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National Water and Electricity Company

Government of The Gambia

THE GAMBIA ELECTRICITY RESTORATION AND MODERNIZATION PROJECT (GERMP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

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LIST OF ACRONYMS AND ABBREVIATIONS

DHHS	Department of Health and Human Services
DLS	Department of Lands and Surveys
DoF	Department of Forestry
DPPH	Department of Physical Planning and Housing
DWR	Department of Water Resources
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
EIB	European Investment Bank
E&S	Environmental & Social
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
ESS	(EIB) Environmental and Social Standard
ESS-GERMP	(GERMP) Environmental Safeguards Specialist
EU	European Union
FMS	Financial Management Specialist
GEAP	Gambia Environment Action Plan
GERMP	Gambia Electricity Restoration and Modernization Project
GESP	Gambia Electricity Support Project
IDA	International Development Association
IFC	(WB) International Finance Corporation
IR	Involuntary Resettlement
KMC	Kanifing Municipal Council
LRR	Lower River Region
M&ES	Monitoring and Evaluation Specialist
MoA	Ministry of Agriculture
MoLRG	Ministry of Lands and Regional Governments
MoPE	Ministry of Petroleum and Energy
MW	Mega Watt
NAWEC	National Water and Electricity Company
NBR	North Bank Region
NEA	National Environment Agency
NEMA	National Environment Management Act
NGO	Non-Governmental Organization
NIOSH	National Institute for Occupational Safety and Health
NRA	National Roads Authority
OP	[WB] Operational Procedure
PAP	Project Affected Person
PPE	Personal Protective Equipment

PCU	Project Coordination Unit
PIE	Project Implementation Entity
POP	Persistent Organic Pollutant
PS	Procurement Specialist
RAP	Resettlement Action Plan
ROW	Right of Way
RPF	Resettlement Policy Framework
SSS	Social Safeguards Specialist
SPO	Senior Programme Officer
STI	Sexually Transmitted Infections
TS	Technical Specialist
T &D	Transmission & Distribution
URR	Upper River Region
WCR	West Coast Region
WB	World Bank

EXECUTIVE SUMMARY

This Environmental and Social Management Framework (ESMF) is prepared within the context of The Gambia Electricity Restoration and Modernization Project (GERMP). Funded by the International Development Association (IDA), the European Investment Bank (EIB) and European Union (EU), The Gambia Government intends to improve the power generation and transmission capacity of the National Water and Electricity Company (NAWEC).

Project Objectives and Components

The GERMP's overall objective is to increase the power generation capacity, and to improve the efficiency of NAWEC's transmission network and ability to absorb variable renewable energy. The project is in early stages of preparation, and is expected to have a total cost of approximately $140 million, and will consist of activities organized into five components, as follows:

Project Component 1: On-grid solar photo voltaic plants with battery backup

i. Option: Development of one 10-20 MW solar photo voltaic (PV) plant within an area of about 23ha (probably in the West Coast Region)
ii. Option: Development of three to four solar PV plants of 3-6MW at various sites

Project Component 2: Transmission and distribution (T&D) upgrades

i. Installation of approximately 30km High Voltage (HV) 132kV T&D lines between Brikama and Kotu
ii. Establishment of new substations at Brikama, New Wellingara and Kotu
iii. Construction of a new dispatch center
iv. Upgrades of some primary and secondary substations
v. Construction of MV distribution lines on the North Bank Region

Project Component 3: Off-grid solar PV systems across the country

i. Installation of 5-10 kW solar PV systems in up to 700 schools
ii. Installation of 10-30kW solar PV systems in up to 100 health facilities

Project Component 4: Institutional strengthening and project implementation support for improved performance

i. Service contractor
ii. Owners' Engineer
iii. New IT system for NAWEC
iv. Studies including feasibility and safeguards instruments (excluding compensation)
v. Project Management Unit operational costs and relevant training
vi. Technical assistance to the Ministry of Petroleum and Energy in various areas

Project Component 5: Emergency response (short-term activities)

i. Emergency communication campaigns
ii. Replacement of incandescent bulbs in government offices to light emitting diode (LED) bulbs

iii. Replacement of incandescent bulbs in 5,000 street lights
iv. Urgent equipment rehabilitation

Besides Component 4, and sub component (i) of Component 5 all the other subproject activities will be subjected to environmental and social screening.

Potential Risks and Impacts

Some Project activities come with potential environmental and social risks. Nonetheless many of the activities and interventions can have positive impacts on the surrounding environment if they are well designed and implemented. With effective and efficient project implementation, the following benefits are expected:

- Employment during works and operation with its associated social benefits such as better living standards
- Economic development and income generation from improved electricity supply
- Economic emancipation of women through petty trading targeting Project workers
- Improved education and health service delivery
- Improvement of other public services such as communications, security
- Technology transfer and capacity building of NAWEC and related staff in managing the solar installations for sustainability; involvement of youth in unskilled activities
- Contribution to the reduction of greenhouse gas emissions and other air pollutants through renewable energy
- Installation of the first 132kV transmission lines in The Gambia shall significantly contribute to the reduction of the high losses in power transmission and provide readily available infrastructure for extra supply from future projects

However, as listed in the following table, there will be potential negative impact as well. It will be noted that the list is not exhaustive, and that additional site-specific impacts will be identified during the environmental impact assessment or audit studies, and will require consideration of additional, site-specific mitigation measures. The parameters used for the identification of the potential impacts are the physical environment (soil, water resources and air quality), biological environment (fauna and flora), and socioeconomic environment (health and safety, land use/ownership/community services, etc.).

Typology of GERMP Activities and Potential Impacts

GERMP Activity / Issue	Potential Impact	Some Mitigation Measures for Consideration in the ESIA
ON-GRID SOLAR FIELDS		
Land clearance and preparation	Involuntary resettlement of persons	Prepare and implement RAP
	Loss of cultural heritage from chance find during construction activities	Apply the procedures for chance find
	Felling trees	Replant equivalent area cleared with trees of the same species as prescribed in RAP
	Loss of birds	T&D line design must provide insulation and other protection to prevent bird strike kills
	Accumulation of waste and debris	Use appropriate waste management measures

	during construction	and do not burn
	Dust and soil erosion	Install erosion control measures; periodic sprinkling of water over ground to control dust
Non-existent or non-implementation of ESMPs including health and safety management	Effects from inadequately managed health and safety risks such as accidents relating to worksites, hazardous chemicals, electrocution, manual handling etc.	Develop and/or implement ESMPs including the health and safety mitigation measures
		Develop and implement programs to correct deficiencies and substandard conditions
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility
		Start awareness or refresher training on health and safety
	Importation of disease from workers	Use local unskilled labour to be stipulated in contracts.
		Educate workers on STIs
Quarrying for sand / gravel for construction	Secondary, off-site impacts on geology, landscape, ground water and agriculture	All local sites for extraction of earth materials shall be approved by the Geology Department
Waste Management during operation/decommissioning	Groundwater, soil and air pollution from improper waste management; health hazards and visual Impact	Develop and implement a site waste management plan in line with the ESMP
	Particular pollution from disused batteries, inverters and panels etc.	Equipment/structures will be disposed in an environmentally friendly manner as prescribed in the ESMP
Communication and Social Risk associated with imported workers	Social conflict, interruption of services, traffic detour routes and provisional road traffic routes, lack of GRM, lack of information, bad management of unskilled labour, irresponsible behaviour of workers and site workers	Establish social communication, install a social animator
		Implement GRM
		Raise awareness of worker on overall relationship management with local population, establish a code of worker conduct in line with international practice and strictly enforce them, including the dismissal of workers and financial penalties to the extent possible, if any, work camps should not be located in close proximity to local communities
OFF-GRID FACILITIES (SCHOOLS / HEALTH CENTERS)		
Land preparation for site of panels (if not installed on existing roof of buildings)	Accumulation of waste and debris during construction	Use appropriate waste management measures; do not burn
	Dust	Sprinkle water over ground to control dust
Quarrying for sand / gravel for construction (rooms for batteries, inverters)	Secondary, off-site impacts on geology, landscape, ground water and agriculture	All local sites for extraction of earth materials shall be approved by the Geology Department
Waste Management during operation/decommissioning	Groundwater, soil and air pollution from improper waste management; health hazards and visual Impact	Develop and implement a site waste management plan in line with the ESMP
	Particular pollution from disused batteries, inverters and panels	Equipment/structures will be disposed in an environmentally friendly manner as prescribed in the ESMP
Non-existent or non-implementation of ESMPs including health and safety management	Public and workplace health and safety risks are not being adequately managed both during construction and future maintenance, amongst others, leading to chemical spills and leaks from batteries contaminating soil, structures, and possibly groundwater	Develop and/or implement ESMPs including the health and safety mitigation measures
		Works in schools to be carried out during weekends to avoid public safety risks
		Develop and implement programs to correct deficiencies
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility
		Awareness / refresher training on health and safety

132kV TRANSMISSION AND DISTRIBUTION NETWORK		
Land preparation and installation of towers/poles (Excavation for foundation of poles; erecting new pole / removing /replacing pole	Involuntary resettlement of persons	Prepare and implement RAP
	Potential loss of cultural heritage from chance find during construction	Apply the procedures for chance find
	Felling trees	Replant equivalent area cleared with trees of the same species as prescribed in RAP
	Loss of birds	T&D line design must provide insulation and other protection to prevent bird strike kills
	Accumulation of waste and debris during construction	Use appropriate waste management measures and do not burn
	Dust and soil erosion	Install erosion control measures; periodic sprinkling of water over ground to control dust
	Onsite noise and vibration effects on workers and nearby PAPs	Maintain all work equipment at optimal operating condition to control noise and limit working hours between 8am and 6pm.
	Potential contamination (groundwater, air, soil) from accidental fuel/engine oil spill and leaks	train personnel in safe handling of hydrocarbons
	Damage/disruption of roads, existing T&D and other infrastructure during works	Avoid existing public services, carry out routine inspections, report and ensure prompt repair of any damage
		Give adequate notice to the public prior to disruption of services to allow works
Influx of workers	Importation of disease from workers	Use local unskilled labour to be stipulated in contracts.
		Educate workers on sexually transmitted infections
Line stringing or restringing	Onsite noise and vibration effects on the workers	Maintain all work equipment at optimal operating condition
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel to direct traffic
		Train and equip workers in safety while working at heights and working with high voltage (apply related guidelines in Annex 6)
Operation of Transmission Line	Exposure to electromagnetic fields	Prevent encroachment and enforce restrictions on activities in line corridor
	Risk of electrocution, injury or property damage	Post warning signs and design poles/towers to prevent access to conductors by unauthorized personnel
T&D line maintenance (mechanical clearing of vegetation, repair and change of T&D infrastructure)	Accumulation of bush and debris	Use appropriate disposal techniques; prohibit burning
	Potential contamination (groundwater, air, soil) from accidental fuel/engine oil spill and leaks	Train personnel in safe handling
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel prohibit or direct traffic
	Worker risks to health and safety	Train and equip workers in safety while working at heights and working with high voltage (apply related guidelines in Annex 6)
	Disruption of road traffic, existing T&D and other infrastructure during maintenance	Give adequate notice to the public prior to disruption of services to allow maintenance works
LAYING UNDERGROUND CABLES		
Excavation of trenches for cables	Involuntary resettlement of various activities along the route	Prepare and implement RAP
	Noise and vibration nuisance to surrounding communities	Maintain all work equipment at optimal operating condition to control noise and limit working hours between 8am and 6pm.
	Disruption of road traffic, existing T&D and other infrastructure during works	Give adequate notice to the public prior to disruption of services to allow works

		Liaise with the National Roads Authority prior to works
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel prohibit or direct traffic
	Potential loss of cultural heritage from chance find during construction activities	Apply the procedures for chance find
TYPICAL IMPACTS DURING CONSTRUCTION OF NEW SUBSTATIONS / UPGRADING OF EXISTING SUBSTATIONS		
Land clearing and preparation: bulldozing, excavating and backfilling with earth; transportation and mixing of materials	Felling trees	Replant equivalent area cleared with trees of the same species as prescribed in RAP
	Accumulation of waste and debris during construction	Use appropriate waste management measures and do not burn
	Dust and air pollution	Periodic sprinkling of water over ground
		Provide protective apparel to workers
	Potential loss of cultural heritage from chance find during construction	Apply the procedures for chance find
	Loss of birds	T&D line design must provide insulation to prevent bird strike kills
Non-existent or non-implementation of ESMPs including health and safety management	Workplace health and safety risks are not being adequately managed both during construction and future maintenance, amongst others, leading to chemical spills and leaks from transformers; Workers exposed to risk of electrocution because of old or poorly-maintained equipment	Develop and/or implement ESMPs including the health and safety mitigation measures
		Develop and implement programs to correct deficiencies
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility
		Start awareness or refresher training on health and safety
		Maintain database to judge compliance with mitigation and monitoring plans
	Importation of disease from workers	Use local unskilled labour to be stipulated in contracts.
		Educate workers on sexually transmitted infections
Hazardous substance contamination	Workers and community exposed to risks	Obtain expert advice in developing a remediation plan
	Contamination may spread offsite through air, surface or groundwater, or improper disposal	Contain the contamination and restrict access to contaminated areas and implement the plan
		Test local water supplies and, if affected, provide alternative sources during remediation
Inadequate security provisions for the facility	Social conflict between the facility and the surrounding community; vandalism or sabotage	Establish effective, ongoing community relations programme; Apply Grievance Redress Mechanism
	Risk of electrocution or injury from contact with high voltage equipment	Install fences and other security features around all dangerous or vulnerable facilities
		Employ security personnel, ideally from local area
		Sensitize and post warning signs
REPLACEMENT OF BULBS IN GOVERNMENT BUILDINGS AND STREET LIGHTS		
Non-existent or non-implementation of ESMPs including health and safety management	Public and workplace health and safety risks are not being adequately managed both during works	Develop and/or implement ESMPs including the health and safety mitigation measures
		Carry out awareness training on health and safety; apply guidelines on working at heights
		Provide safety signs and warning sites
		Works in government office to be carried out during weekends to avoid public safety risks
	Improper management of replaced bulbs, packaging materials etc.	Waste must be properly managed according to the plan

The relevant legal and institutional frameworks

The national legal and institutional frameworks, WB safeguards policies, and the EIB safeguards policies that the ESMF is satisfying and the project will comply with are indicated below.

Key Gambian policies and legislation governing the GERMP are:

Policies

- Gambia Environment Action Plan, GEAP (2009-2018)
- National Energy Policy (2014 – 2018)
- Forestry Policy (2010-2019)
- Wildlife Sector Policy (2013 – 2020)
- National Health Policy (2012-2020)
- National Climate Change Policy (2016 – 2025)
- Gambia National Gender & Women Empowerment Policy (2010– 2020)
- National Youth Policy (2009 – 2018)
- National Strategic Environmental Assessment Policy (2017- 2021)

Acts and Regulations

- National Environment Management Act, NEMA, 1994
- Environmental Impact Assessment Regulations, 2014
- The Forest Act, 1998
- The Anti-littering Regulations, 2007
- Local Government Act, 2002
- State Lands Act, 1990 (Amended 2008)
- Land Acquisition & Compensation Act, 1990
- Physical Planning and Development Control Act, 1991
- Development Control Regulations, 1995
- Public Health Act, 1990
- The Gambia Roads and Technical Services Authority Act, 2003

International policies and treaties ratified by The Gambia that are most relevant to the GERMP include:

- ECOWAS Energy Protocol A/P4/1/03 of 2003
- United Nations Convention on Biological Diversity 1994
- UN Convention to Combat Desertification (UNCCD) 1996
- Stockholm Convention on Persistent Organic Pollutants (POPs) 2004
- UN Framework Convention on Climate Change (UNFCC) 1994

Relevant institutions to be involved in the implementation and monitoring of GERMP ESMF are:

- Ministry of Environment, Climate Change and Natural Resources (MECCNAR)
- National Environment Agency (NEA)
- Ministry of Petroleum Energy (MoPE)
- National Water and Electricity Company (NAWEC)
- Public Utilities Regulatory Authority (PURA)
- Ministry of Lands and Regional Government (MoLRG)
- Department of Forestry (DoF)
- Ministry of Health and Social Welfare (MoH&SW)
- Ministry of Basic and Secondary Education (MoBSE)

World Bank Environmental and Social Safeguards Triggered by GERMP

World Bank Safeguards Operational Policies (OP)	Triggered	Remarks
OP 4.01 Environmental Assessment, including public participation	Yes	Preliminary evaluation has identified potential negative environmental and social impacts, thus, there is need for environmental assessment to ensure appropriate mitigation measures are put in place during all stages of the Project
OP 4.04 Natural Habitats	Yes	There are native species and natural habitats in the study area
OP 4.12 Involuntary resettlement of populations	Yes	There is likelihood of resettlement or loss of earnings from the Project
OP 4.36 Forests	Yes	Three forests may be affected by the T&D component

In addition, the World Bank's Environmental, Health and Safety (EHS) Guidelines applicable include the EHS General Guidelines and more specifically, the EHS Guidelines for Electric Power Transmission and Distribution.

European Investment Bank Environmental and Social Standards Triggered by GERMP

EIB Environmental and Social Principles and Standards	Applicability to GERMP	Remarks
ESS 1 Assessment and management of environmental and social Impacts and risks	Yes	The need for environmental assessment confirmed due to initial potential negative impacts identified
ESS 2 Pollution Prevention and Abatement	Yes	Potential pollution mainly from waste generation and limited, localised air pollution during works. Mitigation included in overall ESMP to be outlined in ESS1.
ESS 3 Standards on Biodiversity and Ecosystems	Yes	Two Forests fall within the study area and shall be considered in the ESIA
ESS 6 Involuntary Resettlement	Yes	There is likelihood of resettlement or loss of earnings from the Project
ESS 8 Labour Standards	Yes	Applies to all workers engaged by the Project during all stages
ESS 9 Occupational and Public Health, Safety and Security	Yes	There are potential health, safety and security issues during all stages

Framework Environmental and Social Management Plan (Framework ESMP) - Guidelines for the preparation of ESMP

The GERMP should develop ESMPs for subprojects and these should be user friendly. The ESMP should be a practical, action oriented plan specifying measures to be taken to address the negative environmental impacts. It should also specify the actions, resources and responsibilities needed to implement the agreed actions and details on key social and environmental management and monitoring performance indicators.

Further, the ESMP should ensure that the costs of implementing the ESIA report recommendations are budgeted into the total GERMP costs. The ESMP should cover the following aspects:

i. Summary of Impacts: Anticipated adverse environmental impacts should be identified and summarized as well as their relationship to social impacts and the appropriate mitigation measures.

ii. Description of mitigation measures: The mitigation measures proposed for the various impacts should be described in relation to the corresponding impacts while stating the conditions under which they are required.

iii. Consultations: Adequate description of the public participation and consultations should be done and justified.

iv. Description of monitoring program: A detailed monitoring program should be described in the ESMP, listing environmental performance indicators and their link with impacts and mitigation measures. The ESMP should also describe the parameters to be measured, methods to be used, sampling location and frequency of measurements, detection limits and a clear definition of thresholds that indicate the need for corrective measures. Monitoring and supervision schedules should be clearly stated and agreed to ensure timely detection of needs for remedial action and also provide information on the level of compliance with ESMP in accordance with the relevant safeguards. These arrangements must be clearly stated in the project implementation/operations manual to reinforce project supervision.

v. Legal requirements and bidding/contract documents: The ESMP should be incorporated in all legal documents to enforce compliance by all contractors participating in the project. The ESMP should be summarized and incorporated in the bidding and contract documents.

vi. Institutional arrangements: The ESMP should clearly state who is responsible for monitoring, execution of remedial action and the reporting order and format to allow for a defined channel of information flow. It should also recommend institutional strengthening for relevant agencies and the funding authorities for the various activities.

vii. Capacity development and training: To support timely and effective implementation of environmental project components and mitigation measures, the ESMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the

agency and ministry level. If necessary, the ESMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the ESMP provides a specific description of institutional arrangements i.e. who is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most ESMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

viii. Implementation Schedule: The frequency, timing and duration of mitigation measures and monitoring should be stated in the implementation schedule. Links between mitigation measures and development of relevant institutions and legal requirements of the project should be stated.

ix. Reporting: The order of information flow as it concerns monitoring reports should be clearly defined. The relevant officers to receive these reports should be those who have authorities to facilitate implementation of the results of the monitoring. These reports should also be communicated to the Bank via media to be agreed and specified in the ESMP. Adequate arrangements should be made by the Bank to facilitate the circulation of the ESMP through the selected means.

Environmental and Social Assessment and Approval Process for GERMP Activities

GERMP's subprojects environmental and social management procedure, from the screening through monitoring and evaluation of the specific ESMP is summarized in Table below.

Summary of the ESIA Process

Activity	Authority / Responsible Person
Completion of the ESIA Screening Form	NAWEC / GERMP Project Coordinator with assistance from the Project Environmental Officer
Screening and classification	NEA / Senior Program Officer-ESIA
Scoping and development of study TOR	Coordinated by NEA / ESIA Working Group
Recruit ESIA Consultant to carry out study including stakeholder consultation	NAWEC / GERMP
Prepare ESIA and ESMP	Consultant
Review of draft ESIA/ESMP report	Coordinated by NEA / ESIA Working Group, TACs, relevant Government institutions, private sector, NGOs and Project affected communities
Environmental Approval is issued if satisfactory	NEA / Executive Director
Share ESMPs with the Lenders	NAWEC/GERMP

Activity	Authority / Responsible Person
Disclosure of site-specific ESMPs. Coordinate the development of complimentary studies recommended by the ESIA/ESMP, such as Resettlement Action Plans.	NAWEC / GERMP
Include the relevant ESMP issues into contractor bid documents	NAWEC
Environmental and Social monitoring	Coordinated by NEA / ESIA Officers, Environmental Inspectors, relevant Regional Technical Advisory Committees.
Reporting of ESMP implementation	NAWEC/GERMP

Consultations and Public Participation

Public participation in the GERMP will involve a combination of stakeholder consultations; it will involve local leaders, municipal agencies and authorities, NGOs and community-based organizations. The consultations shall be based on a communication strategy that seeks to increase transparency, public understanding, and citizen involvement in the development and implementation of the ESMF/ESMPs. The strategy will have clear and consistent messages to be delivered to the public through the following methods:

a) Public Meetings
b) Individual (face–to-face) Meetings
c) Use of Media Outlets including websites
d) Traditional Drama Presentations
e) Participation in Project Activities

The consultations mentioned shall, in all cases, take due consideration of representativeness and inclusion of women and marginalized or vulnerable groups. However, in view of the potential difficulties these groups sometimes have in making their voices heard in large open meetings, special arrangements shall be made at group and individual levels to reach out to them to create the necessary awareness and collect their views. In addition, all meetings will be in the local languages understood by the communities.

The consultations and discussions will be supplemented by the disclosure of key documents (for example, this ESMF and the subsequent ESMPs). Disclosure will take place before appraisal of the Project for investment.

Logs of all consultations (including dates, persons attending, main purpose of consultation, and a summary of the proceedings) will be maintained by the PCU/Consultant. These activities will take place through the sub-activity cycle, including post-construction monitoring.

In developing this ESMF, widespread stakeholder consultation and participation had taken place with all affected and interested parties. The dates, venue and persons met are indicated in Annex 2.

ESMF Implementation Arrangements

NAWEC will be the implementing agency of the GERMP and together with other stakeholders will need to identify all institutions and arrangements that will contribute meaningfully to the effective and efficient implementation of the Project. At this project preparatory stage no institutional structures have been established yet, notwithstanding, to coordinate the preparation of the Project and its preliminary safeguards studies, the Project Coordination Unit of the existing Gambia Electricity Support Project (GESP) under NAWEC was appointed.

Specifically the institutional arrangement for the implementation of the Framework ESMP will consist of the following:

- Project Steering Committee (PSC)
- Project Coordination Unit (PCU)
- Local Authority
- National Environment Agency (NEA)

Project Steering Committee (PSC)

A GERMP Project Steering Committee (PSC), chaired by the Permanent Secretary, Ministry of Petroleum and Energy should be created to oversee the activities of the GERMP. Given the similarities in functions, the membership of the GESP PSC could well be the PSC for the GERMP to oversee implementation of the ESMF, RPF and subsequent ESMPs and RAPs. The Permanent Secretary, Ministry of Lands and Regional Administrations shall be on the GERMP PSC due to the importance of the potential land ownership / compensation issues that this Project may face.

The Project Steering Committee and the Management of NAWEC shall have overall oversight role and responsibility to include:

- Oversee and check the implementation of the GERMP safeguard documents including the ESMF, ESMPs, RPF and RAPs
- Review and address all issues relating to compensations, disputes
- Closely monitor the progress reports
- Visit the Project sites periodically to ensure progress of work and other activities

Project Coordination Unit (PCU)

Currently, the GESP Project Coordination Unit is overseeing the preparation of the Project and it is assumed that at the end of the preparatory phase a more permanent GERMP PCU structure will be in place to oversee the implementation of the project. Such a body shall be responsible for the ESMF implementation process. It will be responsible for the oversight of implementation of the ESMF and provide an enabling environment for the same.

The GERMP PCU will consist of the following:

- Project Coordinator
- Environmental Safeguards Specialist (ESS-GERMP)

- Social Safeguards Specialist (SSS)
- Procurement Specialist (PS)
- Technical Specialist (TS)
- Financial Management Specialist (FMS)
- Monitoring and Evaluation Specialist (M&ES)

The tasks and responsibilities of the GERMP PCU shall include:

- Recruit an environmental safeguards specialist and a social safeguards specialist for the GERMP to be responsible for all the environmental and social aspects of the Project including coordination and monitoring of the implementation of the ESMF and the Project's grievance redress mechanisms amongst others.
- The social safeguards specialist shall identify safeguards focal points at the NAWEC Regional offices that will be trained to support and report during project implementation.
- Responsibility for completion of EIA Screening Forms and liaison with the NEA in ensuring subproject environmental assessment and plans are developed and implemented.
- Work with the technical and procurement teams to ensure that contract documents contain environmental and social clauses that contractors must fully implement.
- Coordinate internal monitoring and evaluation based on monitoring plans.
- Coordinate Project related grievance redress activities.
- Where applicable, facilitate Project related activities of partner stakeholders.

Local Authorities

Local Government Authorities play a major role in land administration as they maintain registers of properties in their jurisdiction for rating purposes and in this way they have records of ownership of land albeit not always very accurate. Thus, their role in the implementation of safeguard policies, including ESMPs and RAPs, is important.

Similarly, the Offices of the Governors process and prepare all applications for leases within their jurisdiction. The Governors are the Chairpersons of their respective Regional Physical Planning Authorities. Like the Local Government Authorities, the offices of the Governors play an important role in social and environmental assessment. Furthermore, Governors, as Chairpersons of Technical Advisory Committees (TACs), have the responsibility of monitoring the implementation of ESMPs and resettlement plans at regional levels.

National Environment Agency (NEA)

The NEA has a monitoring and supervisory role and shall be responsible for confirming the results of the screening process, reviewing and clearing subproject-specific safeguard instruments and conducting compliance monitoring, with national laws and regulations, as well as the lenders' policies and procedures. In addition the NEA shall provide technical support and participate in training and sensitization of stakeholders to enhance understanding of the national, WB and EIB environmental and social safeguard instruments.

Specific Roles and Responsibilities

Implementation of the ESMF is the main responsibility of the PCU. Other parties may have roles to play although these have to be initiated by the PCU or NEA as the coordinating and oversight bodies respectively.

As the purpose of the ESMF is mainly to guide future environmental and social management of subprojects, more specific roles and responsibilities shall be identified in the ESMPs. Notwithstanding, certain important entities are crucial at the preparatory stage mainly for technical advice and regulatory information provision; these may include the Department of Forestry who eventually will be responsible for all forest related issues; the Department of Physical Planning and Housing, and the Department of Lands and Surveys for resettlement issues; and the Ministries of Health and Basic Education for coordination of the sector components. The Local Authorities and project affected persons are also relevant in project planning.

Project Coordinator

A Project Coordinator will be in place to oversee the implementation of the project. He will have the responsibility for initial screening, and ensuring subproject safeguard required studies and documents are developed and implemented.

Environmental Safeguards Specialist (ESS-GERMP)

An environmental safeguards specialist will provide management for all environmental issues and activities including implementation of the ESMF and ESMPs. Progress reports will be submitted to the PCU for transmission to the Project Steering Committee (PSC) and NAWEC.

Social Safeguards Specialist (SSS)

The social safeguards specialist will be required to provide periodic reports on progress on social issues in respect of the identification and acquisition of land as they relate to implementation of RAPs etc., progress in the compensation of PAPs and the level of their participation in project activities. These reports will be submitted to the PCU for transmission to the Project Steering Committee (PSC) and NAWEC.

Procurement Specialist (PS)

The PS is responsible for purchasing and making project equipment and materials available for timely completion of subprojects and ensuring that environmental assessments and plans are developed and implemented.

Technical Specialist (TS)

The Technical Specialist will integrate the construction phase mitigation measures and environmental and social clauses in the bidding documents; ensure that the contactor prepares his ESMP, gets it approved and integrates the relevant measures in the works breakdown structure or execution plan. In collaboration with ESS-GERMP, SSS, FS and PS the Technical Specialist will ensure that contract documents contain environmental and social safeguard clauses that contractors must fully implement.

Financial Management Specialist (FMS)

The Financial management specialist is responsible for the day-to-day management of financial resources of the Project.

Monitoring and Evaluation Specialist (M&ES)

The Monitoring and Evaluation Specialist coordinates internal monitoring and evaluation of subprojects based on monitoring plans.

Monitoring and evaluation are fundamental components of the ESMF and they will be carried out on a continuous basis. Monitoring of the ESMF implementation process is normally the responsibility of the PCU whereas evaluation is undertaken by an external agency.

Summary of Roles and responsibilities for the implementation of the Framework ESMP

No	Steps/Activities	Responsible	Collaboration	Service Provider
1.	Identification and/or siting of the subproject	NAWEC Management	local authorities; Department of Lands and Surveys;	
2.	Screening, categorization and identification of the required instrument (use the national EIA procedure)	ESS-GERMP on the PCU	NEA; local authority; SSS;	Consultant
3.	Approval of the classification and the selected instrument by the NEA	Project Coordinator	ESS-GERMP; SSS;	NEA; World Bank; EIB
4.	Preparation of the safeguard document/instrument (ESIA, Env. Audit, ESMP, etc.) in accordance with the national legislation/procedure (taking into account the Bank policies' requirements)			
	Preparation and approval of the ToRs	ESS-GERMP; PC	NEA	The World Bank; EIB
	Preparation of the report	ESS-GERMP	Procurement specialist; SSS Local authority; NEA	Consultant
	Report validation and issuance of the permit (when required)	ESS-GERMP;	PS; SSS; TACs/Local authority; NEA	Consultant; The World Bank; EIB
	Disclosure of the document	PC/ESS	NEA; NAWEC Management	Media; World Bank; EIB
5.	(i) Integrating the construction phase mitigation measures and E&S clauses in the bidding document prior to being advertised; (ii) ensuring that the contractor prepares ESMP and gets it approved and integrates the relevant measures in the works breakdown structure or execution plan.	Technical Specialist on the PCU	ESS-GERMP; PS; NAWEC; PSC; Engineer; Contractor	Contractor; NEA
6.	Implementation of the other safeguards measures, including environmental monitoring (when relevant) and sensitization activities	ESS-GERMP;	SSS; PS; TS; FS; M&ES; NEA and EIA Working Group; NGO; Local authority; PSC; General public	Consultant; National specialized laboratories;
	Oversight of safeguards implementation (internal)	ESS-GERMP/PC	M&ES;FS; PSC; Local authority;	NAWEC MD and Management

7.	Reporting on project safeguards performance and disclosure	PC	M&ES; ESS-GERMP; SSS; PSC	NAWEC MD and Management
	External oversight of the project safeguards compliance/performance	NEA	PC; M&ES; ESS-GERMP; SSS; PS; PSC	NAWEC MD and Management
8.	Building stakeholders' capacity in safeguards management	ESS-GERMP	PC; SSS; PS; NEA	Consultant Other qualified public institutions
9.	Independent evaluation of the safeguards performance (Audit)	ESS-GERMP	SSS; PS; NEA	Consultant

Disclosure of the Safeguard Documents

Disclosure of the safeguard documents shall include:

(i) Distribution of as many copies as possible to different institutions, affected communities, and at strategic locations accessible to all stakeholders for comments and suggestions and referencing.

(ii) Distribution to individuals and representative persons like Members of the National Assembly (NAMs), Regional Governors, Village Councillors, Village Development Committee members etc.

(iii) Conducting meetings to discuss the plans at the Project affected sites

(iv) The final ESMF and subsequent ESIA reports will be made available in the local communities affected by the Project.

(v) There is no demand and need for translation of documents into local languages as the target audiences do not have the literacy capacity to read the translated documents. Therefore, meetings and discussions will be held in local languages used by the communities to develop understanding of the Project and resettlement issues where there is demand.

(vi) The ESMF and ESMPs shall also be disseminated through the NAWEC and World Bank websites.

Institutional Capacity Enhancement

In the course of the consultations, it was apparent that most of the potential partners in ESMF implementation do not have good background knowledge and information on the environmental issues most especially in impact assessments.

Specifically, it will be necessary to strengthen the capacity of the staff of NAWEC and other collaborating institutions on the safeguards; on the required management procedures and their roles in implementation and monitoring. A training workshop for NAWEC and its partner agencies is proposed to cover Project introduction, potential impacts, specific law, roles and capacity in ensuring sustainability of the Project. This may be held before identification of site-specific activities to ensure effective contribution during the process of subproject preparation, ESIA and ESMP development. The technical advisory committees

located within the offices of the Mayors and Regional Governors shall be sensitized to this effect. NAWEC regional officers and safeguards focal points must also be trained on environmental and social safeguards management relevant to the Project.

The training program should aim to provide attendees with general understanding of environmental and social management issues, safeguard processes, relevant environmental policies and legislation, and the basic approach to implementing the guidelines provided in ESMF/ESMP and the RPF/RAPs. Others will include the use of appropriate tools such as the screening forms, health and safety management, and internal monitoring and evaluation procedures.

In addition to the above, and in order to comply with best practices and international standards, contractors and labourers should be provided with information, knowledge and skills. These should focus not only on the construction phase but also operational phase of the Project.

Grievance Redress Mechanisms for Complaints and Conflict Prevention and Resolution

NAWEC/Government of The Gambia (GoTG) recognises that where compulsory possession is to be carried out, the process is controlled by law which will be abided by. Any forced evictions that may be required will be undertaken solely for the purpose of promoting the general welfare and that full, fair and timely compensation, rehabilitation and non-regression of rights (including the right to an adequate standard of living) will be fully ensured.

Notwithstanding, grievances shall be referred to a grievance resolution committee to be resolved using traditional and administrative mechanisms, or the law courts at national, regional and community levels. However, this grievance mechanism will be designed to be legitimate and trusted by all relevant partners including the PAPs in particular.

The GERMP Grievance Resolution Committee (GGRC) described below, shall be independent, free and in line with the requirements set out in EIB ESS 10. In particular, where a complaint is not admissible or relevant, the GGRC will refer the aggrieved parties to the relevant authority or other grievance process. The grievance mechanism process will not impede access to independent judicial or administrative remedies outside the specific context of the GERMP; quite the contrary, it should complement and facilitate access to the independent courts.

Grievances and conflicts need to be addressed immediately at the community level. The PCU is to be notified of any disputes in the project zone. Project field staff should work closely with the communities and the community leaders to clarify and resolve any misunderstanding that could give rise to conflicts.

Where the dispute cannot be resolved at the community level, the affected persons or party shall be advised to lodge a complaint to the specified GGRC. The Project field staff shall advise the party on how and where to file the complaint. To ensure reports are user friendly and complete for easy comprehension by the GGRC, a standard grievance report form may

be developed by the social safeguards specialist to include name, address and contact details of complainant, date, and nature of complaint etc.

Where the traditional and administrative procedures fail to resolve disputes, the aggrieved party has the right to take the matter to the courts in accordance with the Constitution of The Gambia, other national laws, and the Lenders' policies.

The GERMP Grievance Resolution Committee (GGRC)

A GERMP Grievance Resolution Committee (GGRC) is proposed to be set up to inform and coordinate the relevant stakeholders and provide resources for resolution activities. The GGRC, through the Project Coordinator (Chair), shall maintain all records from complaint to final decision for future reference. The GGRC shall also ensure public participation and consultation is a part of the process at all times to promote understanding and prevent unnecessary complaints and disputes.

Membership of the GGRC shall include permanent members, whilst others will be coopted based on the region from which the grievance report comes from. For example Kotu falls under Kanifing Municipality Mayor whilst Brikama falls under the Governor of WCR. The following membership is proposed:

- The GERMP Project Coordinator (Chair)
- The GERMP Social Safeguards Specialist (Secretary)
- The GERMP Environmental Safeguards Specialist
- Representative of the Ministry of Lands and Regional Governments
- The Governor or Mayor (depending on location)
- The Seyfo / Chief of the Districts (depending on location)
- Representative of the Village Development Committee (VDC)
- Representative of the PAPs
- Relevant local NGO

Grievance Redress Process

The structure or steps of the grievance mechanism shall comprise of:

- Receive, register and acknowledge complaint
- Screen and establish the foundation of the grievance
- Implement and monitor a redress action
- Advise for a judicial proceedings as last resort if necessary
- Document the experience for future reference

Summary of the grievance redress process with suggested timeframe and responsibilities.

Step	Process	Description/Required Action	Completion Timeframe	Responsible Agency/Person
1	Receipt of complaint	Document date of receipt, name of complainant, nature of complaint	1 day	PCU (specifically social safeguards specialist)
2	Acknowledgement of grievance	By letter, email, phone	1-5 days	Social safeguards specialist at the PCU
3	Screen and establish the foundation / merit of the grievance	Visit the site; listen to the complainant/community; assess the merit	7-14 days	GGRC members including the Project safeguard specialists, complainant and his/her representative
4	Implement and monitor a redress action	Where complaint is justified, identify and carry out the redress	21-30 days or at a time specified in writing to the complainant	Project Coordinator, social-, environmental safeguard specialists to coordinate redress actions
5	Extra intervention for a dissatisfied scenario	Review the redress steps and conclusions, provide intervention solution	2-4 weeks of receiving status report	Project Coordinator GERMP and GGRC to review and react
6	Judicial adjudication	Take complaint to court of law	No fixed time	Complainant
7	Funding of grievance process	GGRC logistics and training, redress compensation, court process	No fixed time	GERMP

ESMF Monitoring

The proposed monitoring program for the ESMF is outlined to check progress and measure success rate of implementation. The Project shall aim to support and facilitate monitoring by the identified stakeholders.

Activity	Coordination / Implementation Responsibility	Responsibility For Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
Preparation of subproject ESIA/ESMPs	PCU	- PSC (internally) - NEA (externally)	Monthly as required	Before any subproject activity	ESIA statements and ESMP for all subprojects
Sensitization workshop for NAWEC and all partners on the GERMP ESMF and other safeguards requirements	ESS-GERMP				No. of workshops No. of stakeholders Sensitized
Training of NAWEC regional staff on safeguards management	ESS-GERMP				No. of staff trained No. of Regions covered

Public awareness	ESS-GERMP				No. of public sensitization programmes
Environmental auditing	PCU			After year 4	Environmental Audit Report; Number of reports on implementation of the audit report

Estimated budget for Implementation of the ESMF. The budget for implementation of the ESMF including subproject ESMP development, sensitisation and training, and monitoring and auditing is US$189,000.00 as stated below.

No.	Activity	Cost $US
1	Preparation of subproject ESIA/ESMPs	150,000.00
2	Sensitization workshop for NAWEC and partners (including TACs) on the GERMP ESMF	4,000.00
3	Training of NAWEC regional staff on safeguards management	5,000.00
4	Public awareness	2,500.00
5	ESMF Monitoring	12,500.00
6	Environmental auditing	15,000.00
	TOTAL	**189,000.00**

Conclusions

As the ESMF has outlined the main potential impacts of the GERMP, preparation of the subprojects will bear in mind such issues to prevent or reduce negative environmental and social impacts. Strategies that will be employed include:

- NAWEC shall develop standards for T&D infrastructural development for safety and consistency.
- NAWEC will consider Projects in a coordinated and collaborated manner to reduce staff and other resource expenditure on various similar Project proposals by both NAWEC and private investors.
- Alternative sites, designs and technologies shall always be well explored by NAWEC to avoid negative impacts, including resettlement.
- As suggested by the NEA, NAWEC shall aim to start the ESIA process early in project /subproject development to allow enough time for the process to be completed without delay.

CHAPTER 1: INTRODUCTION

1.1 Project Background

With support from the International Development Association (IDA), the European Investment Bank (EIB), and the European Union (EU), (collectively, "the Lenders"), the Gambia Government intends to improve the power generation and transmission capacity of the National Water and Electricity Company (NAWEC). In this process, it is preparing an energy project called "The Gambia Electricity Restoration and Modernization Project (GERMP)", which will specifically involve electricity generation through renewable sources (on-grid solar energy); reinforcement of the power transmission capacity; expanding off-grid electricity access to schools, health facilities, and industrial establishments across the country; project implementation support and some related short-term activities.

1.2 Project Objectives

The overall objective of the GERMP is to improve power generation capacity and efficiency of NAWEC's transmission network in order to increase access to electricity for socio-economic development.

With a total cost of approximately $140 million, the GERMP which is in its preparatory stage consists of five components; with proposed activities that are likely to cause significant negative environmental and social impacts at varying degrees as identified during initial evaluation.

The objective and justification for this project essentially is derived from the national energy policy, which among other things, is promoting extension and quality of the Government's energy supply nationally, as well as to include diversifying the sources of energy.

This stems from the fact that energy is central to the Gambia's many economic, social and environmental concerns; Government has realized that access to sustainable sources has a profound impact on multiple aspects of Gambian society such as poverty, problems of health, gender inequity and environmental degradation.

1.3 Objectives and Rationale for the ESMF

The objectives of this ESMF are to ensure that the Project is implemented in an environmentally and socially sound manner, from conception, to ensure minimal and controlled negative impacts on the population it aims to serve. It essentially evaluates the potential environmental and social impacts of the proposed Project activities; however, since the exact sites are not known at this preparatory stage, an ESMF is necessary to outline potential impacts and requirements that may lead to alternatives being considered. Thereafter, the best options chosen shall eventually be fully addressed in the environmental and social impact assessments (ESIAs) once the sites are known.

Preparation of the ESIAs, to be guided by the ESMF, shall include environmental and social management plans (ESMPs) that specifically identifies all potential impacts and mitigation measures, costs, responsibilities for mitigation and monitoring. Based on the assessment, related studies such as Resettlement Action Plans (RAPs) may also be recommended to accomplish the safeguards requirements. The ESIA procedures applicable to eventual sub-projects are described in Chapter 6.

For this Project, rather than waiting for the ESIA to necessitate a RAP, preliminary appraisal had shown that there is high probability of involuntary resettlement, thus the formulation of a Resettlement Policy Framework (RPF) at the design stage to guide future development of RAPs.

This ESMF provides the environmental and social due diligence principles and procedures for sub-projects through:

- Description of baseline conditions and linkage to proposed activities that may cause potential impacts
- Description of implementation procedures in relation to screening, scoping, preparation of ESIAs and ESMPs, submission, review and approval of study reports
- Outline subsequent mitigation and monitoring procedures during implementation
- Review of legal and regulatory instruments that the Project would be based on, including the Lenders' environmental and social requirements and safeguards.
- Identification of roles and responsibilities of the various stakeholders, including beneficiaries, in developing implementing the ESMF
- Recommendation of capacity building and training measures to ensure that both the ESMF and subsequent sub-project safeguards procedures can be effectively implemented
- Provision of an estimated budget for implementation of mitigation measures, including preventive, recommended in the ESMF
- Recommendation of any necessary related or further studies and investigations, for full compliance.

The ESMF shall comply with the relevant Gambian laws, World Bank (WB) Safeguards Operational Procedures (OP) and the European Investment Bank (EIB) Environmental and Social Standards (ESS).

1.4 Method used in Developing this ESMF

The approach used in the development of this ESMF is a combination of literature review, consultations and field visits to known, and some identified sample sites.

Literature reviewed includes background study to the GERMP, similar projects such as the Gambia Electricity Support Project in The Gambia and some in other countries; and relevant regulatory instruments of The Gambia, World Bank and the European Investment Bank.

Some of the known potential sites include the 23 ha plot of land at Jambur for the on-grid solar field and the route for the 132 kV transmission and distribution lines. As none of the

countrywide off-grid solar project sites have been identified, a selection was made from across the country for each of the proposed sectors (a school in Farafenni and health facility in Kuntair). These case studies are described in Annex 2. All these sites were visited paying particular attention to the socio-economic and bio-physical environmental characteristics of the various areas. The process was participatory, drawing on the local knowledge of interested and affected persons.

Other institutions and stakeholders who are expected to play a major role in the project were also consulted to determine their roles and status of preparedness in implementing the ESMF and subsequent ESMPs.

Institutions consulted include NAWEC, the National Environment Agency (NEA), Ministry of Petroleum and Energy (MoPE), Department of Forestry amongst many others; the list of persons met is stated in Annex 1 whilst a summary of the consultations with this group of interviewees is in Annex 2.

CHAPTER 2: PROJECT DESCRIPTION

With a total cost of approximately $140 million, GERMP consists of five components:

Component 1 (IDA / EIB financing): Development of a 10-20 MW solar photo voltaic (PV) plant. This will consist of an on-grid PV plant, which potentially will include battery back up to minimize grid absorption concerns.

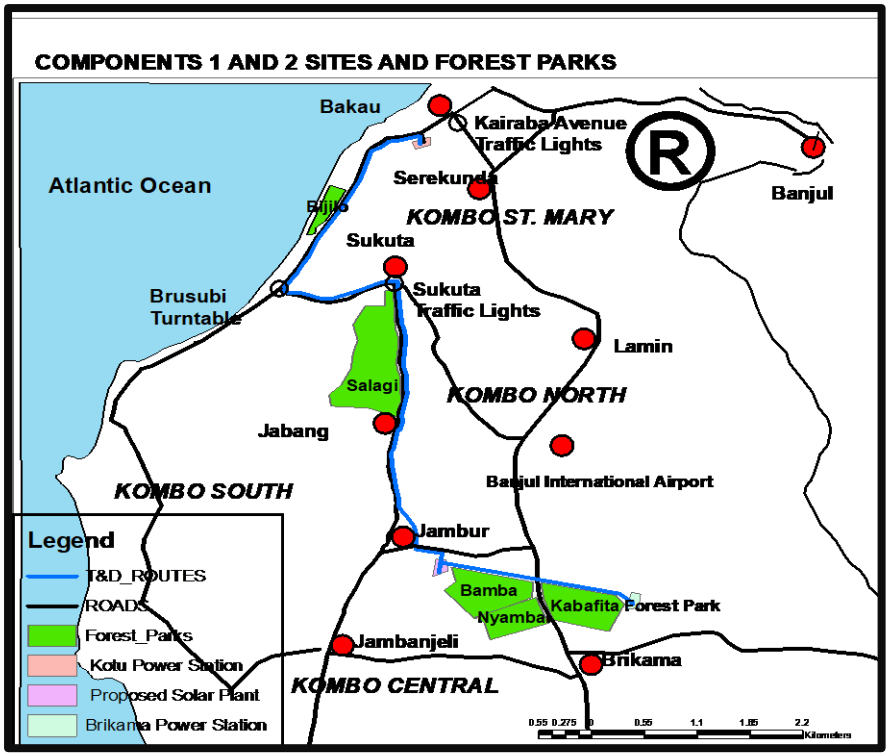
Alternatively, 3-4 plants of 3-6MW, (giving a total new capacity in similar range) will be built closer to demand centres. The advantage of this option is that there would be reduced losses, and reduced impact of grid absorption issues. However, it would increase the number of sites required which may be a challenge.

Any proposed site or a number of sites capable of hosting at least 20 MW of solar PV panels for this power generation shall be subject to ESIA.

Component 2: This component will involve some activities to be financed by IDA and EIB including installation of about 30km of transmission and distribution lines between Brikama and Kotu (Figure 1 outlines potential line routing), establishment of a new dispatch center with SCADA, upgrades to existing primary and secondary substations, and prepayment meters. Activities to be financed with blended EIB / EU financing include construction of MV lines in the provinces.

The feasibility study for this component will evaluate different line routing options to minimize social and environmental impacts. Based on the outcome of the feasibility study and current extensive land use within the study area, the chosen options will go through the ESIA process and RAP as outlined in this ESMF and accompanying RPF.

Figure 1: Map illustrating a potential T&D route and forest parks along the route



Component 3: Development of off-grid solar PV plants. This will include solar PV plants with battery backup in schools (up to 700) and health clinics (up to 100) in the country.

Preliminary estimates suggest that the system design would likely range from approximately 5-10 kW for schools, 10-30kW for clinics, and 50-100 kW for hospitals/clinics. It is likely that system design would need to be specific to the needs of each facility. The systems would also be designed in such a way so as to allow smooth integration with the grid (for facilities already connected to the grid, and those that will be connected in the future).

Component 4: This GERMP component will involve institutional strengthening and project implementation support related to improved operational performance of NAWEC.

Component 5: Financing of short run activities such as emergency communications campaigns, LED bulbs to replace incandescent bulbs in government offices and 5,000 street lights, and urgent equipment rehabilitation.

CHAPTER 3: DESCRIPTION OF BASELINE CONDITIONS

3.1 General Baseline Environmental Conditions Relevant to the Project

The Gambia has a land area of 11,300 square kilometres and is bounded to the West by the Atlantic Ocean and by Senegal to the other sides. It lies 150 longitude at equal distances from the Equator and the Tropic of Cancer. It is divided into the North and South Banks by the River Gambia which claims at least 20% of the country area, with the latter being more populated and developed.

Activites of the GERMP will be implemented in all seven regional governments of The Gambia listed with the location of their admiistrative offices:

- Banjul City Council (BCC) – Banjul
- Kanifing Municipal Council (KMC) – Kanifing
- West Coast Region (WCR) – Brikama
- North Bank Region (NBR) – Kerewan
- Lower River Region (LRR) – Mansakonko
- Central River Region (CRR) – Janjangbureh
- Upper River Region (URR) – Basse

As the Project sites are yet to be identified, the general environmental conditions in The Gambia are decribed. Where specific conditions relating to the Project study area are known, these will be described as well, particularly the 132kV T&D component.

3.1.1 The Physical Environment

Climatic Conditions

The climatic condition of the Gambia is of the Sudano-Sahelian type, and is characterised by the occurrence of two distinct seasons: a hot rainy season from June to October, and a dry season from November to May. Monthly mean temperatures in the rainy season vary between 29^{o}C and 32^{o}C and from 15^{o}C to 23^{o}C in the cooler dry season.

During the rainy season, south-westerly monsoon winds combined with heat from the continent, and because of the northward movement of the wind, give rise to the formation of thundery activities. This is usually accompanied by strong winds, heavy downpours and severe lightning flashes. July, August and September are the highest rainfall months.

In the dry season (during the months of December to April) North-easterly winds (the Harmattan*)* blow from the Sahara towards the western coast of Africa resulting in the presence of dust particles in the air, and general cloudless skies and dry air.

Rainfall

Available long term data suggests that annual rainfall in the country has been declining over the years, the amount decreasing progressively from the mid-1940s corresponding to approximately 30 per cent in deficit. From a high of about 500mm in the month of August (the month with the highest amount of rain) it decreased to just above 300mm between 1965-2005 as recorded at Yundum; in Janjangbureh it decreased from a little more than 300mm to about 250mm, and in Basse it decreased from about 350mm to about 250mm.

In more recent years (1994-2015) the annual rainfall experienced in these regions has been variable, ranging between 470mm (recorded in Janjangbureh in 2011 to 1,359mm recorded in Yundum in 2015). The annual average rainfall during this period ranged between 505mm in 2011 to 1,066mm in 2010. With the same data from 1994-2015 (DWR, 2017), total annual rainfall declined by about 4 per cent in Janjangbureh, and by about 2 per cent in Basse. However, for the same period Yundum recorded an increase of 4 per cent;

Overall, the three regions received an annual average of 1.5 per cent increase in rainfall and this trend in rainfall increases the risk of flooding in some areas, which may affect siting and stability of infrastructure, particularly for electricity transmission and distribution.

Temperature

Table 1 indicates the mean annual temperature for the Country depicted by Yundum in the coastal area (nearest to the proposed solar fields), and Jangjanbureh and Basse in the inland section from 1994-2014. There is a trend in temperature increase which has consequences on the energy sector due to proportional increase in energy needs for cooling. Paradoxically, higher temperatures result to a reduction in absorption of solar radiation by PV panels as the solar cells become less efficient in converting solar energy to electricity.

Table 1: Annual mean temperature for coastal and inland sectors (1994-2014)

YEAR	YUNDUM	AVERAGE	BASSE
1994	33.0	35.4	36.2
1995	33.3	37.0	36.9
1996	33.7	36.2	37.1
1997	33.8	35.6	36.7
1998	33.6	36.4	37.1
1999	32.6	35.5	35.9
2000	32.6	36.1	36.1
2001	33.4	36.7	36.6
2002	33.1	36.9	36.8
2003	32.8	35.8	36.3
2004	33.2	36.5	36.4
2005	32.9	37.0	36.6
2006	32.7	35.9	36.3
2007	33.0	36.1	36.8
2008	32.8	36.2	36.7
2009	32.1	35.8	36.3
2010	33.4	35.7	37.0
2011	33.0	35.8	36.7

2012	32.7	35.3	36.2
2013	32.6	37.8	36.4
2014	32.9	36.0	36.4

Source: Data from the Department of Water Resources, 2017

Sunshine

Much sunshine is received all year round throughout the country. The solar resources in the country have been measured to be as high as 6.5kWh/m2/d especially around May. The national solar energy potential ranges between 5.8k Wh/m2/d to 6.5kWh/m2/d, with an average global horizontal irradiation (GHI) value of 5.97kWh/m2/d. With this average, the entire country is suitable for the proposed solar energy technology although the CRR and some parts of the NBR have the highest resource potential, with about 6kWh/m2/d (Lahmeyer International, 2008).

Topography and Land Use

Gambia's topography is generally flat and low-lying with nearly 50 per cent of its total land area under 20 metres above mean sea level, one-third at or below 10 metres above sea level, and 10 to 20 per cent seasonally or diurnally flooded. Actually, its low elevation puts some areas of the Country such as the capital city of Banjul at risk from sea level rise.

The topography comprises essentially three distinct levels or zones: the river with its associated tributaries and mangrove vegetation, the extensive lowlands forming the river's floodplain and the upland plateau.

As earlier mentioned, high rainwater runoff may increase the risk of flooding in some areas, particularly low and uneven landscape, affecting the Project infrastructure.

With regards to land use, there is currently a high trend of converting agricultural land to residential, industrial, and other purposes. As this Project shall inevitably require large space, mainly for the solar fields, there is a potential of increasing land use competition which shall be addressed in the ESIA and RAP studies.

3.1.2: The Biological Environment

Forests and Vegetation

Forests play multiple functions including the provision of domestic energy for cooking, building materials in the form of poles and timber, medicinal products, wild fruits and nuts, honey and other services. The environmental functions include soil erosion control, carbon sequestration and the enhancement of local climatic conditions.

The Gambia's total forested area is estimated at approximately 505, 300 hectares (about 43 per cent of the total landmass of the country) and includes the mangrove forests. Approximately 32,729 hectares, (7 per cent of the total forest area) constitutes the 66 gazetted forest parks located in different parts of the Country, including those near the potential T&D Project sites. The GERMP T&D route may specifically have negative impacts

on four forests parks; Kabafita, Bamba, Salagi and Bijilo Forest Parks which were reserved because of their ecological importance in protecting and preserving the nation's forest resources. Project impacts on biodiversity will be assessed in line with the Lenders' E&S requirements, notably WB OP 4.36 and EIB ESS 3.

The 132 kV transmission line from Brikama to Kotu would run through the northern edges of both the Kabafita and Bamba Forest Parks, thus, affecting a significant number of timber trees. Depending on which side of the road is eventually chosen for the line, Salagi and Bijilo Forest Parks may also be affected. The vegetation of these Parks include mainly gmelina, teak, eucalyptus, and other local tree species such as "kaba", "santang", "talo" "ditakh", etc. The forests have thick crown closure and very high tree heights. In addition, the coastal Bijilo Forest Park is extremely rich in palm trees and holds the Monkey Park managed by the Department of Forestry.

Fruit Trees and Other Vegetation

Fruit trees are very common around the villages located along the proposed routing of the transmission lines. They are planted as orchards, fenced and well protected from stray animals, or only planted and left to grow unattended over the years. These types of fruit trees are mainly mango and cashew.

Other fruit trees include the baobab which is planted for its shade as well as for food, its fruits are eaten and have certain uses as medicine; its leaves are used as vegetables, for sauces; its bark can be used as rope for tethering cattle.

The Rhun Palm tree is also found abundantly within the study area of the proposed T&D corridor. It provides food (juice and fruit) and timber.

The *Eucalyptus* is commonly found, used as live fences. Its trunk and branches are useful for timber and as fence posts. This tree can grow up to 14 meters, and the branches can be in the way of the transmission lines and thus create some obstruction to the lines.

Similar trees along existing T&D corridors are usually trimmed by NAWEC (especially before the rains), rather than fell the whole tree. This practice is repeated periodically as trees regenerate new branches that threaten the lines.

Mammalian Fauna

The mammalian fauna within the Brikama study area is influenced heavily by the Kabafita, Bamba and Salagi Forest Parks. These are home to various invertebrates, reptiles and mammalian species which may consequently be threatened by the impact of this Project on the Forest Parks.

Avifauna

The Gambia is popular for bird watching and the greatest variation in biodiversity is found within the avifauna, which is composed of both resident and inter-African and Palearctic migratory species. This diversity of birds results from the range of habitat present i.e. marine, estuary, fresh water swamp, and further upland areas such as the Kabafita, Bamba, Salagi and Bijilo Forest Parks.

There are no bird migratory paths across the Project sites and the avifauna along the T&D corridor essentially resides within the identified Forest Parks. Species include various hornbills, pheasants, cuckoos, sunbirds, starlings, weavers, waxbills, eagles and hawks etc. Other recorded species include the black-necked weaver, red-billed hornbill, greater honeyguide, red-necked falcon, and black-billed wood-dove.

3.1.3 The Socio-economic Environment

Agriculture

Generally Gambian agriculture is characterized by subsistence production of food crops comprising cereals (early millet, late millet, maize, sorghum, rice and findo); semi-intensive cash crop production (groundnuts, cotton, sesame and horticulture). Farmers generally practice mixed farming, although crops account for a greater portion of the production. As earlier mentioned, agricultural land conversion for other uses shall consequently contribute to reduced productivity.

The cultivation of horticultural crops (vegetables and fruits) is also widely practiced where women grow mainly onions, tomatoes, small and large pepper, cabbage, lettuce, garden egg, bitter tomatoes, okra and sorrel, etc.

Livestock production is also practiced, and involves the rearing of cattle, small ruminants (sheep and goats), poultry and draft animals (donkeys, horses and mules). The agricultural fields are usually grazed by these livestock immediately after harvest of the crops.

Harvesting of Wood and Non-wood Forest Produce

The communities around the mentioned Forests collect medicinal plants, herbs and the bark of trees, wild fruits and honey for personal consumption or for sale. The most prominent fruits in these forests include the “Kaba” and “Talo” commonly used in juice making.

Operation and Sale of Charcoal

Charcoal is widely used by households in all parts of The Gambia as an important source of domestic energy supply and its exploitation is controlled by the Department of Forestry. Although clandestine exploitation and marketing of charcoal occurs in some remote areas of the provincial regions, charcoal production within or around the forest parks relevant to the GERMP is uncommon due to their centralized locations and close proximity to the monitoring institution.

Firewood Collection

Many of the communities are dependent on the vegetation and forest resources for the provision of firewood. The high prevalence of dry season fires in the woodland areas often results in the death of many trees, which maintains a supply of dead timber. The firewood collected is for both home use and for selling to provide additional income for the family. Figure 2 illustrates people collecting fire wood from the Forests within the study area.

Figure 2: Fire wood collection from Kabafita Forest and Bamboo Plantation next to Medina substation in Brikama

Petty Trading

Petty trading is tradition in the Gambia where, women in particular, sit along roads to sell food, fruits and other items at small scale. Some temporary shacks are also installed by more organized fruit and vegetable sellers. Vending various other items such as second hand clothing, cigarettes, fish, telephone credit, amongst others are common in the T&D study area.

Land use and property rights

The GERMP, with various components across the Country, shall be implemented in areas of mixed land use. There are residences, commercial areas, schools, markets, mosques, car parks, farmland or merely open unused land to be wary of. The Brikama/Kotu corridor within the T&D route is the most densely populated area of the Project with trees and extensive developed properties as residential, commercial and social amenities.

The off-grid schools and health facilities usually have reserve land and will have vulnerable children and patients that may need special attention to protect from health and safety risks associated with construction and operation of the Project.

Any physical and economical displacement as a result of the Project will be assessed and mitigated in line with Gambian laws, WB OP 4.12 and EIB ESS 6.

Cultural heritage

The GERMP components will be located and designed to avoid sites of cultural heritage, including those having cultural, historical, religious or archaeological significance; none of which have been identified during the initial evaluation of the Project.

Notwithstanding, during site preparation for the on-grid solar fields and 132kV T&D network, there is a possibility of discovering objects, features and immaterial forms of cultural heritage such as hidden cultural practices and knowledge. Therefore, the Chance Find Procedures described in Annex 7 will be used to guide action for such discoveries.

Gender

Gender as a social construct has continued to be considered an important pillar in sustainable development, including the environment sector.

Although the approach to issues that concern women is generally conservative in Gambian society, particularly the rural settings, there is gradual advancement with national laws and policies incorporating women issues. However, positive difference can only be meaningful if the grassroots are well involved.

Although in The Gambia men tend to dominate with assets, including secure land tenure, this Project shall benefit households and enterprises irrespective of ownership. There will be equal opportunities to participate during consultations and eligibility for compensation, if applicable based on resettlement action plans.

CHAPTER 4: RELEVANT LEGAL AND INSTITUTIONAL FRAMEWORK

4.1 National and International Polices and Legal Framework

Table 2 indicates the relevant national and international polices and legal framework that will guide the development and implementation of the GERMP.

Table 2: Relevant National and International Policies and Legal Framework

NATIONAL POLICIES			
Policy	**Description**	**Relevance To GERMP**	**Focal Institution**
Gambia Environment Action Plan, GEAP (2009-2018)	Integrated environment and natural resources management	Provides guidance in general environmental planning and natural resources management	NEA
National Energy Policy (2014 – 2018)	Policy aims to increase clean and sustainable energy	All electricity projects are implemented within the context of this Policy	MoPE
Forestry Policy (2010-19)	Promotes state and community forests	Four forest parks within the Project study area	DoF
The Wildlife Sector Policy (2013 – 2020)	Aims to increase biodiversity and protected areas	Bijilo Forest Park falls within the Project study area and houses the Bijilo Monkey Park	DPWM
The National Health Policy (2012-2020)	Promotes and protects the health of the population	Addresses health risks and exposures associated with negative environmental consequences of the Project at all stages	DHS
National Climate Change Policy (2016 – 2025)	Policy provides the framework for managing climate risks, building institutions, capacities, & opportunities for climate-resilient development	Promotes renewable energy and energy efficient options.	DWR
Gambia National Gender & Women Empowerment Policy (2010 – 2020)	To mainstream gender in national and sectoral planning and programming to ensure equity and equality	Women are encouraged to be well informed and take part in decision making at all levels of the Project development and implementation	Office of the Vice President & Ministry for Women Affairs
National Youth Policy (2009 – 2018)	Policy aims to mainstream youth issues into the advancement of all sectors	To be inclusive, the Project shall encourage youth participation in decision making and employment	MoYS

National Strategic Environmental Assessment Policy (2017- 2021)	Aims to ensure environmental sustainability	Applies when developing policies, plans or programmes in all sectors, including energy	NEA
RELEVANT NATIONAL LEGISLATION			
Legislation	**Interpretation of Legislation**	**Relevance to GERMP**	**Enforcing Institution**
National Environment Management Act, NEMA, 1994	Principal legislation for environmental management; Part V of provides for projects listed under Schedule A to be considered for ESIA	This Project falls under Schedule A requiring an ESIA	NEA
Environmental Impact Assessment Regulations, 2014	Prescribes the need for ESIA, its processes and procedures including ESMF/ESMP development and implementation	Elaborates on the requirements for environmental and social safeguards of this Project	NEA
The Forest Act, 1998	Provides framework for the reservation and management of forests. 81(1) of the Forest Act highlights the need for EIA of Projects within forest areas.	Four designated forest parks fall within the study area of this Project	DoF
The Anti-littering Regulations, 2007	Addresses waste management and pollution issues in relation to environmental health and hygiene	The Project must abide by ensuring that all waste produced during all phases is well managed	NEA
Waste Management Bill (1997)	Addresses waste management and pollution issues	Waste management and pollution issues should be addressed by this piece of legislation	NEA/MOH
Local Government Act, 2002	Act makes provisions for decentralized administrative structures including devolution of functions, powers and duties of local authorities.	The Project falls under all administrative regions of the Country.	MoLRG
State Lands Act, 1990 (Amended 2008)	Regulates land tenure and property rights	Potential involuntary resettlement for some Project activities	DLS
Land Acquisition & Compensation Act, 1990	Provides for consultation, resettlement and compensation of land	Potential involuntary resettlement for some Project activities	MoLRG

Physical Planning and Development Control Act, 1991	Ensure developments in The Gambia are in line with land use planning and construction standards.	The Project construction activities shall be in line with national landuse and planning rules	DPPH
Development Control Regulations, 1995	These Regulations further prescribe the requirements for development control	All planning and construction phases of the Project should give consideration to these Regulations	DPPH
Public Health Act, 1990	Protects public and environmental health including abatement of nuisances and any condition that may be injurious to health	Noise and other risks associated with the Project must be prevented or reduced	Department of Health
The Gambia Roads and Technical Services Authority Act, 2003	Provides for the administration, control and maintenance of all roads in The Gambia.	Relevant to the Project as the road reserve is usually disturbed in installing T&D infrastructure	NRA
RELEVANT INTERNATIONAL POLICIES AND TREATIES			
International Regulatory Instrument	**Focus Area**	**Relevance To GERMP**	**Focal Point**
ECOWAS Energy Protocol A/P4/1/03	Promotes energy investment and trade in West Africa.	This Project prepares for future capacity expansion to accommodate regional projects such as those of the OMVG.	MoPE
United Nations Convention on Biological Diversity	Protection of trees and biodiversity	Forests in Project study area	DPWM
UN Convention to Combat Desertification (UNCCD)	Desertification	Forests in Project study area	DoF
Stockholm Convention on Persistent Organic Pollutants (POPs)	Forbids the use of POPs including polychlorinated biphyniles (PCBs)	PCBs may be found in electrical transformers and large capacitors although eradicated and prohibited in The Gambia	NEA
UN Framework Convention on Climate Change	Relates to sustainable sourcing of all energy projects	This Project has renewable energy components	DWR

4.2 Institutional framework

The institutional framework for implementation of this ESMF is outlined in Table 3.

Table 3: Institutional arrangement for GERMP implementation and monitoring

Institution	Responsibilities
Ministry of Environment, Climate Change and Natural Resources (MECCNAR)	Oversees the NEA and implementation of environmental laws and policies of The Gambia
National Environment Agency (NEA)	NEA is the technical arm for environmental management in The Gambia and enforces the NEMA, 1994; ESIA Regulations 2014 and similar legislation
Ministry of Petroleum Energy (MOPE)	The MoPE is the overseeing institution of NAWEC and all energy related projects
National Water and Electricity Company (NAWEC)	As the implementing arm of the MoPE, NAWEC is the main operator and manager of electricity production in The Gambia; it is the executer of this Project.
Public Utilities Regulatory Authority (PURA)	PURA is a multi-sector regulator of utilities in The Gambia mandated to regulate electricity amongst others.
Ministry of Lands and Regional Government (MoLRG)	Oversees all the local government authorities including Regional Technical Advisory Committees; enforcement of legal regulations on land use and administration. Oversees the Department of Lands and Surveys, and the Department of Physical Planning and Housing.
Department of Forestry (DoF)	Responsible for the maintenance and development of forest resources in The Gambia. It recommends sites for forest reserves and parks, community forests and private forests, and monitors their management for sustainability. The DOF is responsible for suggesting to Cabinet the need to de-reserve part or whole forested areas.
Ministry of Health and Social Welfare (MoH&SW)	Responsible for overall formulation and direction of the national health agenda, planning and health infrastructural development. Oversees the potential beneficiary health facilities of this Project.
Ministry of Basic and Secondary Education (MoBSE)	Houses the Project Coordination Unit responsible for management of all projects under this Ministry and the Ministry of Higher Education Research Science and Technology (MoHERST).

4.3 Environmental and Social Safeguards of the WB and EIB

In addition to the need to comply with the environmental laws and regulations of the Gambia, this Project will also be carried out in compliance with the World Bank and European Investment Bank environmental and social safeguards policies. These are designed to protect the environment and beneficiary communities from potential adverse effects of projects, programmes, plans and policies. The EIB and WB safeguard policies (OP) that may be triggered by this Project are discussed in the following sections.

Annex 8 provides a comparison of IDA and EIB safeguards standards which apply to the GERMP. The specific standards to be applied to each activity will be detailed in the safeguards instruments (ESIA, ESMP and RAP) that will be prepared once the technical scope if defined through the feasibility studies underway.

For activities to be jointly co-financed by World Bank and EIB, World Bank Safeguards Policies will apply. Where the requirements of EIB Safeguard Policies are more stringent, these will also be applied in addition to World Bank policies.

For activities financed by blended financing between with EIB and the EU, the EIB safeguards policies will apply.

4.3.1 World Bank Safeguards

Of the ten safeguard Operational Procedures of the WB, three are triggered by the GERMP as outlined in Table 4 and following discussion.

Table 4: World Bank environmental and social safeguards

World Bank Safeguards Operational Procedure (OP)	Triggered by this Project	Remarks
OP 4.01 Environmental Assessment, including public participation	Yes	Preliminary evaluation has identified potential negative environmental and social impacts, thus, there is need for environmental assessment to ensure appropriate mitigation measures are put in place during all stages of the Project
OP 4.04 Natural Habitats	Yes	There exist native plant and animal species in the study area, particularly within forests
OP 4.09 Pest Management	No	No relation to pest management
OP 4.11 Cultural Heritage	No	No sites of cultural or historical significance will be used for or affected by the Project. Notwithstanding, chance find procedures are described in case of any discovery.
OP 4.12 Involuntary resettlement of populations	Yes	There is likelihood of resettlement or loss of earnings from the Project
OP 4.10 Indigenous populations	No	Indigenous groups will not be affected

World Bank Safeguards Operational Procedure (OP)	Triggered by this Project	Remarks
OP 4.36 Forests	Yes	There are four forest parks that may be affected by the T&D component
OP 4.37 Safety of Dams	No	The Project has no relation to dams
OP 7.50 International Waterways related Projects	No	The Project is not related to international waterways
OP 7.60 Projects in disputed areas	No	The Project is restricted to The Gambia and there are no transboundary disputes

4.3.2 European Investment Bank ESS

Table 5: EIB Environmental and Social Standards

EIB Environmental and Social Principles and Standards	Applicability to GERMP	Remarks
ESS 1 Assessment and management of environmental and social Impacts and risks	Yes	The need for environmental assessment confirmed due to initial potential negative impacts identified
ESS 2 Pollution Prevention and Abatement	Yes	Potential pollution mainly from waste generation and limited, localised air pollution during works. Mitigation included in overall ESMP to be outlined in ESS1.
ESS 3 Standards on Biodiversity and Ecosystems	Yes	Three Forests fall within the study area and shall be considered in the ESIA
ESS 4 Climate-related Standards	No	The GERMP rather has positive impacts on climate as promotes renewable energy; no mitigation
ESS 5 Cultural Heritage	No	No sites of cultural or historical significance will be used for or affected the Project. Notwithstanding, chance find procedures are described in case of any discovery.
ESS 6 Involuntary Resettlement	Yes	There is likelihood of resettlement or loss of earnings from the Project
ESS 7 Rights and Interests of Vulnerable Groups	Yes	The GERMP shall not affect specific interest and vulnerable groups
ESS 8 Labour Standards	Yes	Applies to all workers engaged by the Project during all stages
ESS 9 Occupational and Public Health, Safety and Security	Yes	There are potential health, safety and security issues during all stages
ESS 10 Stakeholder Engagement	Yes	Important from design stages to promote Project support and ownership

4.3.3 Comparison between The Gambia, WB and EIB Environmental Classifications

Initial screening of proposed projects set the direction for various levels of safeguards protection and management. The Gambia, WB and EIB have same requirements for full ESIA studies where there are high significant impacts anticipated, as indicated in Table 6, even though the categorization may be different under Class A, Class A and Class C respectively. The GERMP, therefore, shall be classed under Gambian law as category A, WB Category B and EIB category C.

Table 6: Comparison of The Gambia, WB and EIB Screening Categorization

	THE GAMBIA		**WORLD BANK**		**EUROPEAN INVESTMENT BANK**	
Classification	**Impact significance**	**Requirements**	**Impact significance**	**Requirements**	**Impact significance**	**Requirements**
Class A	Highly significant potential adverse impacts	Full ESIA study	Highly significant potential adverse impacts	Full ESIA study	Minimal or no impact	
Class B	Inadequate screening information	Provide more information before final classification as A or C	Less adverse or reversible impacts; mitigation possible	Management plans developed for mitigation.	Less adverse or reversible impacts; mitigation possible	
Class C	Minimal or no significant impact	If minimal, a management plan or other conditions may still be required	Minimal or no impact	No further requirement.	Highly significant adverse impacts	Full ESIA study
Class D	Not applicable*		Not applicable*		Not acceptable in EIB terms	Rejected
Class FI	Not applicable. Such projects are screened like any other.		Financial intermediary is involved	As for Class A or B based on screening.	Not applicable	

* Projects that are totally not in line with The Gambia laws or World Bank safeguards are rejected with no Class allocation.

CHAPTER 5: TYPOLOGY OF GERMP ACTIVITIES, RISKS AND POTENTIAL IMPACTS

5.1 Identification of Positive Impacts of the GERMP

Many of the activities and interventions to be funded under GERMP can have positive impacts on the surrounding environment if they are well designed and implemented. With effective and efficient Project implementation, the following benefits are expected:

- Employment during works and operation with its associated social benefits such as better living standards
- Economic development and income generation from improved electricity supply
- Economic emancipation of women through petty trading targeting Project workers
- Improved education and health service delivery
- Improvement of other public services such as communications, security
- Technology transfer and capacity building of NAWEC and related staff in managing the solar installations for sustainability; involvement of youth in unskilled activities
- Contribution to the reduction of greenhouse gas emissions and other air pollutants through renewable energy
- Installation of the first 132kV transmission lines in The Gambia shall significantly contribute to the reduction of the high losses in power transmission and provide readily available infrastructure for extra supply from future projects

5.2 Identification of Potential Negative Impacts

Since the main focus of GERMP is to increase power generation capacity, the subprojects it will fund will essentially fall under the broad activities and related issues listed in Table 7 where the likely negative E&S impacts of the GERMP are outlined. Associated mitigation measures for consideration during the specific ESIAs are also listed and further outlined in the following Section, 5.2.1. It will be noted that the list is not exhaustive, and that additional site-specific impacts will be identified during the studies with accompanying mitigation measures.

The parameters used for the identification of the potential impacts are the:

- Physical Environment (Soil, Water Resources and Air Quality)
- Biological Environment (Fauna and Flora)
- Socioeconomic environment (Health and safety, land use / ownership /community services etc.).

Table 7: Typology of GERMP Activities and their Potential Impacts

GERMP Activity / Issue	Potential Impact	Proposed Mitigation Measure for Consideration in the ESMP
ON-GRID SOLAR FIELDS		
Land clearance and preparation	Involuntary resettlement of persons	Prepare and implement RAP
	Loss of cultural heritage from chance find during construction activities	Apply the procedures for chance find
	Felling trees	Replant equivalent area cleared with trees of the same species as prescribed in RAP
	Loss of birds	T&D line design must provide insulation and other protection to prevent bird strike kills
	Accumulation of waste and debris during construction	Use appropriate waste management measures and do not burn
	Dust and soil erosion	Install erosion control measures; periodic sprinkling of water over ground to control dust
Non-existent or non-implementation of ESMPs including health and safety management	Effects from inadequately managed health and safety risks such as accidents relating to worksites, hazardous chemicals, electrocution, manual handling etc.	Develop and/or implement ESMPs including the health and safety mitigation measures
		Develop and implement programs to correct deficiencies and substandard conditions
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility
		Start awareness or refresher training on health and safety
	Importation of disease from workers	Use local unskilled labour to be stipulated in contracts.
		Educate workers on STIs
Quarrying for sand / gravel for construction	Secondary, off-site impacts on geology, landscape, ground water and agriculture	All local sites for extraction of earth materials shall be approved by the Geology Department
Waste Management during operation/decommissioning	Groundwater, soil and air pollution from improper waste management; health hazards and visual Impact	Develop and implement a site waste management plan in line with the ESMP
	Particular pollution from disused batteries, inverters and panels etc.	Equipment/structures will be disposed in an environmentally friendly manner as prescribed in the ESMP
Communication and Social Risk associated with imported workers	Social conflict, interruption of services, traffic detour routes and provisional road traffic routes, lack of GRM, lack of information, bad management of unskilled labor, irresponsible behavior of workers and site workers	Establish social communication, install a social animator
		Implement GRM
		Raise awareness of worker on overall relationship management with local population, establish a code of worker conduct in line with international practice and strictly enforce them, including the dismissal of workers and financial penalties to the extent possible, if any, work camps should not be located in close proximity to local communities
OFF-GRID FACILITIES (SCHOOLS / HEALTH CENTERS)		
Land preparation for site of panels (if not installed on existing roof of buildings)	Accumulation of waste and debris during construction	Use appropriate waste management measures; do not burn
	Dust	Sprinkle water over ground to control dust
Quarrying for sand / gravel for construction (rooms for batteries, inverters)	Secondary, off-site impacts on geology, landscape, ground water and agriculture	All local sites for extraction of earth materials shall be approved by the Geology Department
Waste Management during operation/decommissioning	Groundwater, soil and air pollution from improper waste management; health hazards and visual Impact	Develop and implement a site waste management plan in line with the ESMP
	Particular pollution from disused batteries, inverters and panels	Equipment/structures will be disposed in an environmentally friendly manner as prescribed in the ESMP

Non-existent or non-implementation of ESMPs including health and safety management	Public and workplace health and safety risks are not being adequately managed both during construction and future maintenance, amongst others, leading to chemical spills and leaks from batteries contaminating soil, structures, and possibly groundwater	Develop and/or implement ESMPs including the health and safety mitigation measures
		Works in schools to be carried out during weekends to avoid public safety risks
		Develop and implement programs to correct deficiencies
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility
		Awareness / refresher training on health and safety
132kV TRANSMISSION AND DISTRIBUTION NETWORK		
Land preparation and installation of towers/poles (Excavation for foundation of poles; erecting new pole / removing /replacing pole	Involuntary resettlement of persons	Prepare and implement RAP
	Potential loss of cultural heritage from chance find during construction	Apply the procedures for chance find
	Felling trees	Replant equivalent area cleared with trees of the same species as prescribed in RAP
	Loss of birds	T&D line design must provide insulation and other protection to prevent bird strike kills
	Accumulation of waste and debris during construction	Use appropriate waste management measures and do not burn
	Dust and soil erosion	Install erosion control measures; periodic sprinkling of water over ground to control dust
	Onsite noise and vibration effects on workers and nearby PAPs	Maintain all work equipment at optimal operating condition to control noise and limit working hours between 8am and 6pm.
	Potential contamination (groundwater, air, soil) from accidental fuel/engine oil spill and leaks	train personnel in safe handling of hydrocarbons
	Damage/disruption of roads, existing T&D and other infrastructure during works	Avoid existing public services, carry out routine inspections, report and ensure prompt repair of any damage
		Give adequate notice to the public prior to disruption of services to allow works
Influx of workers	Importation of disease from workers	Use local unskilled labour to be stipulated in contracts.
		Educate workers on sexually transmitted infections
Line stringing or restringing	Onsite noise and vibration effects on the workers	Maintain all work equipment at optimal operating condition
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel to direct traffic
		Train and equip workers in safety while working at heights and working with high voltage (apply related guidelines in Annex 6)
Operation of Transmission Line	Exposure to electromagnetic fields	Prevent encroachment and enforce restrictions on activities in line corridor
	Risk of electrocution, injury or property damage	Post warning signs and design poles/towers to prevent access to conductors by unauthorized personnel
T&D line maintenance (mechanical clearing of vegetation, repair and change of T&D infrastructure)	Accumulation of bush and debris	Use appropriate disposal techniques; prohibit burning
	Potential contamination (groundwater, air, soil) from accidental fuel/engine oil spill and leaks	Train personnel in safe handling
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel prohibit or direct traffic
	Worker risks to health and safety	Train and equip workers in safety while working at heights and working with high voltage (apply related guidelines in Annex 6)

	Disruption of road traffic, existing T&D and other infrastructure during maintenance	Give adequate notice to the public prior to disruption of services to allow maintenance works
LAYING UNDERGROUND CABLES		
Excavation of trenches for cables	Involuntary resettlement of various activities along the route	Prepare and implement RAP
	Noise and vibration nuisance to surrounding communities	Maintain all work equipment at optimal operating condition to control noise and limit working hours between 8am and 6pm.
	Disruption of road traffic, existing T&D and other infrastructure during works	Give adequate notice to the public prior to disruption of services to allow works
		Liaise with the National Roads Authority prior to works
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel prohibit or direct traffic
	Potential loss of cultural heritage from chance find during construction activities	Apply the procedures for chance find
TYPICAL IMPACTS DURING CONSTRUCTION OF NEW SUBSTATIONS / UPGRADING OF EXISTING SUBSTATIONS		
Land clearing and preparation: bulldozing, excavating and backfilling with earth; transportation and mixing of materials	Felling trees	Replant equivalent area cleared with trees of the same species as prescribed in RAP
	Accumulation of waste and debris during construction	Use appropriate waste management measures and do not burn
	Dust and air pollution	Periodic sprinkling of water over ground
		Provide protective apparel to workers
	Potential loss of cultural heritage from chance find during construction	Apply the procedures for chance find
	Loss of birds	T&D line design must provide insulation to prevent bird strike kills
Non-existent or non-implementation of ESMPs including health and safety management	Workplace health and safety risks are not being adequately managed both during construction and future maintenance, amongst others, leading to chemical spills and leaks from transformers; Workers exposed to risk of electrocution because of old or poorly-maintained equipment	Develop and/or implement ESMPs including the health and safety mitigation measures
		Develop and implement programs to correct deficiencies
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility
		Start awareness or refresher training on health and safety
		Maintain database to judge compliance with mitigation and monitoring plans
	Importation of disease from workers	Use local unskilled labour to be stipulated in contracts.
		Educate workers on sexually transmitted infections
Hazardous substance contamination	Workers and community exposed to risks	Obtain expert advice in developing a remediation plan
	Contamination may spread offsite through air, surface or groundwater, or improper disposal	Contain the contamination and restrict access to contaminated areas and implement the plan
		Test local water supplies and, if affected, provide alternative sources during remediation
Inadequate security provisions for the facility	Social conflict between the facility and the surrounding community; vandalism or sabotage	Establish effective, ongoing community relations programme; Apply Grievance Redress Mechanism
	Risk of electrocution or injury from contact with high voltage equipment	Install fences and other security features around all dangerous or vulnerable facilities
		Employ security personnel, ideally from local area
		Sensitize and post warning signs

REPLACEMENT OF BULBS IN GOVERNMENT BUILDINGS AND STREET LIGHTS		
Non-existent or non-implementation of ESMPs including health and safety management	Public and workplace health and safety risks are not being adequately managed both during works	Develop and/or implement ESMPs including the health and safety mitigation measures
		Carry out awareness training on health and safety; apply guidelines on working at heights
		Provide safety signs and warning sites
		Works in government office to be carried out during weekends to avoid public safety risks
	Improper management of replaced bulbs, packaging materials etc.	Waste must be properly managed according to the plan

5.2.1 Description of Potential Impacts and Mitigation Measures for the ESIAs

A: Physical Environment: Potential negative impacts and mitigation measures

i) Air quality impacts

During land clearing and all construction activities, excavations and handling of earth materials will create dust pollution. Although the likely nuisance will be confined to the site locality and of short-term nature, some stretches along the T & D route are densely populated.

Mitigation

Access to construction sites must be controlled, particularly in built-up areas, and communities (including schools, health facilities and industrial plants) given long notice before works to ensure sites are cleared. Construction materials must also be dispensed at strategic locations away from community activities.

ii) Noise and Vibration Nuisance

Movement of heavy vehicles and drilling for excavations may create noise pollution temporarily during construction works.

Under moist weather conditions and where cables are damaged, potential noise nuisance is emitted from high tension line infrastructure.

Heavy duty inverters at the solar fields may produce noise during daytime within the sites, however, this diminishes with limited distance from the source and more importantly no noise is produced at night when inverters do not work due to darkness.

Mitigation

All works must be carried out during daytime to reduce noise nuisance which is more prominent at night when there is less background noise.

Minimum height clearance and right-of-way for the 132kV lines should be applied to assure public safety and insulated cables used where technically appropriate. For sustainability and common guidance, T&D right of way and clearance standards must be developed by NAWEC.

iii) Geology and Soils

Sand and gravel to be used for construction of substations, foundation for poles and rooms for batteries, inverters, office and sanitation) may be mined illegally from unapproved sites causing secondary negative impacts on landscape and vegetation.

Mitigation

Contractors must be cautioned through the clauses in their contracts to use only certified sand and gravel suppliers that have been approved by the NEA and Geology Department.

iv) Negative impacts from improper waste management

The possibility of soil disturbance during excavation for the poles may result or contribute to localized soil erosion based on the topography of the area.

During construction in the short-term, solid wastes, unused construction materials, packaging material and hazardous chemicals used in electricity equipment are usually abandoned around sites creating eyesore and health risks.

In the long-term during operation and maintenance, damaged or disused T & D infrastructure, hydrocarbons and hazardous chemicals used in the Project may cause E&S risks if not managed adequately.

The common sludge from heavy fuel oil used in power generators is not expected to be produced under the GERMP as all electricity production by the Project will be from solar energy.

Mitigation

All excess materials and waste produced in the process must be collected and the surrounding land returned to its original state. Some waste materials such as packaging and rubble may have other uses and shall be given to workers or communities for reuse.

When T&D infrastructure is not in use anymore for whatever reason, they must be safely decommissioned and cleared away. A waste management plan shall be developed to ensure proper waste management of other solid waste such as old solar panels and batteries, used bulbs, damaged cables and hydrocarbon wastes.

All waste produced from the Project activities must be well managed to prevent indiscriminate dumping and cause for scavenging by communities.

v) Landscape and stability of towers and poles

Durability and stability of T & D towers and poles may be affected where the topography is uneven, and the wetland areas.

Mitigation

Where the topography is uneven or prone to water logging, a proper foundation must be laid and priority given to relocation of poles to more even areas for sustainability and safety. Design specifications, pole spans and heights will be considered to promote stability of poles. Areas surrounding new poles and routes of potential underground cables must be leveled to prevent erosion.

B: Biological Environment: Potential Negative Impacts and Mitigation Measures

i) Negative Impacts on Forests and Wildlife

Kabafita, Bamba, Salagi and Bijilo Forest Parks fall within the Project study area and their boundaries near the T&D ROW may be affected during construction and maintenance of the 132 kV T&D line. Vegetation will also have to be cleared for the solar field(s).

As earlier discussed, the clearance, disturbance or fires on both mature and young forests trees (such as Gmelina, eucalyptus, teak) will affect dependent wildlife species and communities that depend on the forest products. Other benefits that may be secondarily reduced include ground water conservation that occurs due to increased water carrying capacity of the soil through the roots, and reduced evaporation from the tree canopy protection; nutritive quality of the forest topsoil from organic matter and reduced force of rainwater runoff, soil erosion and desertification.

Forests have a unique potential to contribute to climate change mitigation by reducing carbon emissions and enhancing carbon sinks. Therefore, the modest contribution of the mentioned forests to combating climate change will subsequently be reduced.

Displacement and loss of wildlife such as reptiles and monkeys may occur should their sanctuary and food source, the forest parks, are disturbed or trees cut for T & D route clearance. Furthermore, although the proposed 132kV transmission route from Kotu to Brikama crosses close to Bijilo Forest Park, wildlife, particularly roaming monkeys may come into contact with workers.

The impact of bird strikes is insignificant as there are no migratory paths that will be affected.

Mitigation

Avoid forest parks as much as possible and alternative sites/routes must be considered to minimize environmental impacts. If studies prove beyond reasonable doubt that the best sites are within the forests, an application must be submitted to the Department of Forestry (DoF) for de-reservation of the required areas before use. Conditions of approval shall include compensation based on the ESIA/RPF/RAPs, in line with Lenders' requirements. At least equivalent number of trees / surface areas will be planted with same species or species of similar importance as advised by the DoF).

Lines will not run through forests, and where trees along the boundaries are felled, the resident wildlife will naturally move towards the unaffected central parts of the forests. No fires and burning activities will be allowed by the contractors and DoF to prevent forest fires.

Communities shall be allowed to benefit from felled trees and access to the remainder of the forests for collection of fruits and dry wood as usual.

Although limited, bird strikes will be further prevented by design and distance between conductors and earthed material, increased insulation and enhanced visibility. The possible

relocation of the 11kV line underground to avoid congestion also prevents contact with birds and the public.

ii) Negative Impacts on Agriculture

As explained under the baseline conditions, there is potential encroachment on agricultural lands to give clearance for some Project activities (such as the solar fields and T&D network along or across exiting farmlands in Brikama, Jambur and Kotu) resulting to loss of land, income and livelihood.

Mitigation

Project affected persons must be consulted and informed of the Project prior to commencement. A detailed assessment must be carried out and compensation given based on the Project RPF and subsequent RAPs before Project implementation.

C: The Socioeconomic Environment: Potential Negative Impacts and Mitigation Measures

i) Negative Impacts on Public Health and Safety

During land preparation, construction and installation activities of all components (except Component 4) of the GERMP, there is risk to public health and safety. Communities and children in particular, are at risk of accidents from the equipment, traffic and improperly handled, placed or temporarily stored materials. Waste produced during works or maintenance and decommissioning can also be a health and safety hazard to the surrounding communities within the Project sites including identified schools, health facilities, industrial plants and Government buildings.

Studies have shown that impact of electromagnetic fields on people such as effects on neurodevelopment, cancer, depression and other disorders, cannot be solely attributed to field strengths. However, it is a fact that both electrical and magnetic field strengths reduce with increasing distance from the source, thus, the potential impact from electromagnetic fields can be reduced with due consideration of specifications for design, location of poles and height of lines.

With regards risks associated with polychlorinated biphenyls (PCBs) found in industrial transformers, the Stockholm Convention on Persistent Organic Pollutants (POPs), which Gambia signed in 2004, was the basis for the replacement of all PCB containing and contaminated transformers.

There is a potential risk of imported diseases, including sexually transmitted infections from influx of workers to Project sites.

Mitigation

As earlier discussed, air emissions shall be controlled to prevent nuisance to populations during works that shall only be carried out during daytime with affected populations informed before commencement.

Access to work sites must be restricted in order to avoid accidents and theft incidents. Activities must be coordinated well to prevent accidental destruction of property through falling poles or invasion by equipment and machinery. Waste and disused infrastructure should be removed from all Project sites whenever produced. Safety signs and symbols shall also be used at strategic locations.

For both operational and safety reasons, tree pruning exercises must be scheduled to ensure transmission corridors are clear for safe operation whilst routine inspection and maintenance of the transmission infrastructure shall repair loose installations and prevent frequent breakage.

Due to uncertainties regarding effects of electromagnetic waves, the Precautionary Principle will be applied to the location and height of poles to reduce electromagnetic fields.

As PCB transformers have been eradicated in The Gambia, the NAWEC will ensure that the GERMP will not use any transformer or equipment containing PCBs.

Workers will be educated on the risks and prevention of sexually transmitted infections and workforce, especially unskilled labor, sourced locally. Implement measures to raise local community awareness about sexually transmitted disease risk associated with the presence of external workforce and include local communities in awareness activities.

ii) Negative Impacts on Health and Safety of Workers

There is high risk of health and safety to workers during implementation of all phases and all components (but Component 4) of the GERMP. Hazards include fumes, working at heights, working with heavy equipment and parts, loud noise, road traffic accidents, chemical handling, attack by wildlife from forests amongst others. Fatal electrocution during maintenance of T & D lines is also a potential impact of high significance.

Although not frequent, reports have indicated that workers on the construction of story buildings have also been electrocuted due to contact with existing high tension lines.

Mitigation

Participating NAWEC employees and those to be employed by contractors for the Project must be informed of the associated hazards and risks; training on the job and knowledge on procedures to reduce risks, including coordination and communication to avoid electrocution is also essential. Fire extinguishers, personal protective equipment and first aid kits shall be provided and training given on how to use them.

Reporting of incidents is also essential for the review and improvement of safety procedures.

The Department of Physical Planning and Housing (responsible for issuing building permits) shall protect construction workers from live cables by ensuring that story buildings do not encroach on T&D route clearances.

iii) Negative Impacts on Land Use and Land Ownership

There will be potential encroachment on property and activities for the on-grid solar fields and along the 132kV T&D installation, especially where there is evidence of limited public space for the right-of-way. Residences, farmland, businesses, and recreational facilities may be affected negatively.

Mitigation

Alternative sites must be considered to avoid involuntary resettlement as much as possible and project affected persons consulted from the design stage. Compensation shall be provided before actual Project implementation on the sites based on RAPs.

iv) Negative Impacts on Public Services

Road traffic may be interrupted temporarily during the works on T & D as the route follows existing roads, and more long-term from inappropriate location of poles affecting road safety and traffic.

There is also potential damage or destruction of roads and other facilities due to poor coordination and communication amongst public service authorities. For example, roads may have to be cut or excavated for installation of utility infrastructure.

In addition, during works on the on-grid solar and T&D components, there will be disruption of power services to existing customers (within and outside the Project areas) supplied by lines and substations involved in the works.

Mitigation

Traffic during works must be controlled and materials safely stored away from traffic. Avoid infrastructure of other services such as telephone lines and road infrastructure by keeping to the plans developed by, and in consultation with NAWEC's Planning Department. The Road Reserve Committee at the Ministry of Transport, Works and Infrastructure shall be consulted via the NRA should there be the need for interference with other services, particularly roads.

v) Negative Impacts on Affected Communities

Community instability, conflict or grievances may arise where there are landownership / land use issues, and individuals or groups do not have access to electricity yet they are within the Project area and probably affected.

Furthermore, workers will not be imported to live in the communities nor will camps be established nearby, thus, there will be no competition with the communities for water, food or other services. However, influx of imported workers into Project communities, during working times may promote relationships due to contact in search/purchase of food and water, or demand for use of sanitation facilities within communities. Realistically, it is Gambian tradition and custom to support visitors even though this hospitality may indirectly lead to the increase in risks of spreading sexually transmitted infections (STIs).

Mitigation

NAWEC must seek a project to install low voltage facilities that can distribute electricity to communities surrounding power plants as residents cannot understand why they do not have supply when the source is at their doorstep. Project affected persons and the public in general must also be educated on the impossible distribution of electricity at high transmission voltage.

The subsequent RAPs to be developed, and grievance redress mechanism outlined in Section 8 of this ESMF shall be applied to solve such problems if within the scope of this Project.

To prevent STIs, community sensitization before and during works is essential and contractors, in particular, are required through the contracts to educate their workers on the risks and prevention methods. Team of workers shall also be required to keep their own drinking water supply (usually in 20litre containers) to avoid individuals seeking from communities one after another.

vi) Negative Impacts on Chance Find Cultural Heritage

As earlier discussed, even though there are no known sites of cultural heritage to be affected by the GERMP, there is always a possibility of finding cultural heritage by chance, particularly during land identification and preparation for works. These may be disturbed or lost due to lack of knowledge in managing cultural heritage discovered by chance, and the OP 4.11 and ESS 5 will be triggered.

Mitigation

Based on this ESMF, the GERMP shall avoid locating and designing activities that will affect cultural heritage. Site-specific ESMPs will further determine, through public consultations, whether there are likely discoveries of cultural heritage in proposed Project sites. If applicable, the Chance Find Procedures described in Annex 7 will be applied; avoid further disturbance and secure discovery, inform the supervisor for onward conveyance to NAWEC and subsequently the National Council for Arts and Culture (the legal institution responsible to manage cultural heritages).

CHAPTER 6: FRAMEWORK ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

6.1 Environmental and Social Impact Assessment and Approval Process

This section describes the process of environmental and social screening and approval process of Projects such as the GERMP. It will be noted that the NEA's capacity in the conduct of ESIA was built by the Bank in the 1990s through a Bank funded capacity building project. Consequently the Bank's procedures and that of the NEA are essentially similar. The ESIA process, as applied in The Gambia (summarized in Table 8) will consist of the following steps as required by the NEMA 1994, EIA Regulations 2014, and NEA's *EIA Guidelines* and *EIA Procedures*.

Table 8: Summary of the ESIA Process

Activity	Authority / Responsible Person
Completion of the ESIA Screening Form	NAWEC / GERMP Project Coordinator with assistance from the Project Environmental Officer
Screening and classification	NEA / Senior Program Officer-EIA
Scoping and development of study TOR	Coordinated by NEA / EIA Working Group
Recruit ESIA Consultant to carry out study including stakeholder consultation	NAWEC / GERMP
Prepare ESIA and ESMP	Consultant
Review of draft ESIA/ESMP report	Coordinated by NEA / EIA Working Group, TACs, relevant Government institutions, private sector, NGOs and Project affected communities
Environmental Approval is issued if satisfactory	NEA / Executive Director
Share ESMPs with the Lenders	NAWEC/GERMP
Disclosure of site-specific ESMPs. Coordinate the development of complimentary studies recommended by the ESIA/ESMP, such as Resettlement Action Plans.	NAWEC / GERMP
Include the relevant ESMP issues into contractor bid documents	NAWEC
Environmental and Social monitoring	Coordinated by NEA / EIA Officers, Environmental Inspectors, relevant Regional Technical Advisory Committees.
Reporting of ESMP implementation	NAWEC/GERMP

Step 1: Preparation of Environmental Profiles

As a first step NAWEC, as the host of the GERMP, and thus the proponent will prepare a project profile and concept, and complete the EIA Screening Form (indicated in Annex 3) for submission to NEA for project categorization.

The profile will describe the physical, biological, environmental and socio-economic characteristics of the proposed project site or area. Preparation and completing the Screening Form should be as participatory as possible, drawing on the knowledge and involving the people located along the proposed line corridors.

The Screening Form will determine the potential environmental and social impacts and their significance, and to assign the appropriate environmental category. The Screening Form enhances determination of appropriate environmental mitigation measures, or recommends the execution of an Environmental and Social Impact Assessment (ESIA), if necessary.

Step 2: Screening / Assigning Category to a Project based on Gambian Laws

The assignment of the appropriate environmental category to a Project or particular component will be based on the information provided in the Screening Form. The Senior Programme Officer –Environmental Impact Assessment (SPO-EIA) at the NEA will be responsible for categorizing the project as A, B, or C using E&S guidelines.

Following this, the SPO-EIA informs NEA's Executive Director on the outcome of the screening, with recommendation establishing whether:

- a full blown ESIA should be carried out (Class A)
- more information should be requested from the proponent to make a decision (Class B)
- no environmental studies, and simple mitigation measures will be adequate (Class C)

If the screening outcome indicates that the activities scheduled are more complex and would therefore require conducting an ESIA, a scoping process then takes place.

Step 3: Scoping

Terms of Reference for the study will be prepared by the SPO-EIA at NEA in consultation with the EIA Working Group and other stakeholders, including project affected persons (PAPs). The scoping process is a consultative process that culminates in the determination of the extent and approach to an environmental and social impact assessment study to be conducted by qualified consultants/persons in accordance with provisions of the NEMA, 1994 and EIA Regulations 2014; in addition to OP 4.01 and ESS1 for the GERMP.

Step 4: ESIA Study

The study team addresses the terms of reference following extensive stakeholder consultations, site analyses and literature reviews.

The ESIA reports should be short and clear, so that all relevant Project stakeholders can easily understand it. It should state clearly the main environmental issues, both positive and negative, likely impacts, potential project affected persons, mitigating measures, and costs of mitigation. The report should include a section known as the environmental and social management plan (ESMP) where impacts, mitigation, responsibilities, monitoring and costs are stipulated.

Step 5: Public Consultations and Participation

Public information and participation is not a standalone step, rather it is an activity that must be ensured during all stages of the ESIA process. In the case of GERMP, the consultations will be led by the NEA in collaboration with NAWEC, with participation of relevant government institutions, Regional Governors' offices, concerned Councils, traditional leaders, PAPs, and non-governmental organizations amongst others.

To present the GERMP and seek opinion on its E&S issues, a combination of several formats may be used:

- Meetings and focused group discussions with a gathering of affected and interested stakeholders

- Opening of a register, accessible to all the populations, in locations (such as NAWEC, NEA, Governors' Offices, Councils etc. and online) where they can seek information, access drafts and note their concerns and apprehensions, appreciations, remarks and suggestions about the GERMP

- Media talk shows

In any event, a public information programme is initiated, and public notices are issued during the scoping and EIA preparation stages. Whenever a public concern over the GERMP is indicated and impacts are extensive and far-reaching, the NEA is required to organize a public hearing. The results of the public hearing should be taken into account when a decision is taken, whether or not a permit is to be issued. Where views are disregarded as invalid, reasons must be given for that justification.

Step 6: Review and Approval of Environmental Assessment Report

The study reports are initially reviewed by the NEA for completeness, and on acceptance reproduced for more widespread review by the NEA and the EIA Working Group, in addition to public consultations undertaken during the review. Subsequently, the revised ESIA report will be sent to the Executive Director of NEA for final decision; the outcome of the review of the ESIA reports / Projects will be declared (accepted or rejected).

The review should also include the determination of whether there is need for specific accompanying, complementary studies and reports that must be done to complete the safeguards process, such as RAPs.

Step 7: Disclosure

When approval is granted, the final ESIA reports/ESMPs shall be disclosed through distribution of copies to different institutions and communities for reference. In addition, the WB and EIB shall make these publicly available through their websites.

NAWEC eventually implements the subproject and respective ESMPs. Where mitigation measures are to be carried out by the works contractors, the requirements must be prescribed in contractor bid documents including cost considerations.

Step 8: Environmental and Social Monitoring and Reporting

Monitoring is a key component of the ESMF during project implementation, and is to be carried out in sequences and frequencies. It will be undertaken during project implementation to verify the effectiveness of impact management, including the extent to which mitigation measures are successfully implemented.

The aim is to: (i). Improve environmental and social management practices; (ii). Check the efficiency and quality of the EIA processes; (iii). Establish the scientific reliability and credibility of the EIA for the GERMP; (iv). Provide the opportunity to report the results on safeguards and impacts and proposed mitigation measures during implementation. Monitoring of GERMP activities will involve three areas namely:

- **Compliance monitoring:** to verify that the required mitigation measures are being implemented. This will be carried out by the NEA SPO-EIA, and would include inspections during land preparations at the solar fields, construction of the substations, the stringing and laying of underground cables, etc. The operational and decommissioning phases will also be monitored. In cases where pits have been excavated during construction must be monitored to ensure they are buried up and the ground is brought back to its original state.

- **Impacts monitoring:** of the environmental and social safeguards given to the contractor in the contract specifications or to NAWEC, the Project proponent. This is the responsibility of the NAWEC and/or its designated Focal Point for the GERMP, and should ensure that the contractor submit report on work progress and any challenges in observing the safeguards. The monitoring results should form a major part of the reports to be submitted to the NEA and the Bank and EIB by the Ministry of Petroleum and Energy.

- **Cumulative impact monitoring:** will determine the impacts of GERMP on the environmental and social resources within the project's area of influence. It should be monitored with consideration to other developments which might be established within the general area of the GERMP.

There should be collaboration between NAWEC and other relevant stakeholders including, national institutions such as National Roads Authority (NRA), GAMTEL, and others working within the GERMP's operational area to compare the environmental and social safeguards guiding the implementation of the those institutions' respective projects to ensure comprehensive management of cumulative impacts. For example, some project affected

persons under the ongoing Sukuta-Jambanjelly Road that have recently gone through a process of involuntary resettlement may again be possibly affected by involuntary resettlement under the GERMP.

6.2 Guidelines for the Preparation of ESMP

The GERMP should develop ESMPs for subprojects and these should be user friendly. The ESMP should be a practical, action oriented plan specifying measures to be taken to address the negative environmental impacts. It should also specify the actions, resources and responsibilities needed to implement the agreed actions and details on key social and environmental management and monitoring performance indicators.

Further, the ESMP should ensure that the costs of implementing the ESIA report recommendations are budgeted into the total GERMP costs. The ESMP should cover the following aspects:

i. Summary of Impacts: Anticipated adverse environmental impacts should be identified and summarized as well as their relationship to social impacts and the appropriate mitigation measures.

ii. Description of Mitigation measures: The mitigation measures proposed for the various impacts should be described in relation to the corresponding impacts while stating the conditions under which they are required.

iii. Consultations: Adequate description of the public participation and consultations should be done and justified.

iv. Description of monitoring program: A detailed monitoring program should be described in the ESMP, listing environmental performance indicators and their link with impacts and mitigation measures as outlined in Annex 9. The ESMP should also describe the parameters to be measured, methods to be used, sampling location and frequency of measurements, detection limits and a clear definition of thresholds that indicate the need for corrective measures. Monitoring and supervision schedules should be clearly stated and agreed to ensure timely detection of needs for remedial action and also provide information on the level of compliance with ESMP in accordance with the relevant safeguards. These arrangements must be clearly stated in the project implementation/operations manual to reinforce project supervision.

v. Legal requirements and bidding/contract documents: The ESMP should be incorporated in all legal documents to enforce compliance by all contractors participating in the project. The ESMP should be summarized and incorporated in the bidding and contract documents.

vi. Institutional arrangements: The ESMP should clearly state who is responsible for monitoring, execution of remedial action and the reporting order and format to allow for a defined channel of information flow. It should also recommend institutional strengthening for relevant agencies and the funding authorities for the various activities.

vii. Capacity Development and Training: To support timely and effective implementation of environmental project components and mitigation measures, the ESMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level. If necessary, the ESMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the ESMP provides a specific description of institutional arrangements i.e. who is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most ESMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

viii. Implementation Schedule: The frequency, timing and duration of mitigation measures and monitoring should be stated in the implementation schedule. Links between mitigation measures and development of relevant institutions and legal requirements of the project should be stated.

ix. Reporting: The order of information flow as it concerns monitoring reports should be clearly defined. The relevant officers to receive these reports should be those who have authorities to facilitate implementation of the results of the monitoring. These reports should also be communicated to the Bank via media to be agreed and specified in the ESMP. Adequate arrangements should be made by the Bank to facilitate the circulation of the ESMP through the selected means.

6.3 Consultations and Public Participation

6.3.1 Objectives of Stakeholder Engagement (Consultation and Participation)

The exchange of information during development of the safeguards documents is critical to the completion and satisfactory compliance with best practices and Lenders' requirements. Therefore, a two-way communication will occur throughout the preparation and implementation of the ESMF and ESMP processes.

Extensive, effective, and meaningful consultation and participation procedures in this ESMF are a cornerstone of Bank project development. Consultations and public participation have the following overall objectives:

(i) improving the design of GERMP activities through local inputs to the design process that reduce the negative impacts of the Project;
(ii) ensuring that project beneficiaries are kept fully informed in, and involved with the ESMF process;
(iii) reducing delays in project activity implementation, which can arise if disputes and grievances are not dealt with beforehand.

6.3.2 Consultation and public participation methods that can be applied

Public participation in the GERMP will involve a combination of stakeholder consultations; it will involve local leaders, municipal agencies and authorities, NGOs and community-based organizations. The consultations shall be based on a communication strategy that seeks to increase transparency, public understanding, and citizen involvement in the development and implementation of the ESMF/ESMPs. The strategy will have clear and consistent messages to be delivered to the public through the following methods:

f) Public Meetings
g) Individual (face–to-face) Meetings
h) Use of Media Outlets including websites
i) Traditional Drama Presentations
j) Participation in Project Activities

The consultations mentioned shall, in all cases, take due consideration of representativeness and inclusion of women and marginalized or vulnerable groups. However, in view of the potential difficulties these groups sometimes have in making their voices heard in large open meetings, special arrangements shall be made at group and individual levels to reach out to them to create the necessary awareness and collect their views. In addition, all meetings will be in the local languages understood by the communities.

The consultations and discussions will be supplemented by the disclosure of key documents (for example, this ESMF and the subsequent ESMPs).

Logs of all consultations (including dates, persons attending, main purpose of consultation, and a summary of the proceedings) will be maintained by the PCU/Consultant. These activities will take place through the sub-activity cycle, including post-construction monitoring. The most important of these consultations and participatory discussions shall be carried out as outlined below.

6.3.3 Consultation during the various phases

6.3.31 Consultation Activities during the Design Phase

NAWEC representatives and consultants (as necessary) will hold formal consultations with stakeholders during the preparation of initial and final GERMP designs. They will seek suggestions and modifications to reduce both involuntary resettlement and other negative environmental impacts without adding disproportionately to the cost of construction. They will also seek to identify potential sites Project activities of components (for example, sub-stations) can be located along the corridors. At the same time, NAWEC or their contractors will hold informal discussions on the same issues potential project beneficiaries during their field visits to prepare and finalize the routing of the transmission lines.

6.3.32 Consultation Activities during ESMF Preparation

NAWEC and/or Consultant will make an announcement before the start of the Project and as soon as practicable after this announcement, initial public meetings will be held in specific proposed activity areas (such as the solar fields and along proposed corridors at which activity designs and ESMF policies will be presented; summary information will be will be distributed. Publicity for these meetings will be achieved through the press, radio, and word of mouth. Local officials and leaders will be informed directly. Where the specific project area is extensive (e.g. locations of towers/poles which will be spread along the corridors, multiple public meetings will need to be held.

6.3.33 Consultation Activities during ESMP Preparation

During the process of developing the ESIA report and ESMP the consultant will visit and hold meetings and consultations with potential project beneficiaries. Potential activity sites for the GERMP should be visited, paying particular attention to the socio-economic, physical and environmental characteristics of the various sites, including their respective development-environment situation and relationships. The process should be as participatory as possible, involving the local people, and drawing on the local knowledge and recognizing the relationship among resources, resource users, institutions, socio-economic and cultural setting.

6.3.34 Consultation Activities during ESMP Implementation

Once finalized, the ESMP will be disclosed in the Project areas, including offices of Mayor and Governor. As project proposals are finalized, the complete proposal shall include the environmental category of the subproject. For category B subprojects, the proposal shall include the EIA report and proof of its approval by NEA. For category C subprojects, the EIA Screening Form shall be included, together with a list of mitigating measures. The Screening Form will include an enumeration of possible environmental impact and planned mitigating measures.

6.3.35 Consultation Activities during Post-construction Monitoring

Consultation will constitute a major part of the post-construction monitoring and evaluation system. These activities will include follow-up surveys (quantitative and qualitative) to monitor project implementation, as well as a final workshop to discuss the ESMP process as a whole to which project beneficiaries and those affected by the project will be invited.

6.4 ESMF Implementation Arrangements

6.4.1 Stakeholder Roles and Responsibilities for the ESMF implementation

Implementation of the ESMF is the main responsibility of the Project PCU. Other parties may have roles to play although these have to be initiated by the PCU or NEA as the coordinating and oversight bodies respectively.

As the purpose of the ESMF is mainly to set the pace for future environmental and social management of subprojects, more specific roles and responsibilities shall be identified in the ESMPs. Notwithstanding, those important at the preparatory stage mainly for technical advice and regulatory information provision may include the Department of Forestry who eventually will be responsible for all forest related issues; the Department of Physical Planning and Housing, and the department of Lands and Surveys for resettlement issues; and the Ministries of Health and Basic Education for coordination of the sector component. The Local Authorities and project affected persons are also relevant in project planning.

6.4.11 NAWEC: GERMP Project Steering Committee and Project Coordination Unit

NAWEC will be the implementing agency of the GERMP and together with other stakeholders will need to identify all institutions and arrangements that will contribute meaningfully to the effective and efficient implementation of the Project. At this project preparatory stage no institutional structures have been established yet, notwithstanding, to coordinate the preparation of the Project and its preliminary safeguards studies, the Project Coordination Unit of the existing Gambia Electricity Support Project (GESP) under NAWEC was appointed.

Specifically the institutional arrangement for the implementation of the Framework ESMP will consist of the following:

- Project Steering Committee (PSC)
- Project Coordination Unit (PCU)
- Local Authority
- National Environment Agency (NEA)

GERMP Project Steering Committee (PSC)

A GERMP Project Steering Committee (PSC), chaired by the Permanent Secretary, Ministry of Petroleum and Energy should be created to oversee the activities of the GERMP. Given the similarities in functions, the membership of the GESP PSC could well be the PSC for the GERMP to oversee implementation of the ESMF, RPF and subsequent ESMPs and RAPs. The Permanent Secretary, Ministry of Lands and Regional Administrations shall be on the GERMP PSC due to the importance of the potential land ownership / compensation issues that this Project may face.

The PSC's roles and responsibilities shall include:

- Oversee and check the implementation of the GERMP safeguard documents including the ESMF, ESMPs, RPF and RAPs
- Review and address all issues relating to compensations, disputes
- Closely monitor the progress reports
- Visit the Project sites to ensure progress of work and other activities

GERMP Project Coordination Unit (PCU)

Currently, the GESP Project Coordination Unit is overseeing the preparation of the Project and it is assumed that at the end of the preparatory phase a more permanent GERMP PCU structure will be in place to oversee the implementation of the project. Such a body shall be responsible for the whole resettlement planning and implementation process. It will be responsible for the oversight of implementation of the RPF and provide an enabling environment for the same.

The GERMP PCU will consist of the following:

- Project Coordinator
- Environmental Safeguards Specialist (ESS-GERMP)
- Social Safeguards Specialist (SSS)
- Procurement Specialist (PS)
- Technical Specialist (TS)
- Financial Management Specialist (FMS)
- Monitoring and Evaluation Specialist (M&ES)

The Management of NAWEC shall have overall oversight role and responsibility and tasks and responsibilities of the GERMP PCU shall include:

- Recruit an environmental safeguards specialist and a social safeguards specialist for the GERMP to be responsible for all the environmental and social aspects of the Project including coordination and monitoring of the implementation of the RPF and the Project's grievance redress mechanisms amongst others.

- The social safeguards specialist shall identify safeguards focal points at the NAWEC Regional offices that will be trained to support and report during the Project.

- Completion of EIA Screening Forms and liaison with the NEA in ensuring subproject environmental assessment and plans are developed and implemented.

- Work with the technical and procurement teams to ensure that contract documents contain environmental and social clauses that contractors must fully implement.

- Coordinate internal monitoring and evaluation based on monitoring plans.

- Coordinate Project related grievance redress activities.

- Where applicable, facilitate Project related activities of partner stakeholders.

6.4.12 Local Authorities

Local Government Authorities play a major role in land administration as they maintain registers of properties in their jurisdiction for rating purposes and in this way they have records of ownership of land albeit not always very accurate. Thus, their role in the implementation of safeguard policies, including ESMPs and RAPs, is important.

Similarly, the Offices of the Governors process and prepare all applications for leases within their jurisdiction. The Governors are the Chairpersons of their respective Regional Physical Planning Authorities. Like the Local Government Authorities, the offices of the Governors play an important role in both social and environmental assessment. Furthermore, Governors, as Chairpersons of Technical Advisory Committees (TACs), have the responsibility of monitoring the implementation of ESMPs and resettlement plans at regional levels.

6.4.13 National Environment Agency

The NEA has a monitoring and supervisory role and shall be responsible for confirming the results of the screening process, reviewing and clearing subproject-specific safeguard instruments and conducting compliance monitoring, with national laws and regulations, as well as the lenders' policies and procedures. In addition the NEA shall provide technical support and participate in training and sensitization of stakeholders to enhance understanding of the national, WB and EIB environmental and social safeguard instruments.

6.4.2 Specific Roles and Responsibilities

Implementation of the ESMF is the main responsibility of the PCU. Other parties may have roles to play although these have to be initiated by the PCU or NEA as the coordinating and oversight bodies respectively (Table 9).

As the purpose of the ESMF is mainly to guide future environmental and social management of subprojects, more specific roles and responsibilities shall be identified in the ESMPs. Notwithstanding, certain important entities are crucial at the preparatory stage mainly for technical advice and regulatory information provision; these may include the Department of Forestry who eventually will be responsible for all forest related issues; the Department of Physical Planning and Housing, and the Department of Lands and Surveys for resettlement issues; and the Ministries of Health and Basic Education for coordination of the sector components. The Local Authorities and project affected persons are also relevant in project planning.

Project Coordinator

A Project Coordinator will be in place to oversee the implementation of the Project. He will have the responsibility for initial screening, and ensuring subproject safeguard required studies and documents are developed and implemented.

Environmental Safeguards Specialist (ESS-GERMP)

An environmental safeguards specialist will provide management for all environmental issues and activities including implementation of the ESMF and ESMPs. Progress reports will be submitted to the PCU for transmission to the Project Steering Committee (PSC) and NAWEC.

Social Safeguards Specialist (SSS)

The social safeguards specialist will be required to provide periodic reports on progress on social issues in respect of the identification and acquisition of land as they relate to implementation of RAPs etc., progress in the compensation of PAPs and the level of their participation in project activities. These reports will be submitted to the PCU for transmission to the Project Steering Committee (PSC) and NAWEC.

Procurement Specialist (PS)

The PS is responsible for purchasing and making project equipment and material available for timely completion of subprojects and ensuring that environmental assessments and plans are developed and implemented.

Technical Specialist (TS)

The Technical Specialist will integrate the construction phase mitigation measures and environmental and social clauses in the bidding documents; ensure that the contactor prepares his ESMP, gets it approved and integrates the relevant measures in the works breakdown structure or execution plan. In collaboration with ESS-GERMP, SSS, FS and PS the Technical Specialist will ensure that contract documents contain environmental and social safeguard clauses that contractors must fully implement.

Financial Management Specialist (FMS)

The Financial management specialist is responsible for the day-to-day management of financial resources of the Project.

Monitoring and Evaluation Specialist (M&ES)

The Monitoring and Evaluation Specialist coordinates internal monitoring and evaluation of subprojects based on monitoring plans.

Monitoring and evaluation are fundamental components of the ESMF and they will be carried out on a continuous basis. Monitoring of the ESMF implementation process is normally the responsibility of the PCU whereas evaluation is undertaken by an external agency.

Summary of the roles and responsibilities

The following matrix (Table 9) along with its above write-up on the roles and responsibilities for the implementation of the Framework ESMP, shall be incorporated in the E&S safeguards management section of the project implementation manual.

Table 9: Summary of Roles and responsibilities for the implementation of the Framework ESMP

No	Steps/Activities	Responsible	Collaboration	Service Provider
1.	Identification and/or siting of the subproject	NAWEC Management	local authorities; Department of Lands and Surveys;	
2.	Screening, categorization and identification of the required instrument (use the national EIA procedure)	ESS-GERMP on the PCU	NEA; local authority; SSS;	Consultant
3.	Approval of the classification and the selected instrument by the NEA	Project Coordinator	ESS-GERMP; SSS;	NEA; World Bank; EIB
4.	Preparation of the safeguard document/instrument (ESIA, Env. Audit, ESMP, etc.) in accordance with the national legislation/procedure (taking into account the Bank policies' requirements)			
	Preparation and approval of the ToRs	ESS-GERMP; PC	NEA	The World Bank; EIB
	Preparation of the report	ESS-GERMP	Procurement specialist; SSS Local authority; NEA	Consultant
	Report validation and issuance of the permit (when required)	ESS-GERMP;	PS; SSS; TACs/Local authority; NEA	Consultant; The World Bank; EIB
	Disclosure of the document	PC/ESS	NEA; NAWEC Management	Media; World Bank; EIB
5.	(i) Integrating the construction phase mitigation measures and E&S clauses in the bidding document prior to being advertised; (ii) ensuring that the contractor prepares ESMP and gets it approved and integrates the relevant measures in the works breakdown structure or execution plan.	Technical Specialist on the PCU	ESS-GERMP; PS; NAWEC; PSC; Engineer; Contractor	Contractor; NEA
6.	Implementation of the other safeguards measures, including environmental monitoring (when relevant) and sensitization activities	ESS-GERMP;	SSS; PS; TS; FS; M&ES; NEA and EIA Working Group; NGO; Local authority; PSC; General public	Consultant; National specialized laboratories;
7.	Oversight of safeguards implementation (internal)	ESS-GERMP/PC	M&ES;FS; PSC; Local authority;	NAWEC MD and Management
	Reporting on project safeguards performance and disclosure	PC	M&ES; ESS-GERMP; SSS; PSC	NAWEC MD and Management
	External oversight of the project safeguards compliance/performance	NEA	PC; M&ES; ESS-GERMP; SSS; PS; PSC	NAWEC MD and Management
8.	Building stakeholders' capacity in safeguards management	ESS-GERMP	PC; SSS; PS; NEA	Consultant Other qualified public institutions
9.	Independent evaluation of the safeguards performance (Audit)	ESS-GERMP	SSS; PS; NEA	Consultant

6.4.3 Disclosure of Safeguard Documents

Disclosure of the documents shall include:

(vii) Distribution of as many copies as possible to different institutions, affected communities, and at strategic locations accessible to all stakeholders for comments and suggestions and referencing.

(viii) Distribution to individuals and representative persons like Members of the National Assembly (NAMs), Regional Governors, Village Councillors, Village Development Committee members etc.

(ix) Conducting meetings to discuss the plans at the Project affected sites

(x) The final ESMF and ESIA reports will be made available in the local communities affected by the Project.

(xi) There is no demand and need for translation of documents into local languages as the target audiences do not have the literacy capacity to read the translated documents. Therefore, meetings and discussions will be held in local languages used by the communities to develop understanding of the Project and resettlement issues where there is demand.

(xii) The ESMF and ESMPs shall also be disseminated through the NAWEC and World Bank websites.

6.4.4 Institutional Capacity Enhancement

In the course of the consultations, it was apparent that most of the potential partners in ESMF implementation do not have good background knowledge and information on the environmental issues most especially in impact assessments.

Specifically, it will be necessary to strengthen the capacity of the staff of NAWEC and other collaborating institutions on the safeguards; on the required management procedures and their roles in implementation and monitoring. A training workshop for NAWEC and its partner agencies is proposed to cover Project introduction, potential impacts, specific law, roles and capacity in ensuring sustainability of the Project. This may be held before identification of site-specific activities to ensure effective contribution during the process of subproject preparation, ESIA and ESMP development. The technical advisory committees located within the offices of the Mayors and Regional Governors shall be sensitized to this effect. NAWEC regional officers and safeguards focal points must also be trained on environmental and social safeguards management relevant to the Project.

The training program should aim to provide attendees with general understanding of environmental and social management issues, safeguard processes, relevant environmental policies and legislation, and the basic approach to implementing the guidelines provided in ESMF/ESMP and the RPF/RAPs. Others include the use of appropriate tools such as the screening forms, health and safety, and internal monitoring and evaluation procedures.

In addition to the above, and in order to comply with best practices and international standards, contractors and labourers should be provided with information, knowledge and skills. These should focus not only on the construction phase but also operational phase of the Project.

CHAPTER 7: GRIEVANCE AND CONFLICT RESOLUTION

7.1 Grievance Redress Mechanism for Prevention and Resolution of Complaints and Conflict

During GERMP preparation and implementation, complaints may arise from partner institutions with respect to breach of laws, project affected persons on landownership and land use issues, pollution nuisance and choice of beneficiaries amongst others. Therefore, to maintain community stability and credibility of NAWEC and GERMP lenders, mechanisms are proposed to redress any grievance and conflict that may arise from the Project. NAWEC will strengthen its team by a Social Specialist and an Environmental Specialist.

The above mentioned grievances, when they occur, shall be referred to a grievance resolution committee to be resolved using traditional and administrative mechanisms, or the law courts at national, regional and community levels.

NAWEC/Government of The Gambia (GoTG) recognises that where compulsory possession is to be carried out, the process is controlled by law which will be abided by. Therefore, any forced evictions that may be required will be undertaken solely for the purpose of promoting the general welfare and that full, fair and timely compensation, rehabilitation and non-regression of rights (including the right to an adequate standard of living) will be fully ensured.

Notwithstanding, grievances shall be referred to a grievance resolution committee to be resolved using traditional and administrative mechanisms, or the law courts at national, regional and community levels. However, this grievance mechanism will be designed to be legitimate and trusted by all relevant partners including the PAPs in particular.

The GERMP Grievance Resolution Committee (GGRC) described below, shall be independent, free and in line with the requirements set out in EIB ESS 10. In particular, where a complaint is not admissible or relevant, the GGRC will refer the aggrieved parties to the relevant authority or other grievance process. The grievance mechanism process will not impede access to independent judicial or administrative remedies outside the specific context of the GERMP; quite the contrary, it should complement and facilitate access to the independent courts.

Grievances and conflicts need to be addressed immediately at the community level. The PCU is to be notified of any disputes in the project zone. Project field staff should work closely with the communities and the community leaders to clarify and resolve any misunderstanding that could give rise to conflicts.

Where the dispute cannot be resolved at the community level, the affected persons or party shall be advised to lodge a complaint to the specified GGRC. The Project field staff shall advise the party on how and where to file the complaint. To ensure reports are user friendly and complete for easy comprehension by the GGRC, a standard grievance report form may be developed by the social safeguards specialist to include name, address and contact details of complainant, date, and nature of complaint etc.

Where the traditional and administrative procedures fail to resolve disputes, the aggrieved party has the right to take the matter to the courts in accordance with the Constitution of The Gambia, other national laws, and the Lenders' policies.

7.2 The GERMP Grievance Resolution Committee (GGRC)

A GERMP Grievance Resolution Committee (GGRC) is proposed to be set up to inform and coordinate the relevant stakeholders and provide resources for resolution activities. The GGRC, through the Project Coordinator (Chair), shall maintain all records from complaint to final decision for future reference. The GGRC shall also ensure public participation and consultation is a part of the process at all times to promote understanding and prevent unnecessary complaints and disputes.

Membership of the GGRC shall include permanent members, whilst others will be coopted based on the region from which the grievance report comes from. For example Kotu falls under Kanifing Municipality Mayor whilst Brikama falls under the Governor of WCR. The following membership is proposed:

- The GERMP Project Coordinator (Chair)
- The GERMP Social Safeguards Specialist (Secretary)
- The GERMP Environmental Specialist
- Representative of the Ministry of Lands and Regional Governments
- The Governor or Mayor (depending on location)
- The Seyfo / Chief of the Districts (depending on location)
- Representative of the Village Development Committee (VDC)
- Representative of the PAPs
- Relevant local NGO

7.3 Grievance Redress Process

The structure or steps of the grievance mechanism shall comprise of:

- Receive, register and acknowledge complaint
- Screen and establish the foundation of the grievance
- Implement and monitor a redress action
- Advise for a judicial proceedings as last resort if necessary
- Document the experience for future reference

The process is highlighted in Table 10 with suggested timeframe and responsibilities, also depicted by the flowchart in Annex 10.

Table 10: Proposed Course of Action to Address Grievance

Step	Process	Description/Required Action	Completion Timeframe	Responsible Agency/Person
1	Receipt of complaint	Document date of receipt, name of complainant, nature of complaint	1 day	PCU (specifically social safeguards specialist)
2	Acknowledgement of grievance	By letter, email, phone	1-5 days	Social safeguards specialist at the PCU
3	Screen and establish the foundation / merit of the grievance	Visit the site; listen to the complainant/community ; assess the merit	7-14 days	GGRC members including the Project safeguard specialists, complainant and his/her representative
4	Implement and monitor a redress action	Where complaint is justified, identify and carry out the redress	21-30 days or at a time specified in writing to the complainant	Project Coordinator, social-, environmental safeguard specialists to coordinate the implementation of redress action
5	Extra intervention for a dissatisfied scenario	Review the redress steps and conclusions, provide intervention solution	2-4 weeks of receiving status report	Project Coordinator GERMP and GGRC to review and react
6	Judicial adjudication	Take complaint to court of law	No fixed time	Complainant
7	Funding of grievance process	GGRC logistics and training, redress compensation, court process	No fixed time	GERMP

CHAPTER 8: MONITORING AND REPORTING OF THE ESMF IMPLEMENTATION

8.1 Monitoring

The proposed monitoring program for the ESMF is outlined in Table 11 with suggested frequency and some indicators to measure success rate. The Project shall aim to support and facilitate monitoring by all the identified stakeholders. It should also sensitize and train all relevant stakeholders on their expected roles and responsibilities to promote consistency and efficiency.

Table 11: ESMF Monitoring Programme

Activity	Responsibility for Coordination / Implementation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
Preparation of subproject ESIA/ESMPs	PCU	- PSC (internally) - NEA (externally)	Monthly as required	Before any subproject activity	ESIA statements and ESMP for all subprojects
Sensitization workshop for NAWEC and all partners on the GERMP ESMF and other safeguards requirements	ESS-GERMP				No. of workshops held No. of stakeholders that participated
Training of NAWEC regional staff on safeguards management	ESS-GERMP				No. of staff trained No. of Regions covered
Public awareness	ESS-GERMP				No. of public sensitization programmes
Environmental auditing	PCU			After year 4	- Environmental Audit Report; - Number of reports on implementation of any recommendation from the audit report

During Project implementation, it is important to check if the recommended mitigation measures (as outlined in Annex 9 for consideration in the ESIAs) are being carried out effectively to ensure the Project is environmentally friendly. In addition, monitoring may further identify new problems that have not been anticipated at the time of assessment, or due to changes in the design of Project activities or at the sites that may require alternative means of mitigation. For cost-effectiveness and ease of monitoring and evaluation, the

ESMF/ESMP implementation and monitoring should be mainstreamed in the main Project management system at all levels.

Responsibilities have been prescribed for the various stakeholders including Project personnel, government institutions and contractors. The NEA has the legal role for overall monitoring of the ESMF implementation as required by NEMA, 1994 with support from the Project PCU. NEA collaborates with other institutions, including the Regional TACs of WCR and Kanifing Municipality based on expertise required for different parameters. Moreover, the beneficiary communities along the various corridors are the fulltime watchdogs that should internally monitor the activities of the implementing partners locally.

8.2 Reporting

Effective communication is essential in ensuring an environmentally sustainable Project. Therefore, it is suggested that the NEA uses the platforms of the EIA Working Group and TACs, to report to relevant partner institutions accordingly for speedy remedial action where necessary.

The social and environmental specialists to be recruited under the GERMP PCU will be required to provide monthly reports on progress of the ESMF implementation. These reports will be submitted to the PCU for transmission to the GERMP PSC, and to the World Bank and EIB. The PCU will compile the monthly monitoring reports for an integrated monitoring and evaluation Project report to the Lenders and NEA. Progress or lack of progress must be reported for necessary improvements and identified problems to be addressed on time.

Communication and reporting at the Regional level, to the head offices of the various technical officers is essential. Monthly reports of monitoring are recommended from the NEA Regional Program Officers. The NEA, through its related officers, ensures that recommendations of the reports are taken into account by the relevant parties, and PSC through the Project Coordinator.

8.3 Environmental Audit

This is a systemic review of the activities against the ESMF to ensure that it is implemented as planned and possible identification of any risk and impact that has not been anticipated due to changes in the design of Project activities or changes at the sites that may require alternative means of mitigation. An independent environmental audit is therefore recommended by year 4 of the Project implementation**.**

8.4 Estimated Cost for Implementation of the ESMF

The proposed budget for implementation of the ESMF is $189,000 as stated in Table 12.

Table 12: Proposed budget for the ESMF implementation

No.	Activity	Cost $US
1	Preparation of subproject ESIA/ESMPs	150,000.00
2	Sensitization workshop for NAWEC and partners (including TACs) on the GERMP ESMF	4,000.00
3	Training of NAWEC regional staff on safeguards management	5,000.00
4	Public awareness	2,500.00
5	ESMF Monitoring	12,500.00
6	Environmental auditing	15,000.00
	TOTAL	**189,000.00**

CHAPTER 9: CONCLUSIONS

11.1 Conclusions

As the ESMF has outlined the main potential impacts of the GERMP, preparation of the subprojects will bear in mind such issues to prevent or reduce negative environmental and social impacts. Subsequent environmental assessments, ESMPs and related RAPs when fully implemented shall also promote sustainability of the Project and ensure support by affected communities. Strategies that will be employed include:

- NAWEC shall develop standards for T&D infrastructural development for safety and consistency.
- NAWEC will consider Projects in a coordinated and collaborated manner to reduce staff and other resource expenditure on various similar Project proposals by both NAWEC and private investors.
- Alternative sites, designs and technologies shall always be well explored by NAWEC to avoid negative impacts, including resettlement.
- As suggested by the NEA, NAWEC shall aim to start the ESIA process early in project /subproject development to allow enough time for the process to be completed without delay.

BIBLIOGRAPHY

DHHS, NIOSH (July 2001), *NIOSH Alert: Preventing Injuries and Deaths from Falls during Construction and Maintenance of Telecommunication Towers.* Department of Health and Human Services, National Institute for Occupational Safety and Health [DHHS (NIOSH) Publication No. 2001–156]. Online at https://www.cdc.gov/niosh/docs/2001-156/pdfs/2001-156.pdf

DWR (2017) Climate data of The Gambia

EIB (2013) European Investment Bank Environmental and Social Handbook

GoTG (1990) Public Health Act

GoTG (1991) Land Acquisition and Compensation Act

GoTG (1991) Physical Planning and Development Control Act

GoTG (1991) State Lands Act

GoTG (1994) National Environment Management Act

GoTG (1995) Development Control Regulations

GoTG (1995) State Lands Regulations

GoTG (1997) Constitution of the Republic of The Gambia

GoTG (1999) Environmental Discharge (Permitting) Regulations

GoTG (1999) Environmental Quality Standards Regulations

GoTG (2002) Local Government Act

GoTG (2006) Forestry Policy (2006-2016)

GoTG (2009) Agriculture and Natural Resources (ANR) Policy

GoTG (2010) The Women's Act

GoTG (2014) EIA Regulations

GoTG (2017) National Development Plan 2018-2021

Gov't of Grenada (2011; updated 2015) Disaster Vulnerability Reduction Project – RPF

Himberg, H. (2015) Comparative Review of Multilateral Development Bank Safeguard Systems, Operations Policy and Country Services

Lahmeyer International GmbH (2008) Renewable Energy Study for The Gambia – Feasibility Study Solar Home System Program

National Women's Bureau (2009) The Gambia National Gender and Women Empowerment Policy 2010-2020

NAWEC (2015) Gambia Electricity Support Project - ESMP

NEA (1999) Environmental Impact Assessment (EIA) Guidelines

NEA (1999) Environmental Impact Assessment (EIA) Procedures

NEA (2009) Gambia Environmental Action Plan, Phase II (2009-2018)

NEA (2016) Strategic Environmental Assessment (SEA) Policy 2017-2021

WB (1999) Operational Manual Operational Policies OP 4.01 Environmental Assessment

WB IFC (2007) EHS General Guidelines

WB IFC (2007) EHS Guidelines for Electric Power Transmission and Distribution.

Yves J.M. Lamour (2014), Brikama Solar Park, Brikama, West Coast Region - Environmental Impact Statement

ANNEXES

Annex 1: List of Persons Met

DATE	LOCATION / VENUE	NAME	DESIGNATION	INSTITUTION / COMMUNITY
13/09/17	Petroleum House, Brusubi	Mod Ceesay	Permanent Secretary	Ministry of Petroleum and Energy
15/09/17	Department of Forestry, Banjul	Malang Jarseh	Deputy Director	Department of Forestry
		Cherno Gaye	Senior Forestry Officer	Department of Forestry
		Saikou Sonko	Forestry Officer	Department of Forestry
15/09/17	Department of Physical Planning and Housing, Marina Parade, Banjul	Musa Batchilly	Director	Department of Physical Planning and Housing
		Mamudou Manjang	Assistant Director	Department of Physical Planning and Housing
		Essa Camara	Principal Physical Planning Officer	Department of Physical Planning and Housing
		Mariama Jobarteh	Development Control Technician	Department of Physical Planning and Housing
18/09/17	NEA Head Office, Kanifing	Malick Bah	Senior Programme Officer, EIA	NEA
		Buba Sey	Programme Officer, EIA	NEA
		Lamin Samateh	Environmental Inspector	NEA
18/09/17	Ministry of Lands and Regional Governments, Banjul	Buba Sanyang	Permanent Secretary	Ministry of Lands and Regional Governments
20/09/17	NAWEC Headquarters, Serrekunda	Demba Jallow	Project Coordinator, GESP, and NAWEC Corporate Planning Manager	NAWEC
		Lang Sabally	Director - Corporate Affairs	NAWEC
		Alhagie Cham	Manager, Planning and	NAWEC

DATE	LOCATION / VENUE	NAME	DESIGNATION	INSTITUTION / COMMUNITY
			Corporate Services Division	
		Bambo Fatty	T&D	NAWEC
		Assan Colley	Draughtsman	NAWEC
21/09/17	Governor's Office, WCR, Brikama	Ebrima Mballow	Governor, West Coast Region (Chair, TAC WCR)	Governor's office, Brikama
		Omar Sanyang	TAC member, WCR	Gambia Red Cross Society
		Aba Colley	Police Commissioner (TAC member, WCR)	Gambia Police Force
		Samba Bah	Director (TAC member, WCR)	State Intelligence Agency
		Adama Keita	TAC Member, WCR	National Aids Secretariat
		Kaddy Bojang Saidy	TAC Member, WCR	Department of Agriculture
		BakaryJarju	TAC Member, WCR	Gambia Fire and Rescue Services
		Gibril Sanneh	TAC Member, WCR	Regional Health Directorate
		Baboucarr Secka	TAC Member, WCR	Department of Youth and Sports
		Binta Sey	TAC Member, WCR	National Disaster Management Agency
		Alfusainey Jarju	Seyfo	Foni Bintang District
		Jammeh K. L. Bojang	Seyfo	Kombo Central District
21/09/17	Proposed site for 23ha solar field at Jambur	Sheriff Sonko	Potential PAP /land claimant	Jambur Village
		Lamin Sonko	Community member	Jambur Village
		Ousman Bojang	Community member	Jambur Village
		Momodou Jallow	Community member	Jambur Village
		Oumie Bojang	Potential PAP	Jambur Village
		Jariatou Bojang	Potential PAP	Jambur Village

DATE	LOCATION / VENUE	NAME	DESIGNATION	INSTITUTION / COMMUNITY
		Gala Bah	Community elder	Jambur Village
		Juma Bojang	Community member	Jambur Village
		Yusupha Sanyang	Badge Messenger / Village Alkalo Representative	Jambur Village
		Momodou Jaiteh	Managing Director	Green Vision International Ltd. (Estate Developer)
22/09/17	Kuntair Health Centre, Kuntair, NBR	Amie Bobb	Officer in Charge	Kuntair Health Centre
		Victor Jatta	Public Health Officer	Kuntair Health Centre
23/09/17	Farafenni Senior Secondary School, Farafenni	Abdou Giggo	Deputy Principal	Farafenni Senior Secondary School
25/09/17	Field visit along 132kV T&D route	Edrissa Jarju	Senior Manager, Transmission & Distribution Division, and Head of Renewable Energy Unit	NAWEC

Annex 2: ESMF Consultations

Summary of Consultations Views and Concerns of Stakeholders

Issues discussed	Feedback/Response from Stakeholders
The components and benefits of the GERMP	The project has come to develop the country, so it is a good one and an a welcomed the initiative
	Any Project to supply electricity to health facilities is welcomed as it is very difficult to work without power supply; fans, fridges, water pumps, continuous lighting and computers cannot be operated
	Solar installations would be helpful for lighting, computing classes and pumping of water in schools
Capacity of stakeholders to carry out responsibilities under this Project	Although there are capacity constraints in logistics and human resources stakeholders are prepared to contribute in implementation and monitoring of the Project.
	The Project shall also provide the necessary training and sensitization on roles and expectations.
Institutional arrangements relevant to the project; roles and responsibilities including monitoring and reporting	Stakeholders are ready to play their roles, and hope NAWEC will also play its role in coordination and facilitation.
	TACs are aware of their limitations in the area of environmental impact assessment, however, capacity building in ESIA is necessary for effective participation
Timely start of environmental assessments	It is hoped that the environmental assessment will begin soon so that the works can go on as the Project is much needed by The Gambia.
	NAWEC also has to involve the NEA early in project development to avoid delays.
	NAWEC needs to plan and allow adequate time for the environmental and social safeguard processes.
Land ownership, land use, resettlement and compensation issues	NAWEC should demarcate and mark land given to them until they are ready for use to avoid encroachment.
	NAWEC shall also find and keep suitable land as reserve for similar projects rather than wait until such land is needed
	There is adequate unused space for housing potential solar panels and associated equipment in most health facilities and schools
Proposed on-grid solar Project sites and potential alternatives and impacts	Q: The negative impacts will include our land and compound fences. What will NAWEC do for us? This is traditional land, and is NAWEC going to compensate all the current occupiers? Can NAWEC find alternative sites for the solar fields?

	A: RPF will be developed to ascertain ownership and ways of compensation, if applicable, before any works start. Other areas shall also be explored to see which sites are more feasible for the projects.
Relevant regulatory instruments	Respective regulatory framework will be implemented to guide such projects although some may need review. Q: Will the Project support in finalization and review of legislation for smooth operation? A: It will be outside the scope of the GERMP which has specific objectives and activities.
Environmental and social safeguards	Comment: There are other projects in the Country which do not give consideration to safeguards, or even when there are plans, implementation does not take place effectively. We hope that this Project does not do the same. Response: The Lenders will not allow that, thus, the purpose of the ESMF and meeting is to involve all stakeholders and ensure safeguard procedures are implemented.
There are potential health and safety issues especially during construction	For student safety to be assured, works could be carried out during weekends as there is always class sessions in the afternoons.
	Contractors should supervise their workers to make sure safety is given priority for their benefit and the public at large.
Dispute resolution practices (existing and mechanism proposed for the GERMP)	There are traditional and legal methods to solve complaints and problems. Usually problems are solved at the local level, however, the courts may be involved when necessary.
Maintenance and sustainability of Project infrastructure	Off-grid solar installations are easy to operate, however, it is difficult to get experienced technicians to advice on required electricity capacity based on energy needs, and problems with installations. Sustainability of the solar installations is a problem that has to be considered by the Project.

Some photos during consultations

Meeting with NAWEC Officials at NAWEC Headquarters, Mamady Maniyang Highway, Serrekunda

Meeting in Jambur between the proposed 23ha site for the solar field and Bamba Forest

Solar panels within Kuntair Health Centre

Non-operational solar panels for water pumping at Kuntair Health Centre

Non-operational solar panels at Farafenni Upper Basic School

Annex 3: EIA Screening Form

NATIONAL ENVIRONMENT AGENCY

5 Fitzgerald Street, PMB 48,BANJUL, The Gambia
Tel: (220) 228056 - Fax: (220) 229701 email-nea@gamtel.gm

Serial No._____

ENVIRONMENTAL IMPACT ASSESSMENT SCREENING FORM

Please type or print clearly, completing this form in its entirety. You may provide additional information on a separate sheet of paper if necessary. Kindly note that the information you are to provide is required by Section 22 of the National Environmental Management Act of 1994 and it is an offence to give inaccurate information under Section of the same Act.

SECTION 1: INFORMATION ON THE CONTACT PERSON

Name ……..

Institutional Affiliation ……..

Business Title/position ……

Business Address ……..

Telephone ……..

SECTION 2: DESCRIPTION OF THE PROPOSED PROJECT

Name of Proposed Project …….

Date expected to start construction ……

Proposed location of project ……
(Attach a map or maps, covering the proposed site and surrounding 5 Km radius)

Land Area ……
(Approximate land area and of proposed location)

Current Land Use (Describe how the land is being used at present) …….

Describe any Possible Alternative Site(s)……

Serial No._____

Describe other types of industries or facilities (including health centres and school) which are located within 100 metres of the site, or are proposed to be located near the proposed facility. Indicate the proximity of the proposed industrial site to residential areas, national parks or areas of ecological, historical or cultural importance.

_____

Indicate whether adequate infrastructure exists at the proposed location, or whether new buildings, roads, electricity and water lines, or drainage systems will need to be constructed as a part of the proposed project.

……..

SECTION 3: EMPLOYEES AND LABOURERS

Number of people to be employed:

Employees and Labourers	**During Construction**	**During Routine Operation**

Indicate whether you plan to construct housing/sanitation facilities for temporary or permanent workers.

SECTION 4: DESCRIPTION OF INDUSTRIAL PROCESS

Briefly describe the type and nature of industrial processes to be conducted at the installation.

_____

_____

State the type and quantity of energy to be used (including the origin of the energy, i.e. public utility, on-site generator, wood, solar, wind, etc.)

Type(s) and Source	**Quantity**	**Period (per day/week/etc.)**

Estimate the quantities of water to be used for the following:

Use(s) of Water	Quantity	Period	Source
Cooling			
Steam Generation			
Production Process			

List the type and quantity of raw materials to be used per year in the production process (including soil, sand, cement, aggregates, wood, animals, etc.). Identify if the sources of all raw materials.

Type	Quantity	Source

List all the chemical expected to be used for any aspect of the production process (A separate list may be attached with more detailed information)

Name/Type	Description	Quantity

SECTION 6: PRODUCTS

Briefly state the nature of the product(s) or output of the proposed facility, and the expected quantities on a quarterly or annual basis. Indicate the intended uses of the product(s).

Name of Product/Output	Description of Uses	Anticipated Output per Qtr/Yr

SECTION 7: BY-PRODUCTS, WASTE MANAGEMENT AND DISPOSAL

Specify the nature of each waste or by-product and the quantity to be generated

Type	Description	Quantity in Kg per wk/mo
Solid (Bulk)		
Solid (particulate)		
Liquid		
Gaseous		
Other		

Proposed method of disposal or management of wastes (e.g burning, bury, etc.)

Type of Waste	**Method of Disposal/Management**

Indicate sources of noise pollution, the type/quality of nose (i.e. machinery/repetitive pounding, etc.)

Source of Noise	**Type of Noise**

SECTION 8: ENVIRONMENTAL IMPACTS

Please indicate environmental impacts that may occur as a result of the proposed project

Nature of Impact	Y/N	Brief Description of the Anticipated Impacts
Air Quality		
Drainage		
Landscape		
Forest Cover		
Vegetation		
Human Population		
Animal Population		
Soil Quality		
Soil Erosion		
Water Quality		
Tranquillity/Noise		
Special Habitats		
Other		

SECTION 9: PROPOSED MITIGATION MEASURES

Indicate whether measures are being considered to mitigate against damage likely to be caused by the proposed project to human health and/or the environment. Briefly describe these measures.

Air Pollution	
Water Pollution	
Noise Pollution	
Removal of vegetation	
Wastes	
Displacement of human populations	
Destruction of fish habitat	
Destruction of special habitats	
Soil Erosion	
Others	

State any and all experience you have with implementing the above mentioned mitigation measures. If you do not have prior experience, what skills do you possess to implement these mitigating measures?

_____

_____

What staff training will be provided to ensure compliance with health and environmental safety standards?

_____

_____

Serial No._____

SECTION 10: TESTIMONY

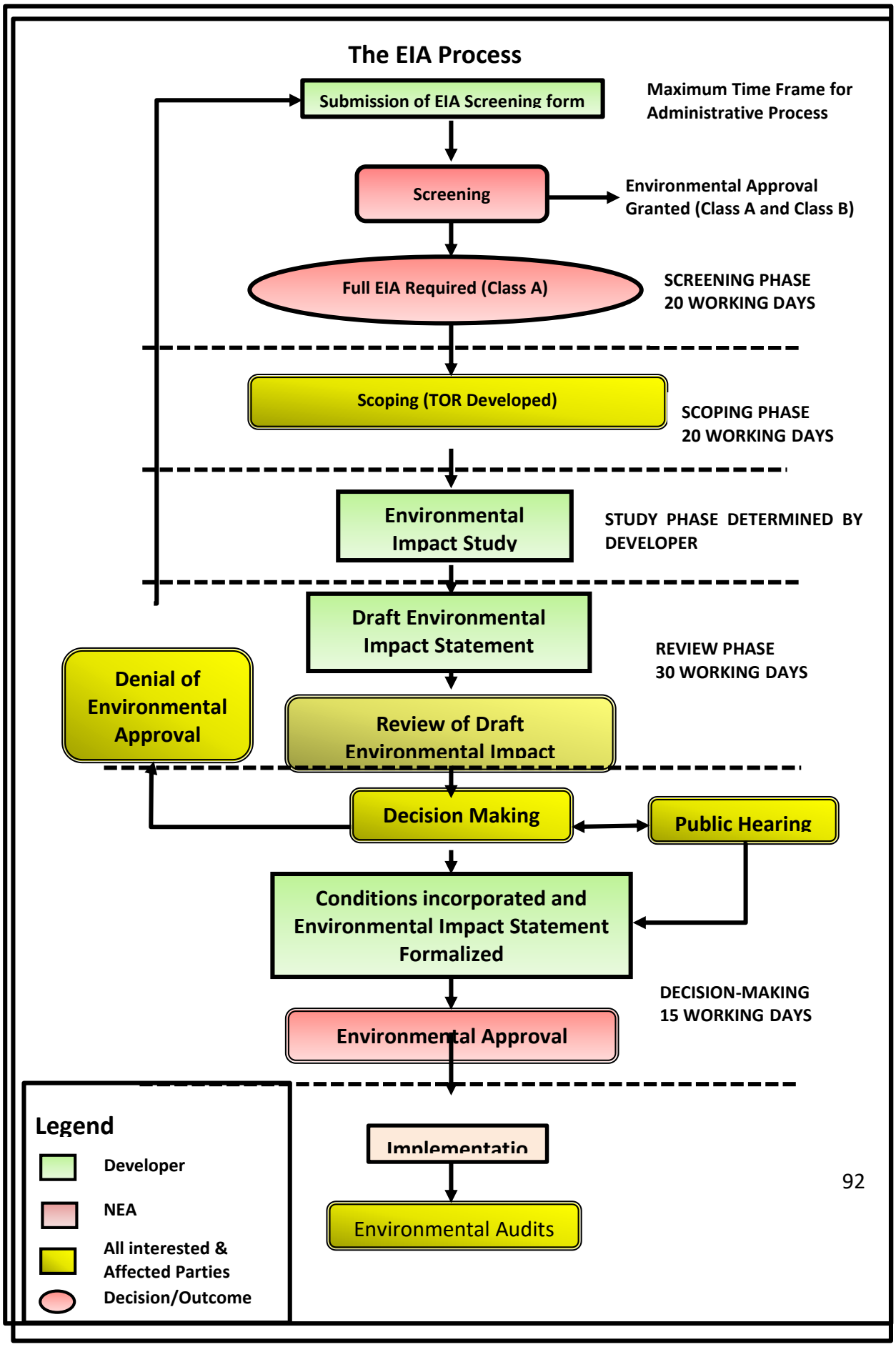
I confirm that the information provided herein is accurate to the best of my knowledge. I will also endeavour to provide additional information and facilitate a site visit if required.

_____

Signed: Developer Date

For Official Use Only
Reviewed by: Date: Classified A B C
Reasons for the Classification:
Endorsed by: Date: Approved by Executive Director: Date:

Annex 4: Flowchart illustrating the EIA Process (Source: EIA Procedures, 1999)



Annex 5: Contract clauses that may be included in Contractor agreements

The rules, including specific prohibitions and construction management measures, should be incorporated into all relevant bidding documents, contracts, and work orders.

Prohibitions: The following activities should be prohibited on or near the project site:

- Cutting of trees for any reason outside the approved construction area
- Hunting, fishing, wildlife capture, or plant collection
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.
- Disturbance to anything with architectural or historical value
- Setting of fires
- Use of firearms (except authorized security guards)
- Use of alcohol by workers.

Construction Management Measures:

Waste Management:

- Minimize the production of waste that must be treated or eliminated.
- Identify and classify the type of waste generated. If hazardous wastes are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- Control placement of all construction waste (including earth cuts) to approved disposal sites. Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.
- Establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

Maintenance:

- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- Identify, demarcate and enforce the use of within-site access routes to limit impact to site vegetation.

Labor health and safety

- Place signs and lighting at strategic locations
- Informing community before works starts
- Conduct safety training for construction workers prior to beginning work.

- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed etc.,) for construction workers and enforce their use.
- During heavy rains or emergencies of any kind, suspend all work.
- Safely store hazardous items away from the public
- Educate on risks and prevention of STIs

Community Safety during Construction

The Contractor's responsibilities include the protection of every person (workers and the public) and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

- Carefully and clearly mark pedestrian-safe access routes.
- If school children are in the vicinity, include traffic safety personnel to direct traffic.
- Keep the public away from construction sites

Nuisance and dust control should include:

- Maintain all construction-related traffic at minimum
- Maintain equipment and machinery to reduce noise
- In sensitive areas (including residential neighbourhoods, health centres, schools) more strict measures may need to be implemented to prevent undesirable noise levels, including controlled working times
- Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses
- Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Community Relations

To enhance adequate community relations, the Contractor should:

- Inform the population about construction and work schedules, interruption of services, traffic detour routes as appropriate.
- Avoid construction activities at night.

Chance Find Procedures for Culturally Significant Artefacts

In case culturally valuable materials are uncovered during excavation:

- Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify the PCU who in turn notifies the National Council for Arts and Culture

- Protect artefacts as well as possible, using plastic covers, and implement measures to stabilize the area, if necessary
- Prevent unauthorized access to the artefacts
- Restart construction works only upon the authorization of the relevant authorities.

Environmental Supervision during Construction

The bidding documents should indicate how compliance with environmental rules and design specifications would be supervised, along with the penalties for noncompliance by contractors or workers. Construction supervision requires oversight of compliance with the ESMP by the contractor or his designated environmental supervisor.

Annex 6: Health and Safety Guidelines during Works at Heights (Adopted from DHHS/NIOSH, July 2001)

NAWEC as the tower/pole owner should take the following steps:

• Use contracts requiring that workers adhere to required safety measures while construction or maintenance is being performed on your poles.

• Require contractors to have a formal safety and health program relating to tower/pole construction and maintenance.

•Include a provision in contracts for frequent and regular jobsite inspections by a competent person who has expertise in tower erection and worker fall protection.

EMPLOYERS should take the following steps to reduce the risk of worker injuries and deaths from falls during tower construction and maintenance:

• Ensure that hoisting equipment used to lift workers is designed to prevent uncontrolled descent and is properly rated for the intended use.

• Ensure that hoist operators are properly trained.

• Ensure workers use 100% fall protection when working on towers at heights above 25ft.

• Provide workers with a 100% fall-protection system compatible with tower components and the tasks to be performed.

• Ensure that gin poles are installed and used according to the specifications of the manufacturer or a registered professional engineer.

• Ensure that tower erectors are adequately trained in proper climbing techniques, including sustaining three-point contact.

• Provide workers with the required personal protective equipment and training in its proper use.

• Ensure that workers inspect their equipment daily to identify any damage or deficiencies.

• Provide workers with an adequate work-positioning device system. Connectors on positioning systems must be compatible with the tower components to which they are attached.

• Supplement worker training on safe work practices with discussions of case reports.

• Know and comply with child labour laws that prohibit hazardous work by workers under age.

WORKERS should take the following steps to protect themselves from falls during tower construction and maintenance:

• Use 100% fall protection when working on towers at heights above 25 feet.

• Participate in all training programs offered by your employer.

• Follow safe work practices identified by worker training programs.

• Use required personal protective equipment and make sure you are trained in its proper use.

• Inspect equipment daily and report any damage or deficiencies to your supervisor immediately.

Annex 7: Chance Find Procedures

This Chance Find Procedure shall be applied in case previously unknown culturally valuable materials are unexpectedly discovered during the GERMP implementation:

- In the case of chance find of any material with possible archaeological, historical, paleontological, religious, or other cultural value, all work at and around the find, feature or site must be stopped immediately.
- The discovery will be clearly demarcated and secured from unauthorized access, and all found remains will be left where they were found**.** Protect artefacts and implement measures to stabilize the area, if necessary.
- Notify the Project Manager/PCU of the findings who in turn immediately notifies the National Council for Arts and Culture for the necessary, assessment, recording and next course of action to take.
- Restart construction works only upon authorization of the relevant authorities (the National Council for Arts and Culture under the Ministry of Tourism and Culture).

Annex 8: Comparison of IDA and EIB safeguards standards that apply to the GERMP

This annex provides a comparison of IDA and EIB safeguards standards applicable to the GERMP.

The environmental and social issues addressed by EIB safeguards standards are substantially the same as those of the World Bank. Substantial portions of EIB Standards 8 and 9 (Labor Conditions, Health and Safety) are outside the scope of the World Bank OPs.

Relative to the World Bank's existing OPs, EIB provides thematic and/or more detailed coverage of the following environmental and social impacts and risks:

- Biodiversity, ecosystem services and natural resource management
- Climate change
- Community Health and Safety
- FPIC and /or reference to the UN General Assembly Resolution on the Rights of Indigenous Peoples
- Vulnerability and Impoverishment
- Labor and Working Conditions
- Stakeholder Engagement and
- Resource Efficiency

Components of the two Safeguard Systems

	Over-arching Policy Statement	**Operational Requirements for Borrowers / Clients**	**Environmental and Social Review Procedures**	**Access to Information Policy**	**Guidelines, Sourcebooks, Manuals for "Good Practice"** (selected examples)
World Bank (IBRD/IDA)	None	Operational Policies	Bank Procedures	Access to Information Policy (2010)	Environmental, Health and Safety Guidelines; Involuntary Resettlement Sourcebook
EIB (2013)	Statement of Environmental and Social Principles and Standards (2009)	Environmental and Social Handbook (2013)	Environmental and Social Practices and Procedures (2013)	Transparency Policy (2011)	Sourcebook on Environmental Law; Guidance Notes (Work in Progress)

	Clear distinction between aspirational, mandatory and guidance policies and procedures	Differential application to diverse financing instruments	Differential application among Investment Lending instruments and circumstances	Same set of safeguard requirements applied to public and private sector	Clarity between Bank and Borrower responsibilities
EIB	Yes	N/A	Yes	Yes	Yes
World Bank (IBRD/IDA)	Yes	Yes	Yes	No[1]	Yes - limited[2]

<u>EIB's Operational Safeguard Requirements Applicable to Borrowers which correspond to WB Ops</u>

World Bank OP 4.01 Environmental Assessment (EA)

- EA process to incorporate/address (when appropriate):
  - more explicit definitions of "associated" and "cumulative" impacts
  - emissions monitoring and reporting requirements
  - more explicit reference to socio-economic impacts, including vulnerable groups, gender issues, surrounding communities and poverty conditions
  - explicit framework for consultation with affected transboundary parties
- Detailed requirements for conduct of SEA
- "Free, prior and informed engagement" [FPIE] as a standard for public consultation and participation
- EA and EMP must be in full compliance with country laws and regulations (as well as a country's international obligations)
- "Precautionary approach" to all environmental impacts
- Impact assessment of pollutants on environmental carrying capacity, land use, surrounding communities, poverty conditions, and transboundary receptors (in part);
- Inclusion of affected parties in monitoring ESMP (for specific aspects of ESMP);
- Grievance redress mechanism (GRM) during the entire project cycle to facilitate resolution of affected peoples' grievances regarding the environmental and social performance of the project.

[1] IDA applies the World Bank Performance Standards (OP 4.03) rather than its OPs to private sector led projects involving Public-Private Partnerships.

[2] In principle, IDA OPs set forth the requirements for borrowers, whereas IDA BPs set forth the procedures for the Bank, but these distinctions are not consistently clear.

World Bank OP 4.36 Forests

- Biodiversity conservation expressly stated as an “integral… criterion” for siting of timber concessions
- Management criteria for second growth forests, and agro-forestry
- Assessment of impacts of plantation forests on specified ecosystem services

World Bank OP 4.12 Involuntary Resettlement (IR)

- Application of IR safeguard to both “permanent” and “temporary” displacement
- Special consideration to claims of seasonal resource users “who may not be present during a census”
- Borrowers to improve the standards of living of the displaced poor to at least “minimum national standards”
- “Adequate housing” must meet criteria specified by the UN Habitat, Office of the UN High Commissioner for Human Rights
- Social Impact Assessment to include gender disaggregated information
- Particular attention to gender concerns and gender-based resettlement measures
- Access to safe drinking water and irrigation facilities as part of resettlement assistance
- When feasible, in-kind replacements to be applied as compensation for loss of common property resources (i.e., rivers, lakes, forest resources)
- “Broad Community Support” required for IR
- Detailed analysis of impacts on, and specified benefits to host communities

Annex 9: Sample Monitoring Programme for consideration during the ESIAs

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
On- Grid Solar Fields							
Land clearance and preparation	Relocation of persons	Prepare RAP in case there is resettlement	NAWEC/PCU	NEA	Once, or as required if there is a breach	Before Project appraisal	RAP is available; No. of PAPS;
	Felling trees	Replant equivalent area cleared with trees of same species	NAWEC/PCU	NEA/DOF	Once, or as required if there are breaches	Monthly	No. of plants replanted; area replanted; reports on process
	Accumulation of waste and debris	Use appropriate waste management measures; do not burn	Contractor	NEA	Once, or as required if there are breaches	During works	No. of Reports; Waste management plan
	Soil erosion	Install erosion control measures	Contractor	NEA	As above	As above	No. of Reports
	Dust generation	Periodic sprinkling of water over ground to control dust	Contractor	NEA	As above	As above	No. of Reports
Off-Grid Facilities (Schools/Health Centers/Industrial establishments)							
Land preparation	Land preparation	Use appropriate waste management measures; do not burn	Contractor	NEA/PCU	Weekly	During works	No. of Reports on process
		Sprinkle water over ground to control dust	Contractor	NEA	Once, or as required if there are breaches	As above	No. of Reports

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
Quarrying for sand and gravel for construction of house to host batteries and inverters	Quarrying for sand and gravel for construction of house to host batteries and inverters	All local sites for extraction of earth materials shall be approved	Contractor	NEA/Geology Dept.	AS above	Before quarrying	Certificate of site approval
Use of Batteries and inverters	Use of Batteries and inverters	Prepare waste management plan for end of life of batteries	MOBSE/MOH	NEA	AS above	Before end of battery life	Process Report
		Dispose batteries in an environmentally friendly way	MOBSE/MOH/ Manufacturing Industries	NEA	As above	After decommissioning	Report on process
Nonexistent or non-implementation of Environmental Management Plan (EMP) or Health and Safety Plan for industrial facilities	Workplace health and safety risks are not being adequately managed	Develop and/or implement ESMP and Health and Safety Plan	Respective School/Health/ Manufacturing industries	NEA/PCU	Once, or as required if there are breaches	During and after project implementation	Reports on process
		Correct substandard conditions requiring urgent attention	As above	As above	As above	As above	Reports on process
		Develop and implement and action plan to correct other deficiencies	As above	As above	As above	As above	As above

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
		Identify and empower (or recruit) responsible individuals to manage health, safety and environment at the facility	As above	As above	As above	As above	As above
		Start or restart awareness training	As above	As above	As above	As above	As above
	Waste Management	Develop and implement a site waste management plan	As above	NEA	As above	AS above	Site waste management Plan; Reports
Transmission and Distribution Network							
Erection of Towers/Poles: Excavation of base of poles; erecting new pole /removing/replacing pole	Onsite noise and vibration effects on workers and nearby houses	Maintain all work equipment at optimal operating condition to control noise	Contractor	NEA	Once, or as required if there are breaches	Monthly	Reports
	Felling trees in forested areas	Replant equivalent area cleared with trees of same species	NAWEC/PCU	NEA/DOF	Once, or as required if there are breaches	Monthly	No. of plants replanted; area replanted; reports on process

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
	Accumulation of debris and/or groundwater contamination from accidental fuel/engine oil spill refueling	Use appropriate waste management measures; do not burn	Contractor	NEA	As above	Monthly	Reports
		Use drip pans to contain any spills during refueling activities	Contractor	NEA	AS above	As above	Reports
		Train personnel in safe fuel handling	Contractor	As above	During works	Reports;	Waste management plan
	Soil erosion	Install erosion control measures	Contractor	NEA	As above	As above	Reports
	Dust generation	Periodic sprinkling of water over ground to control dust	Contractor	NEA	As above	As above	Reports
	Relocation of persons, structures, crops, etc.	Prepare RAP	NAWEC/PCU	NEA	Once, or as required if there is a breach	Before Project appraisal	RAP
	Damage to roads and other infrastructure caused by transit of heavy trucks	Routine inspection, and prompt repair of any damaged road	Contractor	NRA	AS above	During works	Reports

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
Line stringing or restringing	Onsite noise and vibration effects on the workers	Maintain all work equipment at optimal operating condition to avoid noise	Contractor	NEA	Once, or as required if there is a breach	During Works	Reports
	Disturbance by noise and vibration in surrounding communities	Maintain all work equipment at optimal operating condition to avoid noise	Contractor	NEA	Once, or as required if there is a breach	During Works	Reports
	Risk of accidents to life and property	Train and equip workers in safety while working at heights and working with high voltage	Contractor	NEA/NAWEC	As above	As above	Reports
		Use warning signs and, where necessary, personnel to direct traffic	Contractor	NEA	As above	As above	Reports
Operation of Transmission Line	Exposure to electromagnetic fields	Prevent encroachment and enforce restrictions on activities in line corridor	NAWEC	NEA	As above	During and after Project	Reports
	Risk of electrocution,	Post warning signs and design	NAWEC	NEA	As above	During and after works	Reports

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
	injury or property damage	poles/towers to prevent access to conductors by unauthorized personnel					
Maintenance of Transmission Line: mechanical clearing of immediate vicinity of poles/towers of vegetation	Accumulation of brush and debris	Use appropriate disposal techniques; prohibit burning	NAWEC	NEA	As above	During and after project	Reports
	Soil/ groundwater contamination from accidental fuel/engine oil spill refueling	Train personnel in safe fuel handling	NAWEC	NEA	As above	As above	Reports
		Use drip pans to contain any spills during refueling activities	NAWEC	NEA	As above	As above	Reports
	Risk of accidents to life and property	Use warning signs and, where necessary, personnel to direct traffic	NAWEC	NEA	As above	As above	Reports
Laying underground cables							
Trench digging to bury cables	Risk of accidents to life and property	Use warning signs and, where necessary, personnel to direct traffic/pedestrians	Contractor	NEA	Once, or as required if there is a breach	During works	Reports
	Disturbance by noise and	Maintain all work equipment at	Contractor	NEA	As above	During works	Reports

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
	vibration in surrounding communities	optimal operating condition					
		Select an appropriate time to avoid disturbing people asleep	Contractor	NEA	As above	During works	Reports
		Limit construction activities at night	Contractor	NEA	As above	During works	Reports
	Generation of dust	Sprinkle water to reduce dust	Contractor	NEA	As above	During works	Reports
	Soil erosion	Install erosion control structures	Contractor	NEA	As above	During works	Reports
	Damage to roads and other infrastructure caused by trenches	Routine inspection, and prompt repair of any damaged road	Contractor	NRA	As above	During works	Reports
	Relocation of persons, structures, crops, etc.	Prepare RAP	NAWEC/PCU	NEA	As above	Before project appraisal	Reports; RAP
Typical impacts during construction of new substation/upgrading of existing substation							
Land clearing and preparation: bulldoze, excavate, backfill with earth;	Felling trees; accumulation of waste and debris	Replant equivalent area cleared with trees of same species	NAWEC/PCU	NEA/DOF	Once, or as required if there are breaches	Monthly	No. of plants replanted; area replanted; reports on process

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
transportation of materials and mixing concrete		Use appropriate waste management measures; do not burn	Contractor	NEA	Once, or as required if there are breaches	During works	Reports; Waste management plan
	Dust and air pollution	Periodic sprinkling of water over ground to control dust	Contractor	NEA	As above	As above	Reports
		Provide protective apparel to workers	Contractor	NEA	As above	As above	Reports
	Construction activities may impact on physical cultural assets (such as historical and archaeological items; graves, etc.	Apply the procedures for chance finds	Contractor	NEA	As above	As above	Reports
Nonexistent or non-implementation of Environmental Management Plan (EMP) or Health and Safety Plan	Workplace health and safety risks are not being adequately managed	Develop and/or implement ESMP and Health and Safety Plan	NAWEC/ Contractor	NEA	As above	During and after project	Reports
		Start or restart awareness training	NAWEC/ Contractor	NEA	As above	During and after project	Reports
		Identify and Empower (or	NAWEC/ Contractor	NEA	As above	During and after project	Reports

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
		recruit) responsible individuals to manage health, safety and environment at the facility					
	Effluent, emission and noise standards are not being complied with. Ambient conditions in the area exceed standards.	Correct substandard conditions requiring urgent attention	NAWEC/ Contractor	NEA	As above	During and after project	Reports
	Spills and leaks have contaminated soil, structures, and possibly groundwater	Develop and implement and action plan to address contamination	NAWEC/ Contractor	NEA	As above	During and after project	Reports; action plans
Environmental and health and safety monitoring is not being conducted	No database by which to judge compliance with standards in the workplace, or in effluent and	Formulate and/or implement monitoring plans	NAWEC	NEA	Once, or as required if there are breaches	During and after Project	Reports; monitoring plans
		Identify and empower (or	NAWEC	NEA	As above	During and after Project	Reports

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
	emissions	recruit) responsible individuals to manage monitoring program					
	No database to monitor effects on ambient conditions	Repair or obtain monitoring equipment	NAWEC	NEA	As above	During and after Project	Reports; type and number of equipment obtained
Immediate and severe health and safety risks exist in the substation	Workers exposed to hazardous substances such as PCB	Restrict access and provide protective equipment until condition is abated	NAWEC	NEA	As above	During and after project	Reports on process
	Workers exposed to high noise levels, poor ventilation or lighting, etc.	Correct conditions	NAWEC	NEA	As above	During and after Project	Reports on process
	Workers exposed to risk of electrocution because of old or poorly-maintained equipment, lack of safety procedures	Post warning signs and restrict access until condition can be abated	NAWEC	NEA	As above	During and after Project	Reports on process
		Institute or reinstate “lock-out and tag-out” and similar procedures	NAWEC	NEA	As above	During and after Project	Reports on process

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
Inadequate security provisions for the facility	Social conflict between the facility and the surrounding community	Establish effective, ongoing community relations program	NAWEC	NEA	As above	During and after Project	Reports on process
	Vandalism or sabotage	Employ security personnel, ideally from local area	NAWEC	NEA	As above	During and after Project	Reports on process
	Risk of electrocution or injury from contact with high voltage equipment	Install fences and other security features around all dangerous or vulnerable facilities Post warning signs	NAWEC	NEA	As above	During and after Project	Reports on process
Replacement of LED bulbs; incandescent bulbs and street lights							
Nonexistent or non-implementation of Environmental Management Plan (EMP) or Health and Safety Plan	Workplace health and safety risks are not being adequately managed; noise standards are not being complied with	Develop and/or implement EMP/ Health and Safety Plan	NAWEC	NEA	Once, or as required if there are breaches	During and after Project	EMP/HSP/ Reports on process
		Conduct awareness training	NAWEC	NEA	As above	During and after Project	Reports on process; No. of training sessions conducted

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
Social Risk Management							
Non adherence to accepted social norms of local communities	Disharmony in public relationship	Assign local liaison person who is in charge of communication with the contractor and receiving requests / complaints from local population	Contractor	PCU	Once, or as required if there are breaches	During project implementation	Local liaison person assigned and operating; No. of complaints received and addressed; reports on the process
		Inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes	Contractor	PCU	Once, or as required if there are breaches	During project implementation	Notices/sign boards put out to inform population; reports on the process
		At least five days in advance any service interruption (including water, electricity, telephone, bus routes) the	Contractor	PCU	Once, or as often as required if there are breaches	During project implementation	Notices/sign boards put out to inform population; reports on the process

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
		communities must be advised through posting at the project site, bus stops, in affected homme / business or diffused in media					
		Establish a Grievance Redress Mechanism accessible to local people in line with applicable project social frameworks and Contractor shall establish measures to address concerns raised through GRM within the designated timeline if they are responsible	Contractor	PCU	Once, or as required if there are breaches	During project implementation	GRM is established and operational; No. of concerns raised/received/addressed; reports on the process
	Labor Management	To the extent possible, work camps should not be located in close proximity to local	Contractor	PCU	Once, or as required if there are breaches	During project implementation	Reports on the process; No. of camps located away from local communities

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
		communities					
		Siting and operation of any worker camps should be undertaken in consultation with neighboring communities	Contractor	PCU	Once, or as required if there are breaches	During project implementation	No. of worker camps established; reports on consultations with neighboring communities; No. of consultations; participants present at consultations
		Recruit unskilled or semi-skilled workers from local communities to the extent possible. Where and when feasible, worker skills training, should be provided to enhance participation of local people	Contractor	PCU	Once, or as required if there are breaches	During project implementation	No. of semi-skilled/unskilled workers from local communities recruited; No. of training sessions held; reports on the process
		Raise awareness of worker on overall relationship management with local population, establish a code of	Contractor	PCU	Once, or as required if there are breaches	During project implementation	Reports on process of awareness creation; No. of workers involved; code of worker conduct developed; No. of workers penalized/admonished/dismissed

Activity / Issue	Potential Impact	Mitigation Measure	Responsibility for Mitigation	Responsibility for Monitoring	Monitoring Frequency	Monitoring Period	Monitoring Indicators
		worker conduct in line with international practice and strictly enforce them, including the dismissal of workers and financial penalties					

Annex 10: Flowchart Illustrating the Grievance Redress Mechanism