?	If "Yes", explain briefly why there would be restriction and/or closure and what would be the arrangement with the landowners and land users.
13. Is there any crops and/or trees (fruit, timber or herb) or fixed assets, loss of business or enterprises owned by individual or organisation to be affected because of the subproject?	Keep all written filled consent documentation in hard copies If "Yes", explain briefly what would be the impacts of the trees and crops, loss of business or enterprises and the arrangement with the landowners, business owners and land users. Keep all written filled consent documentation in hard copies include
14. Is there any adverse impact on social and economic activities arising from change in land use 15. Is there restrictions on land and resources owned communally or by the Government	reference/basis for compensation. If "Yes", explain briefly what would be the adverse impacts on social and economic activities arising from change in land use If "Yes", explain briefly what would be the impacts of the restrictions on land and resources owned communally or by the
16. Is there any private land to be used temporary during the construction phase for any construction activities?	Government If "Yes", explain briefly: - location(s) of private land to be used - evidence(s) that the land would be rented under contractor's contract
Safety Distance As per Electricity Regulation 2050 (1993)	
17Schedule 12 (Distance which ought to be from wire to the ground) 18. Schedule 13 (Minimum distance which	If "Yes", for any of the question, the subproject has to redirect the distribution lines plan to follow the safety distance Note:
10. Concadio 10 (Minimum distance Willon	11010.

1 9	Keep all plan documented in print-out, any
tree)	change has to be noted in the resource
a.	documents

9.2 Mitigation measures if the impact entails:

	Particulars	Mitigation	Responsibility	Remarks
		measures		
E1.	If route passes through forest area and tree cutting is required.			
E2.	If the distribution line/ route and locations of poles are falling in any landslide & erosion prone/ risk spot where geological avoidance is not feasible.			
E3.	To maintain minimum clearance as per government/NEA standard.			
E4.	If existing transformers are replaced with new one. How to manage to those replaced one			
E5.	Occupational health and safety measures of the works during the erection/installation of poles/cables			
E6.	Issues related to influx of labor/labor camp and sanitation			
E7.	Other if any	41		

Note: Kindly response mitigation measures with example if any alternative option has been selected/proposed during the survey and design of route. Mitigations measures stated shall be implemented during construction and operation phase.

Each package of the proposal (distribution line) will be subject to environmental screening and environmental compliance monitoring.

9.3 Supporting Form

1	Subproject	
2	Type of Activity (choose in accordance with the activity)	□ Extension of 11 kV distribution lines □ Expansion of distribution lines on existing right of way□ □:
3	Project Description (describe briefly about the project activities from preparation to operation)	
4	Project Location (describe the location of the project in detail, name of sub-village, village district, regency/city and province)	
	Alternatives Considered and Hierarchy of Mitigation Measures applied (for private land and/or land belonging to IPs)	
5	Work Capacity (describe the capacity of the work)	
6	Protected Area (checking whether the project location is in protected location below)	
	a. Protected Area as defined By the Department of National Parks and Wildlife and conservation and Forest Act 2076	□ Protected forest/Types of Forest □ Wetland □ □ □ □ □ □ □ □ □ □ National Park and Wildlife
	c. List of protected	1.
	species/animals based on the International Union for Conservation of Nature (IUCN) List	
7	Land Use – provide explanation for items 12-16 if applicable	
8	IPs Area (checking whether the project location is in IP location or there are presence of IP groups or ethnic minorities in the community)	

^{*} might cross (X) more than one options

Form on Consent of Private Land Owner(s)

Statement Letter

The p	erson signing belo	,	
Name	:		
	:		
Addre	· ·		
, ladi c			
Phone	e Number :		
	ation with the reque ing details:	t for electricity distribution upgrade and e	expansion of NEA with the
Powe	r :		
Locat	ion :		
	. , , , , ,		
Geo-t	agging (coordinate	: 	
	•••		
from affect partie neede	all parties that when the develops on the list belowed (e.g. trimming of	we permission for the electricity installated be land and non-land assets (like planent for installing the poles, transformed agree for the usage of the land and branches, cutting of trees).	ants and crops) could be er and right of way. The
List of	Name		
No	Name	Address	Signature
1			
2			

....,202...

Witnesses	Applicant
Ward Chair or Ward Member (other	
authority)	(Legal stamp)
	(Name and signature)
(Name and signature)	

Attachment:

Map of Distribution Network Plan Drawing

For any complaints or request for information, NEA can be contacted via 123.

Notes and List of Attendance of Community Consultations

Notes of	Community	Consultations
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Date, time :
Name of the Village /Municipality and Ward:
:
Name of the Province:
:

Note of the Community Consultation:

- 1.
- 2.
- 3.

Name of the notes taker:	:		Signature:
Agreed by Position	:	1.	Signature:
Position	:	2.	Signature:

List of Attendance of Community Consultations

Date, time	:
:	
Name of the Villa	ge/Municipality and Ward:
:	
Name of the Prov	rince :

No	Name	Gender		Address or Mobile	Signature
		Male (M)	Female (F)	Phone	
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2					
3					
4					
5					
6					
7					
8					
9					
10					

Google map of 11kV distribution line

Consent letter of Community Forest User Groups (If route alignment passes through forest)

E & S Screening completed by:
Name:
Designation:
Date:
E & S Screening verified/reviewed by:
Name:
Designation:
Date: