TOG WAJAALE-HARGEISA-BERBERA 271.6 KM 400KV DOUBLE CIRCUIT TRANSMISSION LINE (THE "PROJECT") IN SOMALILAND

TERMS OF REFERENCE BIODVERSITY ASSESSMENT

Introduction

The Horn of Africa (HOA) region has been afflicted with persistent conflict and fragility hampering development of basic infrastructure and social service provision to their citizens and industries. Progress towards ensuring access to affordable, reliable, sustainable, and modern energy for all (UN Sustainable Development Goal 7) is further constrained by high cost and/or unreliable supply of electricity. The lack of access to adequate electricity is preventing development of small and medium size enterprises, local entrepreneurship, and effective provision of essential services such as healthcare and education. The rich and diverse energy resource endowment in the HOA creates significant potential for regional power trade and optimized utilization of regional energy resources. Through trade, countries can benefit from a reduction in the cost of electricity supply, greater security of supply and resilience to supply shocks and increased penetration of renewable energy. Substantial benefits are also likely as regional interconnection of the transmission grid would enable to source power from inexpensive imports and reduce reliance on small and expensive thermal generators.

The World Bank under the Horn of Africa Regional Power System Transformation Project (P179036) is the financier for the proposed 271.6km Tog Wajaale 400kV double circuit transmission line which is part of the 550km transmission line starting from Debre-Zeit to Hurso and then from Jigjiga-Tog Wajaale on the Ethiopian side into Somaliland from Tog-Wajaale to Hargeisa and terminating in Berbera. Separate ESIA studies have been prepared for the other sections of the transmission line.

Tog Wajaale-Hargeisa-Berbera 400kV double circuit transmission line (the "Project") in Somaliland: The project is jointly owned by Eastern Africa Power Pool (EAPP) and Somaliland and is designed to facilitate power trade between Ethiopia and Somaliland, making sure that Somaliland will get access to cheaper and green power from Ethiopia. The project comprises the following:

- The construction and operation of 271.6 km power transmission line (TL) traversing through the regions of Marodi-Jeh and Sahil, starting from Wajaale (border between Somaliland and Ethiopia) via Hargeisa and terminating at Berbera.
- Construction of 2 sub stations in Hargeisa and Berbera. The sites for the sub stations have not been identified and therefore this ESIA does not include them. A separate ESIA will be prepared when the locations of the substations are known.

The proposed Wajaale-Hargeisa-Berbera EHV 400kV transmission line is located in Somaliland and traverses 2 regions i.e. Marodi-Jeh and Sahil starting at Wajaale (border between Ethiopia and Somaliland) passing through Hargeisa and terminating at the proposed Berbera. The line crosses 3 administrative districts (Gebiley, Hargeisa and Berbera) and a total of 22 villages. The administrative locations of transmission line are shown in Figure 1.

Figure 1: Transmission Line Route

Source: EMC Consultants 2024

ESIA and Biodiversity Scoping

Environment and Social Impact Assessment and biodiversity scoping for the project was carried out in 2024, the reports will be shared with the consultant for familiarization with the project. The field studies for the biodiversity scoping were conducted in February 2024 and some of the key findings are highlighted below;

- The proposed transmission line is passing 10km-50kms away from two critical habitats i.e. Boorama Plains and Gacan Libaax which have been identified as habitats to 5 species of avifauna classified as Critically Endangered (CR) and 10 species of avifauna classified as Endangered (EN). Boorama Plains is 10kms away from the transmission line while Gacan Libaax is more than 50kms away from the transmission line. The line is over 50kms from a protected area (Ga'an Libah National Park).
- A total of 25 floral and fauna and avifauna species are known to occur within the buffer zone, reported from International Biodiversity Assessment Tool (IBAT) screening. On analyzing Rare, Endangered and Threatened (RET) status of these recorded species as per the IUCN categories, it was found that 4 floral species were in the Endangered (EN) category. The RET assessment of avifauna showed 5 species of birds in the Critically Endangered (CR) category and 10 species classified as EN. Amongst the fauna, 3 of the species in the category of CR and 3 in the category of EN.

STUDY MANAGEMENT ARRANGEMENT

Financing of the Study. The Study is financed by proceeds of the International Development Agency (IDA) of the World Bank, Grant to the EAPP as a project preparation advance of the Horn of Africa Regional Integration for Sustainable Energy Supply Project under preparation.

Eastern Africa Power Pool Project Implementation Unit. The Eastern Africa Power Pool (EAPP) Secretariat is responsible for the implementation of the IDA Grant. The EAPP has established a project Implementation Unit (EAPP-PIU), headed by a Project Manager and dedicated staff, which include an environmental specialist, a procurement specialist, a financial management specialist, and technical experts. The EAPP-PIU reports to the Secretary General of EAPP6. The EAPP-PIU will administer the contract for the Ethiopia-Somalia ESIA Study, including formal approval of study progress milestone deliverables, the Study final reports, and payment of invoices, subject to prior approval of the deliverables by the Joint Study Management Team.

OBJECTIVES OF THE PROPOSED Study

The above study aims in identifying potential impacts on flora and fauna and to suggest relevant compensatory and mitigatory measures to protect/conserve biodiversity in the likely impacted area along RoW of transmission line due to the project activity. To achieve this agency/consultant shall carry out a comprehensive study on biological, socio-economic aspects along the proposed routes (RoW) limited to affected biodiversity area and assess the potential impacts and risks (direct as well as indirect/ induced) due to the project activities and shall suggest appropriate measures for compensating & mitigating measures for managing the same. This study will describe the biodiversity values present on the development site and the impact of the project activity on these values and also identify reasonable measures and strategies that can be taken to avoid and minimise impacts on biodiversity.

