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| <b>Project</b><br>Electricity Supply Reliability Improvement Project (ESRIP)                                         |                                                                                                                  |                 |                |                                 |               |
| <b>Sub Project:</b><br>Subproject (Package-2/Lot-1): The reinforcement of the distribution network in Jhapa district |                                                                                                                  |                 |                |                                 |               |
| <b>Client</b>                                                                                                        | <br>Nepal Electricity Authority |                 |                |                                 |               |
| <b>Document Title:</b><br>Environment & Social Code of Practice (ESCOP).                                             |                                                                                                                  |                 |                | <b>Discipline:</b><br>E&S       |               |
|                                                                                                                      |                                                                                                                  |                 |                | <b>Purpose:</b><br>FOR APPROVAL |               |
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## **ABBREVIATIONS**

|                |                                                           |
|----------------|-----------------------------------------------------------|
| <b>AAAC</b>    | : All Aluminium Alloy Conductor.                          |
| <b>ABC</b>     | : Aerial Bundled Cable.                                   |
| <b>DCS</b>     | : Distribution and Consumer Services                      |
| <b>DCSD</b>    | : Distribution and Consumer Services Directorate.         |
| <b>DTR</b>     | : Distribution Transformer.                               |
| <b>ESCOP</b>   | : Environment and Social Code of Practice.                |
| <b>ESRIP</b>   | : Electricity Supply and Reliability Improvement Project. |
| <b>E-WASTE</b> | : Electronic Waste.                                       |
| <b>GoN</b>     | : Government of Nepal.                                    |
| <b>GRM</b>     | : Grievance Redress Mechanism.                            |
| <b>HT</b>      | : High Tension.                                           |
| <b>IDA</b>     | : International Development Association.                  |
| <b>IUSGS</b>   | : International Union of Geological Sciences.             |
| <b>KM</b>      | : Kilometre.                                              |
| <b>kV</b>      | : Kilovolt.                                               |
| <b>LT</b>      | : Low Tension.                                            |
| <b>MASL</b>    | : Meters above Sea Level.                                 |
| <b>MHT</b>     | : Main Himalayan Thrust.                                  |
| <b>NEA</b>     | : Nepal Electricity Authority.                            |
| <b>NRs</b>     | : Nepalese Rupee.                                         |
| <b>OHS</b>     | : Occupational Health & Safety.                           |
| <b>OPD</b>     | : Outpatient Department.                                  |
| <b>PIU</b>     | : Project Implementation Unit.                            |
| <b>PPE</b>     | : Personal Protective Equipment.                          |
| <b>PSC</b>     | : Prestressed Concrete.                                   |
| <b>ROW</b>     | : Right of Way.                                           |
| <b>SEA</b>     | : Sexual Exploitation and Abuse.                          |
| <b>SEP</b>     | : Stakeholder Engagement Plan.                            |
| <b>SH</b>      | : Sexual Harassment.                                      |
| <b>STIs</b>    | : Sexually Transmitted Infections.                        |
| <b>STL</b>     | : Sub Transmission Line.                                  |
| <b>US\$</b>    | : US Dollar.                                              |
| <b>WB</b>      | : World Bank.                                             |
| <b>3R</b>      | : Reduce, Reuse, and Recycle.                             |



## 1 INTRODUCTION

### 1.1 PROJECT BACKGROUND

The Government of Nepal (GoN) has received US\$120 million of IDA credit to implement the Electricity Supply and Reliability Improvement Project (ESRIP or the Project). The objective of the Project is to improve the distribution network and enhance the quality, resilience and reliability of electricity services in different areas of Nepal. The Project is also expected to bring expanded and more dependable electricity service to the consumers and supplement the GoN's and other development partners' efforts in enhancing the distribution system in Nepal. The Project is implemented by Nepal Electricity Authority (NEA). The proposed project includes construction of 33/11 kV substations at nine different locations in Koshi Province, along with the construction of the associated 33 kV sub-transmission lines. The project also includes the upgrading of existing distribution networks in Koshi and Sudurpaschim Province by replacing old conductors, poles, and distribution transformers. In addition, the project also covers the installation of smart meters in Kailali and Kanchanpur Districts, as well as the implementation of feeder automation systems across Koshi, Madhesh, Bagmati, Karnali, and Sudurpashchim Provinces.

Under package 2, lot 1 of the ESRIP, it is proposed to expand and reinforce the distribution system in seven districts, i.e., Jhapa District, Morang District, Sunsari District, Dhankuta District, Udaypur District, Terhathum District, and Ilam District. There will be 198 Ckt-km high-tension (HT-11 kV) line and 212 Ckt-km LT-0.4/0.23 kV) new line construction and Upgrading/Reinforcement of 590 Ckt-km high-tension (HT-11 kV) line & 680 Ckt-km low-tension (LT-0.4/0.23 kV) line in total. The scope also includes installing 395 distribution transformers.

The reinforcement of the distribution network **sub-project** is proposed to expand and reinforce 11 kV and 0.4 kV electrical lines and install 11/0.4 kV distribution transformers in Jhapa District. The subproject falls under Package-2, Lot-1 of ESRIP. This subproject is located at all 15 local levels in Jhapa District, Koshi Province. The reinforcement works of the distribution network in Jhapa District include upgrading existing 11 kV and 0.4 kV lines with higher- size/capacity conductors/cables, and upgrading existing transformers with higher-capacity units. Similarly dismantling old /unwanted structure will be handed over to the respective distribution center stores after joint verification, also under the scope of this subproject. There are five DCS in Jhapa district, namely Damak DC, Anarmani DC, Gauradaha DC, Bhadrapur DC and Dhulabari DC.

### 1.2 OBJECTIVE

The objective of this ESCOP is to identify the potential impact and its mitigation measures during the expansion and reinforcement of 11 kV and 0.4 kV electrical lines and installation/Upgradation of 11/0.4 kV distribution transformers in Jhapa District. It also outlines responsibilities of mitigation and monitoring.



## 2 DESCRIPTION OF SUB-PROJECT

The primary scope of Jhapa District covers distribution system reliability improvement by reinforcement and new addition of distribution network. It aims to encourage customers increase per capita electricity consumption by using more and more electricity. Supporting national policy with distribution expansion and encouragement is our motive. The project has a scope of 242 circuit kilometers of 11kV line and 265 circuit kilometers of 0.4/0.23kV line in different areas of all 15 local levels of (Municipalities/ Rural municipalities) of Jhapa district under the service area of NEA's five Distribution Centers (Damak DC, Gauradaha DC, Anarmani DC, Bhadrapur DC, and Dhulabari DC). Approximately 2500 HT poles (13/11 m) and 2750 LT Poles (8/9 m) will be erected for construction/reinforcement of distribution lines. A total of 123 11/0.4 kV distribution transformers will be installed for addressing the future residential as well as industrial demand growth in different places of Jhapa District. Among the 123 transformers, 37 transformers will be newly installed and the remaining 86 transformers will be replaced with higher capacity transformers

**Conductor:** The project will use medium voltage covered (MVCC) All Aluminum Alloy Conductor (AAAC) for 11 kV lines and Aerial Bundled Cable (ABC) for 0.4 kV lines. The details of HT and LT line lengths are presented below

**Table 1: HT and LT line lengths**

| S.N. | DC Name   | Feeder Name                                                                    | Site Location (Municipality/<br>Rural Municipality)                                                                                                             | Line Length<br>(Circuit-KM) |    | Remarks |
|------|-----------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----|---------|
|      |           |                                                                                |                                                                                                                                                                 | HT                          | LT |         |
| 1    | Damak     | NTC<br>Tarabari<br>Shivagaunj                                                  | Different places of Damak, Kamal and Shivasatakchi Municipalities<br>Chulachuli Municipality and Simle Municipality of Ilam District ( Line feed from Damak DC) | 33<br>13                    | 35 |         |
| 2    | Gauradaha | Damuna<br>Maharani<br>Padajungi<br>New<br>Gaurigaunj<br>Gauradaha<br>Kunjibari | Different Places of Gauradaha, Gaurigaunj and Kamal Municipalities.                                                                                             | 35                          | 13 |         |
| 3    | Anarmani  | Goldhap<br>Sanischare                                                          | Different Places of Birtamode, Haldibari, Arjundhara,                                                                                                           | 55                          | 81 |         |




ELECTRICITY SUPPLY RELIABILITY IMPROVEMENT PROJECT (ESRIP)

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*The Reinforcement of The Distribution Network in Jhapa District*

| S.N. | DC Name   | Feeder Name                                                              | Site Location (Municipality/<br>Rural Municipality)                                | Line Length<br>(Circuit-KM) |    | Remarks |
|------|-----------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------|----|---------|
|      |           |                                                                          |                                                                                    | HT                          | LT |         |
|      |           | Surunga<br>Rajgad<br>Kankai<br>Khudunabari                               | Baradashi and Kankai<br>Municipalities.                                            |                             |    |         |
| 4    | Bhadrapur | Bhadrapur<br>Haldibari<br>Jalthal New<br>Kachana New                     | Different Places of Bhadrapur,<br>Haldibari and Kachanakewal<br>Municipalities.    | 45                          | 70 |         |
| 5    | Dhulabari | Bahundagi<br>Bazar<br>Budhabare<br>Dhulabari<br>Kakarvitta<br>Sanischare | Different Places of Mechinagar,<br>Buddhashanti and, Arjundhara<br>Municipalities. | 61                          | 66 |         |

**Pole:** 13meter steel telescope poles, 11meter steel tubular poles, and 11meter PSC poles will be used for installation of the 11kV high-tension (HT) line depending upon the site condition and location. Similarly, 8 m steel tubular poles and 9-meter PSC poles will be used for installation of the 0.4 and 0.23 kV low-tension line (LT). The details of pole types and numbers are presented below.

**Table 2: Pole types and numbers**

| Component                  | Quantity |
|----------------------------|----------|
| 13 m Steel telescopic pole | 43Nos    |
| 11m Steel tubular Pole     | 266Nos   |
| 8 m Steel tubular pole     | 233Nos   |



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| Component     | Quantity  |
|---------------|-----------|
| 11 m PSC Pole | 2,167Nos  |
| 9 m PSC Pole  | 2,498 Nos |

**Distribution Transformer (DTR):** Transformer is the major component of this subproject. The transformers transform the power from higher to lower utilization voltage. The 11/0.4 kV three phase distribution types of transformers will be used in this subproject.

**Table 3: The details of Transformers**

| S.N. | DC Name   | Feeder Name                                                                    | Site Location (Municipality/<br>Rural Municipality)                                                                                                            | DTR<br>Installation<br>(Nos) | Remarks |
|------|-----------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------|
| 1    | Damak     | NTC<br>Tarabari<br>Shivagaunj                                                  | Different places of Damak, Kamal and Shivasatakchi municipalities<br>Chulachuli Municipality and Simle Municipality of Ilam District (Line feed from Damak DC) | 25                           |         |
| 2    | Gauradaha | Damuna<br>Maharani<br>Padajungi<br>New<br>Gaurigaunj<br>Gauradaha<br>Kunjibari | Different Places of Gauradaha, Gaurigaunj and Kamal Municipality.                                                                                              | 15                           |         |
| 3    | Anarmani  | Goldhap<br>Sanischare<br>Surunga<br>Rajgad<br>Kankai<br>Khudunabari            | Different Places of Birtamode, Haldibari, Arjundhara, Baradashi and Kankai Municipalities.                                                                     | 37                           |         |




*The Reinforcement of The Distribution Network in Jhapa District*

| S.N. | DC Name   | Feeder Name                                                              | Site Location (Municipality/<br>Rural Municipality)                                   | DTR<br>Installation<br>(Nos) | Remarks |
|------|-----------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------|---------|
| 4    | Bhadrapur | Bhadrapur<br>Haldibari<br>Jalthal New<br>Kachana<br>New                  | Different Places of<br>Bhadrapur, Haldibari<br>Kachanakewal<br>Municipalities.        | 22                           |         |
| 5    | Dhulabari | Bahundagi<br>Bazar<br>Budhabare<br>Dhulabari<br>Kakarvitta<br>Sanischare | Different Places of<br>Mechinagar, Buddhashanti<br>and, Arjundhara<br>Municipalities. | 24                           |         |

**Other Materials:** Crossarms, bracing angles, stay sets, grounding rods, surge arresters, drop-out fuses, insulators and transformer platforms will also be used in this subproject.





Formations comprise relatively consolidated sedimentary and metasedimentary rocks, including sandstone, conglomerate, quartzite, and phyllite.

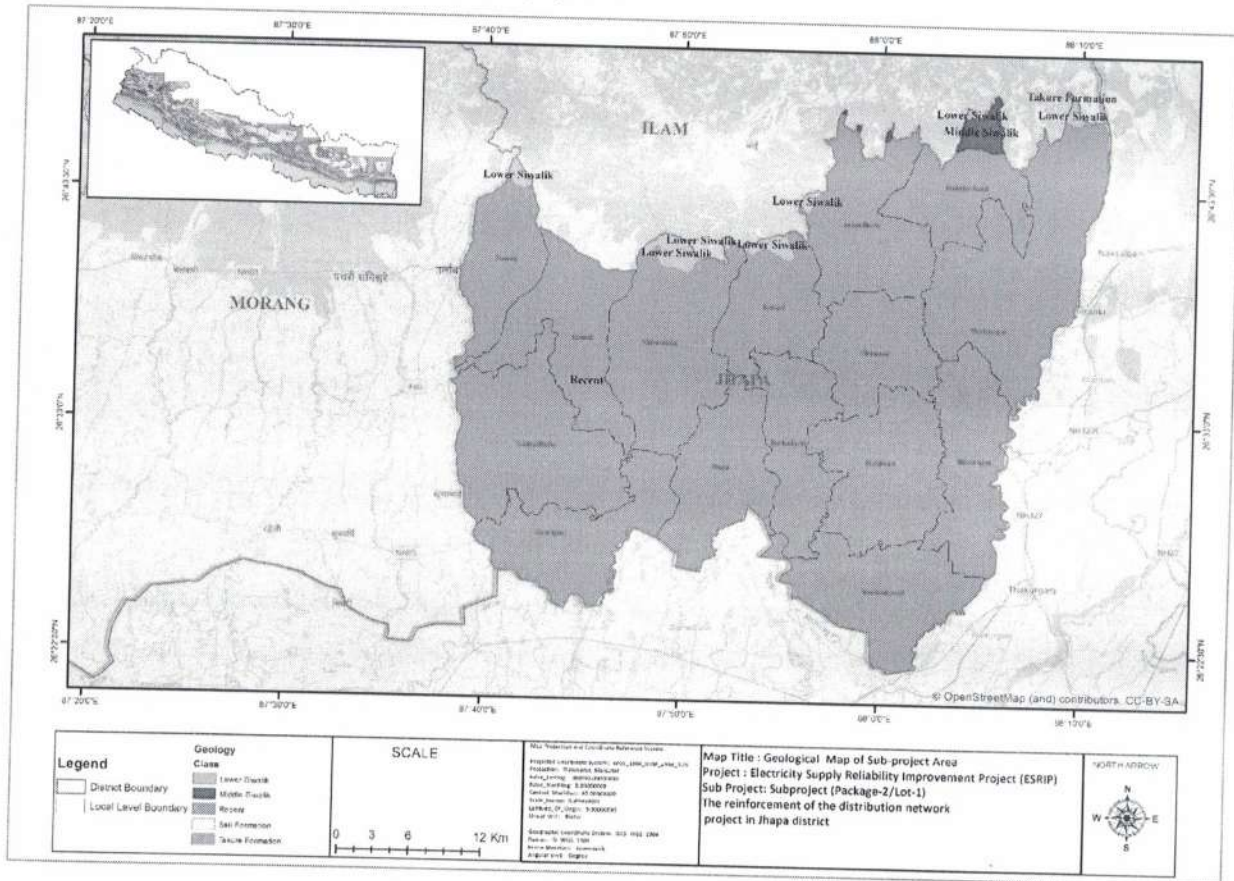


Figure 2: Geology Map of Jhapa District

### Climatic Condition:

The Reinforcement of Distribution Network Project proposed Jhapa District falls within the Sub-Tropical Climatic Zone and is characterized by a monsoon-influenced humid subtropical climate of eastern Nepal. The area experiences an annual minimum temperature of approximately 17.9 °C and a maximum temperature of 30.9 °C. The average annual rainfall in the Jhapa district 2889.3 mm (Source: Environment Statistics of Nepal, 2024)

### 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 strike-slip faults. Therefore, the 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.

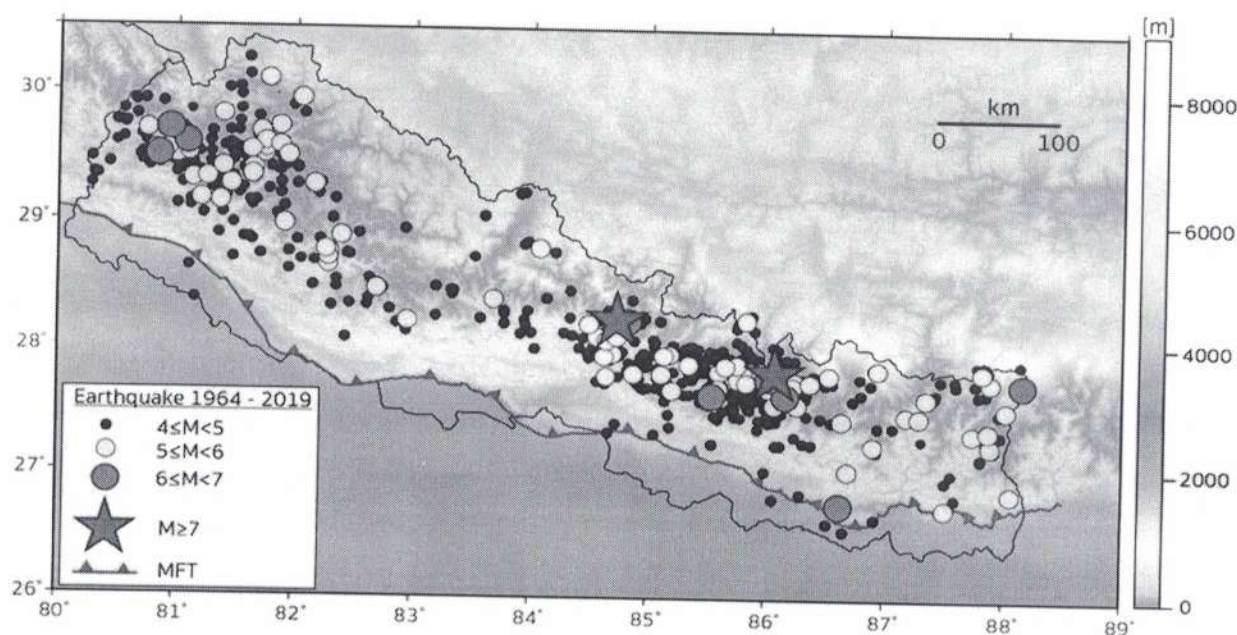


Figure 3: Seismicity Map of Nepal from 1964 -2019

### 3.2 BIOLOGICAL ENVIRONMENT.

The proposed Subproject does not fall within any forest area or officially designated conservation area. Furthermore, the reinforcement activities will be carried out along the existing distribution network and within existing road rights-of-way (RoW), thereby avoiding the need for additional forest clearance or vegetation removal. Consequently, no significant adverse impacts on forest resources or biological diversity are anticipated during Subproject implementation. However, the overall biological baseline conditions of Jhapa District are described below.

#### Tree and Vegetation

The major tree species recorded in Jhapa District include Shisham (*Dalbergia sissoo*), Sacred Fig (*Ficus religiosa*), Cotton Tree (*Bombax ceiba*), Kamala Tree (*Mallotus philippensis*), Sal (*Shorea robusta*), Indian Gooseberry (*Phyllanthus emblica*), Mango (*Mangifera indica*), Common Bamboo (*Bambusa vulgaris*), Persian Silk Tree (*Albizia julibrissin*), Burflower Tree (*Anthocephalus chinensis*), Coconut Palm (*Cocos nucifera*), and Betel Nut Palm (*Areca catechu*).

### **Wildlife Species**

Major wildlife species reported from Jhapa District in eastern Nepal include the Golden Jackal (*Canis aureus*), Rhesus Macaque (*Macaca mulatta*), Wild Boar (*Sus scrofa*), Asian Elephant (*Elephas maximus*), Indian Hare (*Lepus nigricollis*), and Jungle Cat (*Felis chaus*). These species inhabit the district's fragmented community forests, grasslands, and agricultural corridors, where animals like Asian elephants frequently utilize transboundary movement routes between Nepal and West Bengal, India.

### **Bird**

The recorded avifauna of Jhapa District comprises a blend of resident farmland, urban, and wetland species, including the Common Kingfisher (*Alcedo atthis*), Black Drongo (*Dicrurus macrocerus*), House Crow (*Corvus splendens*), Large-billed Crow (*Corvus macrorhynchos*), Common Myna (*Acridotheres tristis*), Red-vented Bulbul (*Pycnonotus cafer*), Common Tailorbird (*Orthotomus sutorius*), House Sparrow (*Passer domesticus*), Rose-ringed Parakeet (*Psittacula krameri*), Spotted Dove (*Stigmatopelia chinensis*), Common Pigeon/Rock Dove (*Columba livia*), and the raptorial Oriental Honey-buzzard (*Pernis ptilorhynchus*).

### **Herpetofauna**

The major herpetofauna reported in the sub-project area includes amphibians like the Asian Common Toad (*Duttaphrynus melanostictus*) and the Two-striped Grass Frog (*Hylarana taipehensis*), along with reptiles such as the Garden Lizard (*Calotes versicolor*), Common Rat Snake (*Ptyas mucosa*), Common Krait (*Bungarus caeruleus*), Common Cobra (*Naja naja*), and MacClelland's Coral Snake (*Sinomicrurus maclellandi*).

### **Fish**

The major fish species recorded from the sub-project area include the Sucker Fish (*Garra mullya*), Copper Mahseer (*Neolissochilus hexagonolepis*), Sucker Throat Catfish (*Pseudecheneis sulcata*), Gangetic Mystus (*Mystus cavasius*), Tire-track Spiny Eel (*Mastacembelus armatus*), Swamp Barb (*Puntius chola*), Gangetic Hairfin Anchovy (*Setipinna phasa*), and Assamese Snakehead (*Channa stewartii*).

## **3.3 SOCIAL ENVIRONMENT**

Jhapa district has eight municipalities and seven rural municipalities, and the total area of the district is 1606 sq kilometers. According to the national population and housing census 2021, the





total population of the project-affected Jhapa district is 998054, comprising 245142 households in which the male population is 478509, and the female population is 519545.

Approximately 40 percent of the population belongs to Brahmin/Chhetri, while Rajbanshi, Limbu, Rai, Santhal, Dalit, Newar, Musalman, Tamang, Magar, and other populations also reside in Jhapa district. (Source: National Population and Housing Census 2021).

Similarly, 61.47 percent of the population speaks Nepali as their first language. Similarly, Rajbanshi, Yakthung/Limbu, Rai, Meche, Nepal Bhasha, Magar, Santali, Dhimal, and other languages are also spoken in Jhapa district. (Source: National Population and Housing Census 2021).

Most of the population of the project-affected district follows the Hindu religion which is the major religion (79.1 percent), followed by Kirat (9.4 percent), Buddhism (4.9 percent), Islam (3.3 percent), and Christianity (2.6 percent). Other religions are present in smaller proportions. (Source: National Population and Housing Census 2021).

Most of the population of Jhapa district is engaged in the agricultural sector, while the remaining population is engaged in various sectors such as elementary occupations, service & sale work, craft and related trades work, business, service, and other sectors (source National Population and Housing Census 2021).

There are many schools and college are available in Jhapa district providing educational services at different levels. Similarly, there are various levels of hospitals and health institutions in Jhapa district that provide Specialist Services, OPD, vaccination services, maternity facilities, x-ray/video x-ray service and lab facilities, Physiotherapy, 24-hour emergency service, and other services.

Mobile phone, internet service, television, and FM radio service are the main means of communication in the project area.



#### 4 INSTITUTIONAL ARRANGEMENT

Nepal Electricity Authority (NEA) is responsible for implementing the Electricity Supply and Reliability Improvement Project (ESRIP). The project is under the Distribution and Consumer Services Directorate (DCSD) of NEA. The Project Implementation Unit (PIU) has been established under the DCSD and serves as the implementing unit for the project. The owner's engineer /consultant is responsible for supervising the civil works and ESCOP implementation. Similarly, the contractor is responsible executing civil works and implementing the required mitigation measures proposed in ESCOP with regular compliance monitoring. The organizations and their responsibilities are presented in below.

**Table 4: List of Organizations and Responsibilities**

| Organization                 | Responsibilities                                                                                                                                                                                                                                         |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEA (PIU)                    | Coordination with all stakeholders<br>Procurement of goods and services<br>Environment and social management of subprojects                                                                                                                              |
| NEA, Project Manager         | Coordination with all stakeholders<br>Procurement of goods and services<br>Environment and social management of subprojects                                                                                                                              |
| Owner's Engineer/Consultants | Supervise Line Construction/ reinforcement works and ESCOP implementation<br>Prepare monthly progress and monitoring report and submit to PIU.                                                                                                           |
| Contractor                   | Construction of civil work & installation of equipment<br>Implementation of Mitigation measures proposed in the ESCOP and regular monitoring to ensure compliance.<br>Deploy the environmental and social safeguard employee for implementation of ESCOP |

## 5 GRIEVANCES REDRESS MECHANISM

Grievance Redress Mechanism has been established to receive and facilitate the resolution of issues or concerns and grievances raised by complainants. The main objective of a GRM is to assist in resolving complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. The details of GRM have been described in Stakeholder's engagement plan of this project. The two level GRM has been designed to be transparent and fair to redress the grievances of the project-affected personnel and community engagement. GRM flow chart of this project is presented in below.

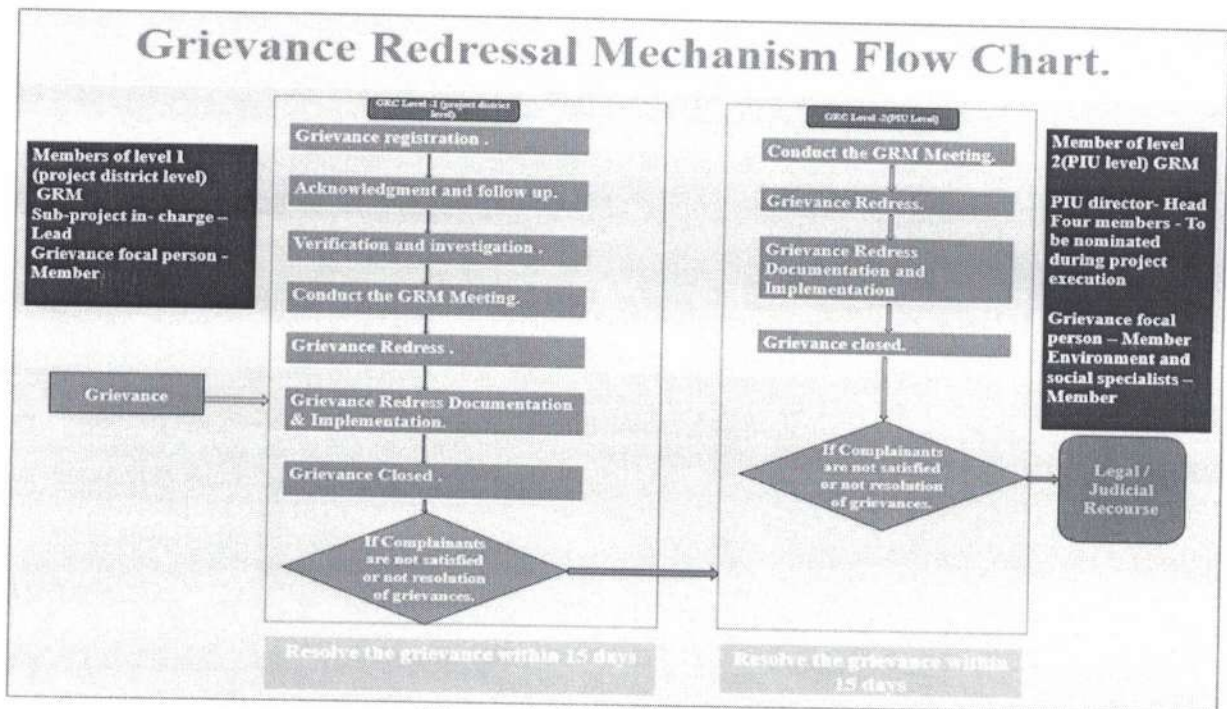


Figure 4: GRM Flow Chart



## **6 ENVIRONMENT SOCIAL CODE OF PRACTICE (ESCOP)**

### **6.1 ENVIRONMENT SOCIAL CODE OF PRACTICE (ESCOP)**

The proposed subproject work is to expand and reinforce 11 kV and 0.4 kV electrical lines and install 11/0.4 kV distribution transformers, which will be executed within the existing line alignment and existing right of way of the road (RoW). Therefore, no additional private land will be required for this subproject. The subproject only involves the erection of 8 m, 9 m, 11 m and 13 m steel tubular and PSC poles, installation of the transformer on a double-pole-mounted structure, and stringing the cover conductor. So, the construction activities will require very minimal space and take a short time for the erection of poles, wire, and installing the transformers. Based on the nature, size, and scale of the project activities (erection of poles, stringing the conductors, and installation of transformers), the potential environmental and social impact of the subproject is expected to be insignificant and mostly localized within the project footprint. The project activities do not attract and trigger the provisions of the Environmental Protection Act, 2019, and the Environmental Protection Rule, 2020. Therefore, the nature and scale of the project activities, Environmental and social code of practice is required and has been prepared to mitigate the minor impact of the subproject. The total cost of ESCOP implementation is NRS. 910,000.

This ESCOP provides guidelines for identifying environmental and social potential risks and their appropriate mitigation measures during the implementation of the expansion and reinforcement of 11 kV and 0.4 kV electrical lines and the installation of 11/0.4 kV distribution transformers in Jhapa District. It represents good practices in environmental, social, and occupational health and safety, and addresses issues related to people and the environment.

The contractor shall comply with all applicable laws, regulations, and ESCOP requirements and coordinate with relevant authorities throughout the project execution. Contractors shall ensure that ESCOP provisions are communicated to all workers and other responsible personnel for ESCOP implementation, and provide workers with training on occupational health and safety, community health, labor standards, and environmental management as per ESCOP. The list of ESCOP includes implementation costs and responsibilities for implementation and monitoring is presented in below.



ESCOP 1: Noise Management

| S.N. | Issues          | Environmental and Social Issues                                                                                                                                 | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Means of Monitoring | Mitigation Costs (NRs.) | Institutional Implementation | Supervision and Monitoring |
|------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------|------------------------------|----------------------------|
| 1    | Noise pollution | <ul style="list-style-type: none"> <li>Temporary nuisance to nearby residents and employees, workers and sensitive receptors due to noise pollution.</li> </ul> | <p>Overall, the potential impact is expected to be insignificant and of a short duration</p> <p>However, the following mitigation measures will be implemented.</p> <ul style="list-style-type: none"> <li>The contractor shall service and maintain all vehicles and equipment on a timely basis</li> <li>Vehicle speeds will be kept low, and horns will not be used near the communities.</li> <li>Earplugs will be provided to the workers if required.</li> <li>Night work will be avoided near the settlements area; however, if the work is required, prior notice will be given to the nearby communities.</li> </ul> | Site Observation    |                         | Contractor/field office      | PIU/NEA                    |

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ESCOP 2: Air Quality Management

| S.N. | Issues        | Environmental and Social Issues                                                                                                                             | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                           | Means of Monitoring                                                              | Estimated Mitigation Costs (NRs.)    | Institutional Responsibility | Supervision and Monitoring |
|------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------|------------------------------|----------------------------|
|      | Air pollution | <ul style="list-style-type: none"> <li>Temporary nuisance to nearby people, employees, workers and sensitive receptors due to the air pollution.</li> </ul> | <p>Overall, the potential impact is expected to be insignificant and of a short duration</p> <p>However, the following mitigation measures will be implemented.</p> <ul style="list-style-type: none"> <li>Construction materials/if any dusty construction materials will be covered during transportation and storage.</li> <li>Water sprinkling will be carried out at the material. Storage yard if required.</li> </ul> | <p>Site Observation, Check logbooks of water spraying and vehicle servicing.</p> | <p>Water Sprinkling: 1,00,000.00</p> | Contractor/field office      | PIU/NEA                    |

| S.N. | Issues                  | Environmental and Social Issues                                         | Mitigation and Management Measures                                                                                          | Means of Monitoring     | Estimated Mitigation Costs (NRs.) | Institutional Responsibility                  |
|------|-------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------|-----------------------------------------------|
|      | Vegetation/tree cutting | <ul style="list-style-type: none"> <li>Loss of vegetation ??</li> </ul> | <p>Avoid unnecessary tree cutting</p> <p>If tree required then obtain permission, provide compensation for replantation</p> | Records of tree cutting |                                   | <p>Contractor/field office</p> <p>PIU/NEA</p> |

### ESCOP 3: Waste Management

| S.N. | Issues           | Environmental and Social Issues                                                                         | Mitigation and Management Measures                                                                                                                                                                                                                                                                               | Means of Monitoring                                                                                             | Estimated Mitigation Costs (NRs.) | Institutional Responsibility                  |
|------|------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------|
|      | Waste generation | <ul style="list-style-type: none"> <li>Waste generated in the construction area and campsite</li> </ul> | <ul style="list-style-type: none"> <li>The waste should be segregated into organic and inorganic in source.</li> <li>3r principle shall be followed.</li> <li>Biodegradable waste will be managed through the compost bin.</li> <li>Recyclable wastes like left out/non-usable reinforcement bars and</li> </ul> | <p>Site observation.</p> <p>Check log book of waste collection and disposal.</p> <p>Record of waste bin and</p> | 1,50,000.00                       | <p>Contractor/field office</p> <p>PIU/NEA</p> |

| S.N. | Issues                                  | Environmental and Social Issues                                                                                                        | Mitigation and Management Measures                                                                                                                                                                                                                                                  | Means of Monitoring                     | Estimated Mitigation Costs (NRs.)                                    | Institutional Responsibility                  |
|------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------|-----------------------------------------------|
|      |                                         |                                                                                                                                        | <ul style="list-style-type: none"> <li>packing materials will be sold to scrap vendors</li> <li>Three-color dustbins will be kept in the campsite.</li> <li>If generated, non-recyclable and hazardous waste will be managed in coordination with the local level.</li> </ul>       | compost bin placed at site.             |                                                                      | Supervision and Monitoring                    |
|      | Hazardous materials and chemical wastes | <ul style="list-style-type: none"> <li>Improper storage, handling, and disposal of hazardous materials and chemical wastes.</li> </ul> | <ul style="list-style-type: none"> <li>Fuel, oil, and chemicals will not be stored near water sources</li> <li>Spill response kits will be provided</li> <li>Dedicated storage areas for fuel, oil, and chemicals will be established using drums, containers, or tanks.</li> </ul> | Site observation                        | This cost will be included in the project cost.                      | Contractor/field office<br><br><b>PIU/NEA</b> |
|      | Transformer Oil                         | <ul style="list-style-type: none"> <li>Issues with transformer oil leakages and storage</li> </ul>                                     | <ul style="list-style-type: none"> <li>Transformer oil to be <b>PCB-free</b> and supported by supplier/manufacturer certification.</li> </ul>                                                                                                                                       | Barricading storage area of Transformer | ..... for barricading/enclosure around transformer installations and |                                               |

| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Means of Monitoring                                            | Estimated Mitigation Costs (NRs.)                                       | Institutional Responsibility |                            |
|------|--------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------|----------------------------|
|      |        |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                |                                                                         | Implementation               | Supervision and Monitoring |
|      |        |                                 | <ul style="list-style-type: none"> <li>No transformer containing PCB or PCB-contaminated oil to be procured.</li> <li>Transformer tanks, bushings and fittings to be inspected for leakage before installation.</li> <li>Oil-filled transformers should not be placed where leakage could directly enter drains, irrigation canals, ponds, rivers or groundwater recharge areas.</li> <li>Spill kits should be available during installation and maintenance.</li> <li>Workers should be trained in spill response.</li> </ul> | Warning signs in Nepali for electrical hazards and fire safety | warning sign, Periodic inspection cost will be included in project cost |                              |                            |

| S.N. | Issues                         | Environmental and Social Issues                                                                                                         | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                            | Means of Monitoring                               | Estimated Mitigation Costs (NRs.)               | Institutional Responsibility |                            |
|------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|------------------------------|----------------------------|
|      |                                |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                               |                                                   |                                                 | Implementation               | Supervision and Monitoring |
|      |                                |                                                                                                                                         | <ul style="list-style-type: none"> <li>Any spill should be immediately contained and cleaned up.</li> <li>Contaminated soil/material should be collected, stored safely and managed according to applicable hazardous-waste requirements</li> </ul>                                                                                           |                                                   |                                                 |                              |                            |
|      | Dismantled materials (E-waste) | <ul style="list-style-type: none"> <li>Improper handling of dismantled cable, conductors, poles, hardware, and transformers.</li> </ul> | <ul style="list-style-type: none"> <li>Joint verification will be done with the contractor.</li> <li>The dismantled materials will be properly segregated</li> <li>Appropriate PPE will be used during the dismantling work.</li> <li>All old transformers will be checked for leakage and stored upright.</li> <li>The dismantled</li> </ul> | Site observation, Records of dismantled materials | This cost will be included in the project cost. | Contractor/field office      | PIU/NEA                    |



| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures                                    | Means of Monitoring | Estimated Mitigation Costs (NRs.) | Institutional Responsibility  |
|------|--------|---------------------------------|-----------------------------------------------------------------------|---------------------|-----------------------------------|-------------------------------|
|      |        |                                 | material will be handed over to the concerned NEA distribution center |                     |                                   | Implementation and Monitoring |

#### ESCOP 4: Electrical Safety Management

| S.N. | Issues            | Environmental and Social Issues                                                                                                                                                  | Mitigation and Management Measures                                                                                                                                                                                                                                                                        | Means of Monitoring                    | Estimated Mitigation Costs (NRs.)              | Institutional Responsibility       |
|------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------|------------------------------------|
|      | Electrical safety | <ul style="list-style-type: none"> <li>Electrocution during live-line proximity, installation of heavy electrical equipment in substations, testing, or energization.</li> </ul> | <ul style="list-style-type: none"> <li>Warning signs will be installed at the pole erection area.</li> <li>Only trained personnel will handle electrical work</li> <li>Shutdown shall be taken during maintenance work.</li> <li>Use of insulation, guarding, grounding, electrical protective</li> </ul> | Check incident record. Site inspection | This cost will be included within project cost | Contractor/field office<br>PIU/NEA |

| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures           | Means of Monitoring | Estimated Mitigation Costs (NRs.) | Institutional Responsibility |
|------|--------|---------------------------------|----------------------------------------------|---------------------|-----------------------------------|------------------------------|
|      |        |                                 | devices, and safe work practices is advised. |                     |                                   | Supervision and Monitoring   |

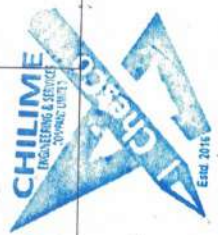
#### ESCOP 5: Labor Management and Community Grievance Management

| S.N. | Issues           | Environmental and Social Issues                                                                                                                                                                                                                   | Mitigation and Management Measures                                                                                                                                                                                                                             | Means of Monitoring                                                                | Estimated Mitigation Costs (NRs.)                                           | Institutional Responsibility           |
|------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------|
|      | Influx of labour | <ul style="list-style-type: none"> <li>Conflicts with the community regarding the use of public facilities and social cultural differences,</li> <li>Spreading communicable disease from workers to the local community or vice versa.</li> </ul> | Overall, the potential impact is expected to be insignificant and of a short duration because the small number of workers will be required and will take 5-7 days at each site. If possible, local workers will be deployed. However, the following mitigation | Records of GRM, Consultation with community and workers<br><br>Records of training | Training cost: 1,00,000.00 and other costs will be included in project cost | Contractor/field office<br><br>PIU/NEA |



| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                         | Means of Monitoring | Estimated Mitigation Costs (NRs.) | Institutional Responsibility | Supervision and Monitoring |
|------|--------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|------------------------------|----------------------------|
|      |        |                                 | <p>measures will be implemented.</p> <ul style="list-style-type: none"> <li>The Contractor shall prepare and implement Labor Management Plan (LMP)</li> <li>Locally available people will be provided priority for employment based on their skills and experience.</li> <li>Labor camps will be constructed separately from the local community if required.</li> <li>Provide awareness training to workers on</li> </ul> |                     |                                   |                              |                            |

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| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                                   | Means of Monitoring | Estimated Mitigation Costs (NRs.) | Institutional Responsibility |                            |
|------|--------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|------------------------------|----------------------------|
|      |        |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                   | Implementation               | Supervision and Monitoring |
|      |        |                                 | <p>respecting the local people, culture, religion, and communicable diseases, etc.</p> <ul style="list-style-type: none"> <li>• Restrict unnecessary movement of workers outside the camp at night.</li> <li>• The workers' code of conduct will be prepared and all workers and employee will be required to comply it.</li> <li>• Restrict alcohol consumption in the labor camp and Prohibit entry to the construction</li> </ul> |                     |                                   |                              |                            |

| S.N. | Issues           | Environmental and Social Issues                                                                                                                  | Mitigation and Management Measures                                                                                                                                                                                                                                                                        | Means of Monitoring                      | Estimated Mitigation Costs (NRs.) | Institutional Responsibility |                            |
|------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------|------------------------------|----------------------------|
|      |                  |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                           |                                          |                                   | Implementation               | Supervision and Monitoring |
|      |                  |                                                                                                                                                  | site after consuming alcohol.                                                                                                                                                                                                                                                                             |                                          |                                   |                              |                            |
|      | Worker Grievance | <ul style="list-style-type: none"> <li>Workers' wage payment dispute between workers and contractor, harassment, and physical assault</li> </ul> | <ul style="list-style-type: none"> <li>Contractor shall strictly follow the GRM</li> <li>The workers' code of conduct will be prepared, and all workers and employee will be required to comply it.</li> <li>Anonymous complain system will be established (Install the grievance box at site)</li> </ul> | GRM Records and interaction with workers | GRM Implementation: 1,50,000.00   | Contractor/field office      | PIU/NEA                    |
|      | GBV/SEA/SH risk  | <ul style="list-style-type: none"> <li>Sexual Harassment, Sexual exploitation</li> </ul>                                                         | <ul style="list-style-type: none"> <li>Awareness training will be conducted for employees and workers on</li> </ul>                                                                                                                                                                                       | GRM Records and interaction with workers | Awareness training 50,000.00      | Contractor/field office      | PIU/NEA                    |

| S.N. | Issues | Environmental and Social Issues                                                                                          | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                                            | Means of Monitoring | Estimated Mitigation Costs (NRs.) | Institutional Responsibility |                            |
|------|--------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|------------------------------|----------------------------|
|      |        |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |                                   | Implementation               | Supervision and Monitoring |
|      |        | <ul style="list-style-type: none"> <li>and abuse at Workplace</li> <li>Gender-based violence at the workplace</li> </ul> | <p>GBV, SH, and SEA.</p> <ul style="list-style-type: none"> <li>The workers' code of conduct will be prepared, and all workers and employees will be required to comply with it.</li> <li>Workers' behavior will be regularly monitored, and appropriate disciplinary action will be taken against any violations of rule.</li> <li>GRM will be effectively implemented during the construction phase.</li> <li>Anonymous complain</li> </ul> |                     |                                   |                              |                            |

| S.N. | Issues                                      | Environmental and Social Issues                                                                                        | Mitigation and Management Measures                                                                                                                                                                                                                        | Means of Monitoring                         | Estimated Mitigation Costs (NRs.)                                           | Institutional Responsibility |                            |
|------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------|------------------------------|----------------------------|
|      |                                             |                                                                                                                        |                                                                                                                                                                                                                                                           |                                             |                                                                             | Implementation               | Supervision and Monitoring |
|      |                                             |                                                                                                                        | system will be established (Install the grievance box at site)                                                                                                                                                                                            |                                             |                                                                             |                              |                            |
|      | Child and forced labor                      | <ul style="list-style-type: none"> <li>• Employment of below-age workers and forced labor</li> </ul>                   | <ul style="list-style-type: none"> <li>• No workers below 18 years age will be employed at site or camp.</li> <li>• Forced labor will be prohibited.</li> <li>• The contractor shall be maintaining the documents of age verification records.</li> </ul> | Site observations of Records of workers     | No additional cost required                                                 | Contractor/field office      | PIU/NEA                    |
|      | Community grievance and project information | <ul style="list-style-type: none"> <li>• Grievances and complaints from community members caused project by</li> </ul> | <ul style="list-style-type: none"> <li>• GRM will be effectively implemented during the construction phase.</li> <li>• Consultation with project</li> </ul>                                                                                               | Records of GRM, Consultation with community | For project-related information materials (Brochure, posters, flyers, media | Contractor/field office      | PIU/NEA                    |

| S.N. | Issues               | Environmental and Social Issues                             | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                      | Means of Monitoring | Estimated Mitigation Costs (NRs.)                                       | Institutional Responsibility |                            |
|------|----------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------|------------------------------|----------------------------|
|      |                      |                                                             |                                                                                                                                                                                                                                                                                                                                                                                         |                     |                                                                         | Implementation               | Supervision and Monitoring |
|      |                      | activities and the lack of project information              | <p>stakeholders will be done, as envisaged in the stakeholder's engagement plan (SEP).</p> <ul style="list-style-type: none"> <li>Project-related information materials (Brochure, posters, and flyers and radio notice) will be prepared and distributed to the local community.</li> <li>Anonymous complain system will be established (Install the grievance box at site)</li> </ul> |                     | <p>campaign, etc.) - 50,000.00</p> <p>Consultation meeting - 200000</p> |                              |                            |
|      | Utility interruption | <ul style="list-style-type: none"> <li>Temporary</li> </ul> | <ul style="list-style-type: none"> <li>Minimize outage</li> </ul>                                                                                                                                                                                                                                                                                                                       | Site Observation    | No additional cost required                                             | Contractor/field office      | PIU/NEA                    |

| S.N. | Issues | Environmental and Social Issues                                     | Mitigation and Management Measures                                                                                    | Means of Monitoring | Estimated Mitigation Costs (NRs.) | Institutional Responsibility |
|------|--------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|------------------------------|
|      |        | power outage during line/substation installation and commissioning. | <ul style="list-style-type: none"> <li>duration; Undertake planned shutdowns with proper advance to users.</li> </ul> |                     |                                   | Supervision and Monitoring   |

#### ESCOP 6: Occupational Health and Safety Management

| S.N. | Issues                         | Environmental and Social Issues                                                                                           | Mitigation and Management Measures                                                                                                                                                                                                               | Means of Monitoring                                                                                                                                 | Mitigation Costs (NRs.)                                                                                                                             | Institutional Responsibility       |
|------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|      | Occupational health and safety | <ul style="list-style-type: none"> <li>Accidents and incidents involving workers,</li> <li>Sickness of workers</li> </ul> | <ul style="list-style-type: none"> <li>All workers will be provided OHS awareness training.</li> <li>Provided permit to work system</li> <li>Lock-out/tag-out (LOTO)</li> <li>Verification that equipment is de-energized before work</li> </ul> | <ul style="list-style-type: none"> <li>Inspection of PPE use</li> <li>Records of accident and incident</li> <li>Records of OHS trainings</li> </ul> | <ul style="list-style-type: none"> <li>OHS training and awareness program- 1,00,000.00</li> <li>Other cost will be included project cost</li> </ul> | Contractor/field office<br>PIU/NEA |



| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Means of Monitoring | Mitigation Costs (NRs.)                                                                                        | Institutional Responsibility |                            |
|------|--------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------|
|      |        |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |                                                                                                                | Implementation               | Supervision and Monitoring |
|      |        |                                 | <ul style="list-style-type: none"> <li>Proper earthing and grounding should be done around transformer installation area</li> <li>All workers will be provided adequate PPE as required such as insulated tools for verification of electrical appliances, helmets, safety shoes, high visibility vest, electrical rated gloves</li> <li>Certified crane/ladder during working at height</li> <li>Safe drinking water will be provided at worksite and labor camp.</li> <li>First aid box will</li> </ul> |                     | <ul style="list-style-type: none"> <li>Awareness programs on STIs and communicable diseases - 50000</li> </ul> |                              |                            |



*Signature*

| S.N. | Issues | Environmental and Social Issues | Mitigation and Management Measures                                                                                                                                                                                                                                                                                                                                                                           | Means of Monitoring | Mitigation Costs (NRs.) | Institutional Responsibility |                            |
|------|--------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------|------------------------------|----------------------------|
|      |        |                                 |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                         | Implementation               | Supervision and Monitoring |
|      |        |                                 | <p>be provided at the construction site and labor camps,</p> <ul style="list-style-type: none"> <li>• Emergency rescue procedure in place</li> <li>• Safety and warning signage will be installed at the construction site.</li> <li>• Awareness programs on STIs and communicable diseases will be conducted.</li> <li>• Electrical emergency response and incident reporting mechanism in place</li> </ul> |                     |                         |                              |                            |

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## 6.2 ESTIMATED ENVIRONMENT AND SOCIAL CODE OF PRACTICE COST

Estimated ESCOP implementation cost has been presented in below table. The estimated cost includes mitigation measures to be implemented by the contractor. The total estimated ESCOP cost is NRs 1045,000

Table 5: ESCOP Implementation Cost

| SN | Budget Items                                                                                                                                                                    | Unit       | Rate (NRs.) | Total Amount (NRs) | Remarks                                                                                                                                                                                                                 |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Water sprinkling                                                                                                                                                                | LS         | 100000      | 1,00,000           | Overall, the potential impact is expected to be insignificant and of a short duration. However, this budget has been allocated only if any such impacts are observed at the storage yard during project implementation. |
| 2  | Waste management (three-color waste bins@4 Sets - 12000, compost bins@2 sets - 6000, garbage, plastic and others- 12000, and waste collection service fees @ 24 months 120000 ) | LS         | 150000      | 1,50,000           |                                                                                                                                                                                                                         |
| 3  | Awareness training to workers on respecting the local people, culture, and religion                                                                                             | 4 (Events) | 25000       | 1,00,000           |                                                                                                                                                                                                                         |
| 4  | Project-related information materials d (Brochure, posters, flyers, media campaign)@ 500 pieces-25000 and media campaign (FM radio notice ) @                                   | LS         | 50000       | 50,000             |                                                                                                                                                                                                                         |

| SN           | Budget Items                                                                               | Unit       | Rate (NRs.) | Total Amount (NRs) | Remarks |
|--------------|--------------------------------------------------------------------------------------------|------------|-------------|--------------------|---------|
|              | 25 times (before the work commencement)                                                    |            |             |                    |         |
| 5            | Consultation meetings                                                                      | 10 (Times) | 20000       | 2,00,000           |         |
| 6            | GRM implementation (including stationery, meeting, communication, and other related costs) | LS         | 150000      | 1,50,000           |         |
| 7            | Awareness training will be conducted for employees and workers on GBV, SH SEA.             | 2 (Events) | 2000        | 50,000             |         |
| 8            | OHS awareness training                                                                     | 4 (Events) | 25000       | 1,00,000           |         |
| 9            | Awareness programs on STIs and communicable diseases                                       | 2 (Events) | 25000       | 50,000             |         |
| 10           | Contingency                                                                                | LS         | 95000       | 95000              |         |
| <b>Total</b> |                                                                                            |            |             | <b>10,45000</b>    |         |



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## **7 CONCLUSION**

The construction of the proposed sub-project is expected to have minor and temporary environmental and social adverse impacts. The identified adverse minor impacts can be effectively minimized through the implementation of the mitigation measures outlined in the ESCOP. The estimated ESCOP cost of this project is NPRs. 10,45000. Therefore, the proposed project is considered suitable for construction and operation, provided the recommended mitigation measures defined in this ESCOP are properly implemented. No further environmental or social studies are required for this subproject.

