



**Government of Sierra Leone
Ministry of Transport and Aviation**

Integrated Resilient Urban Mobility Project (IRUMP)

**Environmental and Social Management
Framework**

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ABBREVIATIONS AND LIST OF ACRONYMS

AfDB	Africa Development Bank
APs	Affected Parties
ARAP	Abbreviated Resettlement Action Plan
CDAP	Community Development and Action Plan
CHMP	Cultural Heritage Management Plan
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
dB	Decibels
EA	Environmental Assessment
EMP	Environmental Management Plan
EPA	Environment Protection Agency
ESDS	Environmental and Social Development Specialist
EHS	Environmental Health and Safety
ESF	Environmental and Social Framework
ESHIA	Environmental Social and Health Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMMP	Environmental and Social Management Monitoring Plan
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
ESSS	Environmental and Social Safeguards Specialist
FCC	Freetown City Council
FI	Financial Intermediaries
FM	Financial Management
FSU	Family Support Unit
FWMC	Freetown Waste Management Company
GDP	Gross Domestic Products
GIS	Geographical Information System
GoSL	Government of Sierra Leone
GRC	Grievance Redress Committee
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IPA	Integrated Project Assessment
IPAU	Integrated Project Administrative Unit
IPU	Integrated Project Unit
IRUMP	Integrated and Resilient Urban Mobility Project
IWMSP	Integrated Waste Management Strategic Plan
IWWMP	Integrated National Water Management Plan
M&E	Monitoring and Evaluation
MLCPE	Ministry of Lands, Country Planning and the Environment
MoF	Ministry of Finance
MoTA	Ministry of Transport and Aviation
MSWGCA	Ministry of Social Welfare, Gender and Children's Affairs

MTR	Medium Term Review
MWPA	Ministry of Works and Public Assets
NGOs	Non-Government Organisations
OHS	Occupational Health and Safety
OP	Operational Policy
PAP	Project Affected Parties
PAPs	Project Affected Persons
PIU	Project Implementation Unit
PMFU	Projects Financial and Management Unit
PMU	Project Management Unit
POPs	Persistent Organic Pollutants
PRSP	Poverty Reduction Strategy Paper
QPR	Quarterly Progress Report
RAPs	Resettlement Action Plans
RMFA	Road Maintenance Fund Administration
RPF	Resettlement Policy Framework
SEA	Sexual Exploitation and Abuse
SGBV	Sexual and Gender-Based Violence
SI	Statutory Instruments
SL-EPA	Sierra Leone Environment Protection Agency
SleTU	Sierra Leone Traders Union
SLIHS	Sierra Leone Integrated Housing Survey
SLMA	Sierra Leone Maritime Administration
SLPA	Sierra Leone Port Authority
SLRA	Sierra Leone Roads Authority
SLRSA	Sierra Leone Road Safety Authority
SMC	Social Management Consultant
SPCP	Spill Prevention Contingency Plan
TIDU	Transport Infrastructure Development Unit
TOR	Terms of Reference
TSG	Technical Steering Group
UTCC	Urban Traffic Control Centre
VAW	Violence Against Women
WB	World Bank
WBG	World Bank Groups

EXECUTIVE SUMMARY

1.0 Brief Project Description

The Government of the Republic of Sierra Leone (GOSL) through the Ministry of Transport and Aviation (MoTA) intends to establish the Integrated and Resilient Urban Mobility Project (IRUMP) with an investment loan from the World Bank (WB). IRUMP focuses on improving urban accessibility, resilience and safety in pilot areas and enhances institutional and academic capacity to plan and manage urban transport in the city of Freetown.

The proposed IBRD/IDA/World Bank funded IRUMP will allow MoTA and their respective Agencies to achieve and expand outcomes in three key areas: (i) comprehensive improvement of transport services, (ii) comprehensive corridor improvements which will cover comprehensive traffic management measures including intersection improvements, coordinated traffic lights, improvement of sidewalks for pedestrian movement, drainage etc.; (iii) provision of institutional and academic capacity building and studies for MoTA staff and management and their agencies..

The overall IRUMP is to: (i) pilot short-term remedies in order to obtain immediate relief and demonstrate the value of good management of existing infrastructure, efficient implementation, and good coordination across multiple department and agencies within the government; (ii) build institutions and specialized skills, develop appropriate policies and regulations, and identify arrangements to strengthen the delivery of public transport services and climate resilience.

1.1 Purpose of ESMF

The objective of this assignment is to undertake a detailed Environmental and Social Management Framework (ESMF) focusing on key activities outlined under the project components. The ESMF provides the safeguard instruments decision support tool and guides to inform the Environmental, Social and Health Impact Assessment (ESHIA), Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs), and other safeguard instruments (if applicable) during subproject feasibility and design phase.

The ESMF will inform and guide the Ministry of Transport and Aviation and their respective Agencies and EPA (SL-EPA 2008 (as amended) for ensuring safeguard requirements of proposed subproject investment initiatives and activities are in compliance with policies, legal, principles, institutional framework and procedures to assess the environmental and social risks and impacts and propose preventive and mitigation measures to enhance sustainability of the project.

1.2 Project Objectives, Components and Activities

1.2.1 Project Objective

The project development objective of the IRUMP is “to improve accessibility, resilience and road safety in selected areas of Western Region and enhance institutional and academic capacity in the transport sector.”

1.2.2 Components

The IRUMP will have three main components:

Component 1: Enhancing Transport Services

This component will support the enhancement of transport services in three sub-sectors: (i) public transport services; (ii) mobility services to access education centers; and (iii) on-demand mobility services, to serve key sectors for social and economic development and economic diversification.

Component 2: Comprehensive Corridor Improvements

This component will use an integrated and comprehensive approach to improve safety mobility for pedestrians and vehicles, and overall management of the public rights of way in selected areas of Greater Freetown. The project investments would focus on: (a) improving pedestrian infrastructure; (b) improving road conditions and rehabilitating key road sections and drainage; (c) providing traffic management, signalization, parking, and intersection improvements; (d) providing a transport operator's terminal; and (e) addressing the needs of street traders through off-street market areas. Depending on the credit amount, the project may also finance the rehabilitation of sections of urban roads which are currently unpaved or in extremely poor condition, such as Motor Road and/or King Harmon Way.

Component 3: Institutional Capacity Building and Studies

The activities of this component may include: (a) strengthening the ministry's and departments' capacity to develop a long-term vision and regulatory framework to support effective management of the urban transport system; (b) diagnosing problems with public transport and developing a comprehensive strategy to improve bus services; (c) conducting a public relations/communication campaign to educate stakeholders, schoolchildren and the public about road-space management and road safety; (d) developing a road-safety database; and (e) supporting climate-resilient activities, for example by developing guidelines to incorporate climate and disaster resilience into road design by providing specific cost-effective requirements and good practices for slope stabilization in mountain areas of Freetown; and mapping tools for prioritization of urban transport projects using network analysis and giving consideration to climate-related risks.

2.0 Overview of the major environmental and social risks and stakes in the project implementation area

As part of ESMF process, environmental and social safeguards rapid screening exercises has identified the following potential impacts from the project activities:

Positive Impacts

The positive project impacts include improved transport conditions for the city of Freetown, the population of the city, and transporters from the outskirts of the city centre such as:

- Improved access to social facilities, business and transport facilities
- Reduced number of road accidents
- Increased value added for land located along the upgraded roads

- Improvement of key intersections
- Higher traffic carrying capacity on already dual carriageways
- Improved traffic flow arising from better roads signaled junctions
- Reduced travel time and cost benefiting the motoring public
- Aesthetic city and smarter junctions
- Jobs and contracts to implementation contractors
- Improved service delivery (Ferry services)
- Reduction in vessel turnaround time

Negative Social and Economic Impacts

Though it is envisaged that subprojects will involve very generic social issues that are manageable, there might be some subproject activities proposed in due course, that may carry a higher social risk and/or disruptions and/or impacts. The possibility of such issues arising in the subprojects sites will be identified during the subproject screening process.

For the construction/rehabilitation phase, the main potential social issues are:

- **Loss of livelihood or sources of livelihood:** There may be negative economic impacts on small businesses and individuals informally working in the project area to be rehabilitated. Vendors or small businesses removed or displaced from their original locations may be unable to return to these once they have been rehabilitated, thus facing significant loss of income. Since most vendors are women, the impact will be bigger on them than men.
- **Loss of private land:** Little or no private land taking is foreseen under this project.
- **Relocation of structures:** Structures, such as street vendor stalls, may need to be moved or relocated in order to rehabilitate the road corridor. Removal/displacement of vendor stalls or small businesses may have adverse impacts with regards to security of said vendors. This can especially impact women vendors or small business owners.
- **Loss of and/or loss of access to public, common and/ or private property:** Fences may need to be erected to protect current public grounds, and they could block access to people's lands or assets. Vendor stalls may need to be moved to be outside or inside the fence.
- **An increase of GBV and SEA risk:** The project will bring job opportunities to the local community and potentially increase their purchasing power, exacerbating, at the same time, income differences. The already present risks for women and girls could be aggravated.
- **Inconvenience and nuisance during construction:** It is expected that the construction work will result in some temporarily traffic obstruction that may cause impacts like increasing commuting time and creating inconvenience to road users.

Negative Environmental Impacts

Generally, the type of civil works anticipated under the project will involve:

- Demolition and new construction; provision of basic services (such as electricity, water and sanitation).
- Rehabilitation, restoration and/or maintenance of existing infrastructure construction of new or extended facilities on existing land, installation of road signage and interpretation.

- Public amenities (Public utilities that may be affected due to the construction of the project road include overhead electricity poles underground cables and water supply lines.

3.0 Policy, Institutional Framework and Legal Regulatory Environment

The primary relevant national laws and legislations framing social and environmental issues which need to be considered in relation to IRUMP are:

- Constitution of Sierra Leone 1991
- Local Government Act 2004
- National Land Policy 2015
- National Environmental Policy 1994
- Environmental Protection Agency Act 2008 and the EPA (Amendment) Act 2010
- New direction policy framework 2018
- Domestic Violence Act 2007
- Sierra Leone Road Authority Act 1992

Some of the relevant institutions include the following, whose mandates and interest in project are subsequently described in the report:

- Ministry of Transport and Aviation
- Ministry of Works and Public Assets
- Ministry of Lands, Housing and the Environment
- Ministry of Finance
- Ministry of Social Welfare, Gender and Children's Affairs
- Environment Protection Agency
- Freetown City Council
- Sierra Leone Police
- Transport owners associations and driver's union
- Sierra Leone Traders Union

World Bank Operational Policies Triggered in the IRUMP

The World Bank's Safeguards policies triggered to support the project development objectives include guidance on EA requirements - Environmental Assessment (OP 4.01), Involuntary Resettlement (OP 4.12) and Physical Cultural Resources (OP 4.11).

4.0 Risk and Generic Potential impacts of eligible subprojects

Activity	Risk and Generic Potential Impacts	Significance	Remarks
Road corridor improvements	<ul style="list-style-type: none"> • Occupational safety and health risk to workers • Temporary/permanent land acquisition (specifically for road improvements/park and construction of markets) or to livelihoods of self-employed persons operating at the sites • Temporary disturbance or no access to site during construction works • Dust, debris during construction may affect nearby residents. • Restricted or limited access and road detours during civil works • Traffic and community safety issues • Clearing or impingement upon wetland habitat for construction of market and parking lots • Incompatibility of selected design with community wishes • Displacement of market women from their original place trading • Temporary increase of waste generation • Risk to traffic and pedestrians • Compatibility with flood control schemes • Noise, dust, vibration, spills, air pollution • Ensuring accessibility for physically disabled individuals via the 	<ul style="list-style-type: none"> • Potentially significant and long-term in both construction and operation 	<ul style="list-style-type: none"> • Typical civil works impacts can be addressed through standard measures • Any potential land acquisition is anticipated to be discrete and can be readily mitigated • Any potential land acquisition and/or economic displacement is expected to be temporary and discrete • Issues of accessibility and land acquisition/economic displacement can be mitigated • Wetland habitat concerns require a detailed assessment and management plan

	installation of ramps and other measures as necessary, at sub-project sites undergoing infrastructure construction and upgrading		
Ferry terminals	<ul style="list-style-type: none"> • Turbidity or other damage and modification to marine environment • Temporary/permanent land acquisition • Increase marine traffic safety and pollution issues • Poor fueling, waste or other operation practices • Temporary interruptions to livelihood practices and businesses in the project areas • Temporary increase of waste generation • Unavailability of ferry terminal areas during construction works • Modification to marine environment 	<ul style="list-style-type: none"> • Moderately significant and long-term 	<ul style="list-style-type: none"> • Natural habitat concerns may be relevant and require additional assessment • Typical civil works impacts can be addressed • Any potential land acquisition is expected to be discrete and can be readily mitigated

5.0 Framework Environmental and Social Management Plan

5.1 Generic Risks and Potential Environmental/Social Impacts and Mitigation Guidelines

Mitigation guidelines have been prepared to respond to potential environmental/social risks and impacts arising from project implementation. The mitigation guidelines have been designed following the mitigation hierarchy of avoidance, reduction, compensation or offsetting the negative environmental and social impacts and risks. These generic measures are presented in the table below.

Generic Environmental and Social Impacts and Mitigation Measures during Construction and Operations

Issues	Component	Potential impacts from project activities (construction and/or operation phase)	Impact evaluation and extent	Mitigation measures
Air/dust	Ambient air quality deterioration due to gaseous pollutant emissions	Construction phase Emission of pollutants from construction site equipment (e.g. NO _x , SO _x , particulate) Dust generation due to earth moving and vehicle traffic	Duration: medium Extent: local Significance: low	Conduct baseline air quality measurements, machineries at work sites will be kept turned only if necessary, avoiding unnecessary emission. Repair and maintenance of construction equipment and vehicles. Covering trucks and soil piles to reduce wind transportation; paved construction sites to reduce dust levels.
		Operation phase Air pollutant emissions from buses and other vehicles	Duration: long term Significance: to be determined	Use of alternative fuel (such as GNG) for buses and other vehicles should be encouraged. Enforcement of compliance with air quality emission standards.
Increase of noise levels	Noise	Construction phase Noise emission from engines of machinery and equipment	Duration: medium Extent: local Significance: low	Comply with international legislation for noise emissions maintenance of machinery in good condition. Equipment running only when necessary. Positioning of the noise source in a concealed area with respect to acoustic receptors, consistent with the needs of the construction site. Identify sensitive receptors and agree on work schedules as much as possible.
		Operation phase Increased noise emission from higher speed buses	Duration: long term Extent: local Significance: low	Low noise emissions. Consider installation of noise barriers reflectors along the road corridors (subject to availability of funds).

Traffic patterns	Traffic congestion and diversion	Construction phase Increase in road traffic due to: movements of vehicles for transporting earth and materials, construction site machining activities, and movements of the workers involved in the construction-site activities. Congestion due to construction activities.	Duration: medium term Extent: local Significance: low	Alternative traffic management plan to create alternative routes should be implemented to avoid traffic congestion. Heavy construction equipment and vehicles should avoid rush hours and high traffic times. Regular TV and Radio traffic bulletin to alert drivers about congestions and detours.
		Operation phase Not determined		
Solid waste	Waste management and disposal	Construction phase Production of construction waste and other waste related to the maintenance activities of machines etc.	Duration: medium term Extent: local Significance: low	No open burning of wastes will be conducted All types of waste generated during the construction phase should be stored into a number of waste streams. Recycling and waste generation reduction measures will be implemented. Solid waste will be transported to designated official landfills (dumpsites). Waste storage facilities must be fenced on the perimeter, properly lighted and with access constraints for unauthorized people; furthermore waste storage on construction site should not exceed 7 days.
		Operation phase Improper disposal and piling of solid wastes along the routes of the corridors	Duration: long term Extent: local Significance: medium	Disposal of solid wastes along the road corridors should be prevented. Waste collection contractors should regularly remove any accumulated wastes.

				Public awareness campaigns should encourage proper disposal of solid wastes. Waste disposal bins should be adequately and appropriately located especially at bus terminals.
Demographic economic social structure and road traffic issues	Socioeconomic	<p>Construction phase Migration to or from the area is not expected. Construction of the project brings the opportunity for job creation. Public nuisance due to construction activities. Disturbing access to shops due to excavations or other construction activities. Land acquisition or resettlements and physical relocation as well as economic displacements at the location of the terminal and market . Gender biased wages, unfair payment to women labour Child labour in spite of legal provisions. An increase in income disparities within the community exacerbating gender gap and increasing risk for women and girls in the community.</p>	Duration: medium term Extent: local Significance: high	<p>Place signs to inform the public about the duration of construction and completion dates. Avoid blocking access to residential buildings or commercial shops. Avoid resettlements and land acquisition. A Resettlement Policy Framework (RPF) is being prepared. At a later stage and when the corridors are specified and in case land acquisition and resettlement proved to be unavoidable. A Resettlement Action Plan (RAP) will be prepared and disclosed before the start of any civil work. A grievance redress mechanism will be available and functioning on the local level to handle local complaints and concerns. Stringent monitoring of contractors that provisions made on the contracts for equal and fair payment to women labour is followed. Ensure legal provisions defined in the Child Rights Act are fully followed and included in the contracts. Supervision and monitoring of contractors during construction phase. Make certain the availability of an effective grievance redress mechanisms prepared and</p>

				<p>trained to refer GBV and SEA survivor to service provider</p> <p>Define the requirements to be included in the bidding documents for a Code of Conduct. During the stakeholder engagement process of the project keep communities informed about project activities and GBV related issues.</p> <p>Make certain the availability of an effective grievance prepared and trained to ask questions and refer GBV survivors service providers.</p>
		<p>Operation phase Attraction of informal markets and vendors to occupy sidewalks and block the traffic especially close to the bus terminal stops.</p>	<p>Duration: long term Extent: local Significance: low</p>	<p>Efforts will be exerted to avoid the development of informal markets at the early stage of the project operation. As alternative, formal markets selling goods at affordable prices can be placed in well-chosen locations which will not obstruct traffic and in the meantime create jobs for low income groups.</p> <p>Once the corridors are identified, further analysis for the potential impacts on local businesses should be carefully examined. Consultations with the potentially affected businesses should be conducted during the design stage to help in minimizing negative socioeconomic impacts especially on affected local business.</p>
Health and safety	Health and safety issues	<p>Construction and operation phase Impact on Public Health connected with the production of Emissions</p>	<p>Duration: long term Extent: local</p>	<p>Provision of appropriate training on EHS issues for all construction and operation workers, including initial induction and regular refresher training.</p>

		into the air and noise emissions and risks related to operation phase.	Significance: medium	<p>Provision of trainings on GBV and HIV for construction workers and requirements of CoC on OKS and GBV requirements for contractors and workers</p> <p>Provision of health and safety information</p> <p>Regular inspection, review and recording of EHS performance</p> <p>Pre-construction and operation assessment of the EHS risks and hazards associated with construction and operation, including consideration of education level of workforce and local work practices.</p> <p>Establish an H&S committee</p> <p>EHS Management during construction and operation implementation of EHS procedures as a condition of contract with contractors and their sub-contractors</p> <p>Establish emergency and accident response procedures</p>
Utility disruptions	Disruption of utility services	<p>Construction and operation</p> <p>Affected utility lines may have to be relocated leading to disruption in services</p>	<p>Duration: temporary</p> <p>Extent: limited to local area</p> <p>Significance: low</p>	<p>Adequate Notice for the general public.</p> <p>Collaboration with utility providers.</p> <p>Install new lines before disconnection where applicable.</p> <p>Restoration of utility lines and other structures damaged during the construction.</p>
Impacts on cultural heritage	Impacts on sites with tangible and intangible heritage values	<p>Construction and operation</p> <p>Road corridor improvement may result in increased vibration which could affect safety of buildings.</p> <p>There may be a need to replace or move</p>	<p>Duration: Temporary</p> <p>Extent: Local</p> <p>Significance: Minor to moderate</p>	<p>Before handing over the project sites to contractors, MoTA and the project engineering consultant will carry out pre-construction surveys to identify cultural heritage resources and existing ecologically sensitive areas (if any) that the project will avoid and take adequate care/notice of</p>

		underground piping requires deep excavation.		<p>The project will implement a change find procedure and reporting system to be used by contractors in the event that a cultural heritage feature or ecologically sensitive item/issue is encountered.</p> <p>Discuss and agree with owner/community if a cultural heritage resource identified can be relocated if possible. The relocation of any cultural heritage resource will be done in line with the provisions of the RPF</p>
Gender and vulnerable groups	GBV, including Sexual Exploitation and Abuse	<p>Construction and operation phase Influx of labour force, impact of having workers earning relatively more than other people around the area, closeness to women and girls in a situation of poverty, prevalence of child abuse etc.</p>	Moderate to low	<p>Shall maintain gender equity in providing employment.</p> <p>Codes of Conduct for contractors and workers on their obligations regarding SEA and SH, trainings for construction workers on their obligations and behaviours on these topics to be signed by workers and contractors, awareness raising to communities on SEA risks and the different entry points to provide support to potential survivors of SEA and SH derived from the project, and development of GBV Action Plan by the IA, including a response and accountability framework, mapping of GBV prevention and response actors in the project area with a response and accountability framework (in case the risk goes above low), prohibit recruiting child labour.</p>

5.2 Environmental screening and assessment process and responsibilities

A screening process, selection, assessment, approval and evaluation of sub-project activities are required to manage environmental and social aspects of these activities. MoTA/TIDU will use the screening and assessment process provided below for all subprojects under IRUMP.

Summary of Environmental Screening and Assessment Process and Responsibilities

	Stage	Institutional responsibility	Implementation responsibility
1	Preliminary screening of infrastructure sub-project to determine their safeguard requirements and also to assist in project formulation using checklist	MoTA	Environmental and social safeguards specialist (ESSS)
2	Advise on which IRUMP subprojects to register with the EPA following preliminary screening	EPA	EPA
3	Statutory environmental registration of IRUMP subproject	MoTA/TIDU/PIU	TIDU/PIU/ESSS
4	Determination of appropriate environmental assessment level/category	EPA	National EPA
5	If ESIA is necessary	EPA/MoTA	-
6	Preparation of terms of reference	MoTA	ESSS
7	Validation of ESIA/ESMP TOR	EPA/World Bank	-
8	Selection of consultant	MoTA/	ESSS/Procurement Specialist
9	Preparation and publication of scoping reports	Consultant	-
10	Preparation of ESIA report	Consultant	-
11	Review and approval of ESIA	MoTA/EPA/World Bank	MoTA/ESSS
12	Issuance of environmental permit for project implementation	EPA	-
13	Public Consultant and Disclosure	MoTA/EPA/World Bank	ESSS/Contractor/Consultant
14	Implementation of ESHIA/ESMP	MoTA, Contractor	ESSS/Project Implementers
15	Surveillance and monitoring	MoTA/EPA/World Bank	ESSS, M&E Specialist, EPA

5.3 Public communication and consultation mechanism/plan throughout the project lifecycle

The objectives of stakeholder engagement and consultation are to keep all stakeholders informed of the project activities, the potential beneficial and adverse impacts and to ensure that stakeholders actively participate at all levels of the project/subproject life cycles. The mechanisms of stakeholder engagement in the ESMF will include: (i) public meetings in the subprojects' influence area; (ii) information/awareness campaigns through engaged locally formed groups and NGOs/CBOs; (iii) interviews/surveys in project affected households; (iv) focus group discussions;

(v) formation of committees and/or groups including at various stages of the project; (vi) development of grievance redress mechanism for project affected and beneficiary communities and other stakeholders; (vii) disclosure/dissemination of project information including decision making process and how the grievance of Affected Persons (APs) will be addressed; and (viii) mitigation of environment and social/resettlement impacts in an effective manner.

5.4 Institutional Capacity

Capacity building and training is necessary for key stakeholders to ensure that they have the appropriate knowledge and skills to implement the environmental and social management framework. To enhance the respective roles and collaboration of the relevant stakeholders and further strengthen their capacity for planning, management and overall regulation of the transport sector, the following broad areas of capacity building needs and technical support required have been identified in the implementation of the ESMF requirements of this Project and future projects:

- Strengthening the ministry's and departments' capacity to develop a long-term vision and regulatory framework to support effective management of the urban transport system;
- Developing a comprehensive strategy to improve public transport services incorporating different sectors of the population needs and requirements;
- Conducting a public relations/communication campaign to educate stakeholders, schoolchildren and the public about road-space management and road safety;
- Developing a road-safety database;
- Supporting climate-resilient activities, for example by developing guidelines to incorporate climate and disaster resilience into road design by providing specific cost-effective requirements and good practices for slope stabilization in mountain areas of Freetown;
- GBV prevention and response in infrastructure projects.

Training workshops on the ESMF/RPF and the World Bank safeguard policies of OP 4.01, OP 4.12 and OP 4.11 would be organized for MoTA and its respective related agencies. The following additional training areas have been identified:

- Environmental and social screening checklist
- Completion of EPA EA Registration forms
- Preparation of Terms of Reference for ESIA
- Environmental and social clauses in contractors' contract and bidding documents

5.5 Grievance Mechanism

A Grievance Redress Mechanism (GRM) will be put in place wherein all project stakeholders are given a venue to lodge complaints regarding any aspects of the land acquisition, compensation, resettlements requirements and other project-related issues.

The Grievance redress procedure is meant to reduce the incidence of expensive and time consuming litigation involving minor issues among landowners, and to give an opportunity to those not covered by the land acquisition and compensation laws of Sierra Leone. However, many grievances can be resolved by providing correct and complete information early in the subproject development process at the community level. If not resolved, it can be escalated to Project Safeguard Unit (Environmental and Social Safeguards team of the IRUMP). Furthermore, complaints can be referred to Grievance Redress Committee (GRC) within project area of influence and further to complainants will be advised that they have uninhibited access to legal redress mechanism can be adapted through the Sierra Leone’s judicial or appropriate administrative system. As such the ESMF has developed a grievance management process to serve as a guide during project implementation. The grievance management guide is provided in the table below.

5.5.1 Proposed grievance redress mechanism

	Process	Description	Time frame
1	Grievance receipt and registration/ logging	<ul style="list-style-type: none"> • Face-to-face; phone; letter, e-mail, recorded during public/community meetings etc • Significance assessed and grievance recorded or logged using the model complaint form and filed. Significance criteria: Level 1 – one off event; Level 2 – complaint is widespread or repeated; Level 3 – any complaint (one off or repeated) that indicates breach of law or policy or this ESMF/RPF provisions 	1 – 2 Days
2	Development and implementation of response	<ul style="list-style-type: none"> • GRC meets or takes a decision on the grievance • Grievance assigned to appropriate party for resolution of necessary • Response development with input from relevant stakeholders • Redress response/action approved by GRC and logged • Redress response/update of progress on resolution communicated to the complainant • Start implementing redress action 	5 – 10 Days
3	Verifying the implementation of redress action	2 Redress action implemented and verified by GRC 3 GRC satisfied with implementation of redress action	10-15 Days
4	Close grievance or refer grievance to 2 nd tier resolution	<ul style="list-style-type: none"> • Completion of redress action recorded or logged • Confirm with complainant that grievance can be closed or determine what follow up is necessary • Record final sign off of grievance • If grievance cannot be closed, return to step 2 or recommend 2nd level settlement 	15-25 Days
5	Court of law	<ul style="list-style-type: none"> • If 2nd level settlement does not address dispute, complainant can resort to court of law 	Unknown
6	Monitoring and evaluation, and reporting	<ul style="list-style-type: none"> • Grievance Redress Mechanism Process is documented and monitored 	