Scope of the study

- Provide a clear description of the area of potential influence (referred to as 'study area') and its natural, modified and potential critical habitats;
- Obtain a baseline biodiversity assessment for flora, avifauna, mammals, herpetofauna and aquatic fauna, as contained within current habitats across the study area;

- Understand how the proposed Project may adversely impact Key Biodiversity Areas (KBAs'), protected areas and internationally recognised areas of biodiversity significance, and how such impacts can be mitigated;
- Conduct a Critical Habitat Assessment (CHA), including:
    - Verifying presence or potential presence of Indigenous Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Data Deficient (DD) and range-restricted (RR) species, collectively referred to as species of conservation concern (SCC) (indicating potential suitable habitat(s) for such species);
    - Verifying the presence or potential presence of significant aggregations of congregatory or migratory species, as well as unique ecosystems or key evolutionary processes
    - Determine the minimum extent of buffer areas around sensitive species or habitats that need to be avoided, protected and monitored during all Project phases.
- Following the mitigation hierarchy and the Word Bank's Environmental and Social Framework, recommend potential mitigation methods to avoid and minimize negative effects on biodiversity and to contribute towards a No Net Loss or Net Gain target for biodiversity
- Prepare a comprehensive biodiversity management plan
- Environmental Impact Assessment: Using the findings and proposed mitigation measures of the biodiversity assessment report and biodiversity management plan update the Environment and Social Impact Study report for the Tog Wajaale-Berbera 271.6km 400kV double circuit transmission line.

Studies on habitats and species need to be conducted with a combination of desk-top and field studies. Desktop studies will investigate available data and scientific publications, guiding the preliminary mapping of focus areas where field studies need to be carried out at a more detailed level. Such information will inform a Critical Habitat Screening. High-level, land-cover and/or land-use maps that are currently available on international platforms will be compared to present and past Google-Earth imagery and client-provided preliminary layout geographical information systems (GIS) layers in addition to outcomes of the Critical Habitat Screening to inform an optimal sampling strategy.

Due to the migratory nature of some faunal species, as well as different emergence and –flowering times of flora, a wet-and dry season biodiversity field survey needs to be undertaken. Pending outcomes of the literature review, the optimal timing of the two surveys will be determined with one survey being carried out during the peak plant flowering/fruiting season. Due to the potential and anticipated dependence on several habitats on the availability of fresh water, the final interpretation of biodiversity baseline studies will also rely substantially on the outcomes of surface water quality studies.

Somaliland experiences four distinct seasons—Jilaal, Gu, Hagaa, and Deyr—characterized by rainfall patterns rather than temperature. Jilaal is a hot, dry season (December to mid-March), followed by the main rainy season, Gu (mid-March to June). The second dry season is Hagaa (July to mid-September), and the secondary rainy season is Deyr (mid-September to November).

Approach and Methodology of the Study

The study will essentially be carried out in two parts:

i. Baseline study in order to determine what flora & fauna species of concern might be found along the route in such sensitive areas through review of data from secondary sources like important data base (IBAT Business), using Satellite imaginary like GIS and GPS technique, IUCN Red data lists, other literatures/publications, various notifications/ gazette, forest/wildlife management plans and other studies, if available ii)

ii. Field study and collection of primary data along the route in protected/sensitive areas on key parameters like

a) Details of flora & fauna with special reference to endemic/threatened species population reported from the study area.
b) Description of habitat for such endemic/threatened species, ecology and like threat including the breeding, foraging pattern and its conservation plan/biodiversity action plan undertaken, if any
c) Socio-economic values of the affected area vis-à-vis biodiversity values.
d) Consultations with forest/wildlife officials, local communities, technical & managerial staff of Utility and survey team.

Output

The consultant will submit biodiversity assessment report including management plan broadly covering following aspects:

1. **Baseline status of diversity values project affected area**: Biodiversity assessment shall include details on forest/ tree cover with species and girth distribution, density/crown, description of understory and middle storey flora & fauna, if any, survey of fauna including species abundance, major habitats, current distribution etc. The study shall cover distribution of species in terms of seasonal issues related to breeding and feeding ecology and geographical issues related with the movement of wild species including species from cryptic habitats. This study shall identify any rare, endangered, threatened, and endemic species of flora and fauna present along the route. If such species are present, the assessment shall also include geographical features and other associations important for survival of these species and their role in community ecology.
2. **Study of ecological, environmental and socio-economic impacts:** The study should concentrate on the likely impacts on flora & fauna including their role in community ecology due to project activities. The study shall include impact on socio-economic aspect and also impact on ancillary activities such as provision of access roads to site, on other resources on biodiversity value in the affected area.
3. **Management Plan for bio-diversity conservation**: Based on the assessment, suitable management plan shall be prepared describing adequate compensation, mitigation and management measures with respect to identified impacts, if any. It should focus on measures for conserving important resources, recommending avoidance of impacts by modifying design of specific activities/components if practical, minimum compensatory measures required by GoI/State government for mitigation and/or management measures for indirect or induced impacts, institutional arrangements including co-ordination mechanisms that need strengthening, description of roles and responsibilities, and budgetary resources required.

- **Updated environment and social Impact Study report**: The consultant shall update the ESIA study report for the proposed Tog Wajaale-Berbera 271.6km 400kV double circuit transmission line based on the findings and proposed mitigation measures of the biodiversity assessment report and biodiversity management plan

Resource Requirements

It is anticipated that the assignment will require a Biodiversity Expert assisted by a field team of support professionals including Ecologist, Wildlife Biologist, and Zoologist & Environmental Management/Planning Specialist etc.

Completion Schedule & Final Deliverables

It is expected that the above study will be completed within nine (9) months from the date of issuance of contract. The consultancy firm will submit final report in both hard & soft copy with within 2 weeks of acceptance of report.