5.6 Performance indicators for the monitoring of the framework ESMP

To ensure effective implementation of ESMF, the environmental and social safeguard compliance monitoring will be conducted internally based on the following performance indicators and benchmarks for achievement of the objectives:

- Proposed indicators, indicating project inputs, expenditures, staff deployment, etc.
- Output indicators, indicating results in terms of numbers of affected People compensated and assisted, training held, details of disbursements, etc.
- Impact indicators, related to the longer-term effect of the project on communities.
- Number and type of grievances and GBV cases reported, including legal actions arising from expropriation.
- Number of GBV cases received by the GRM and the effectiveness of referral system, confidentiality of the process, empathetic and non-judgmental listening.

The Environmental and Social Safeguards Specialist of TIDU with support from SLRA will be responsible to carry out, monitoring during different stages of the project cycle, that is, construction and operational phase of subproject. Environmental monitoring will be carried out to ensure that the project activities will not create adverse impacts. The MoTA/TIDU will be responsible to prepare quarterly progress report, annual monitoring report and end-term monitoring and submit to the project steering committee of IRUMP and also submit it to the World Bank. The World Bank will be responsible to conduct periodic review missions, which will include a review of safeguard implementation issues.

5.7 Institutional arrangement for the implementation of the Framework ESMP

The overall responsibility for project implementation lies with the Ministry of Transport and Aviation, where the Project Implementation Unit (PIU) will be hosted, in collaboration with multiple departments and agencies, including:

- Ministry of Finance
- Project Steering Committee/technical support groups
- Freetown City Council
- Sierra Leone Roads Authority
- Sierra Leone Road Transport Corporation
- Sierra Leone Road Safety Authority
- Traffic Police
- Environmental Protection Agency
- World Bank

The MoTA/TIDU PIU will comprise of the following key experts:

- Project coordinator (TIDU Director)
- Project engineer
- Environmental and social development specialist
- Financial management specialist
- Monitoring and evaluation officer

- Procurement specialist
- Consultant (technical specialist)

5.8 Budgetary estimates

The total cost to implement the ESMF is estimated at US\$ 940,000

#	Item	Unit	Unit Cost	Total	Source of financing
			US\$	US\$	
1	Preparation of specific ESIA	LS	200,000	200,000	Project funds
2	Capacity Building	3	50,000	150,000	Project funds
3	Implementation of specific ESMP (purchase of equipment, cost of meeting)	3	30,000	90,000	Project funds
4	Mid-term audit of ES performance	No	150,000	150,000	Project funds
5	Completion audit of ES performance	No	50,000	50,000	Project funds
6	Health and safety at construction sites and environmental monitoring	No	135,000	135,000	Project funds
7	Preparation of RAPs	1	90,000	90,000	Project funds
8	Grievance Redress Management	No	30,000	30,000	Project funds
9	Miscellaneous expenses	No	15,000	45,000	Project funds
X	Total			940,000	

6.0 Consultation and Disclosure

Stakeholder consultations were carried out during the preparation of ESMF and RPF. These consultations were held with institutional representatives as well as representatives of community stakeholders (councilors) and transport operators such as drivers, okada riders, women and youth groups, in the project affected area (Lumley, Congo Cross and Kissy Ferry Terminal) between May and June 2018. The consultations have revealed that the project is considered to have a number of positive social and environmental impacts. The main issues raised during the consultative meetings included land acquisition and associated compensation caused by physical relocation/displacement of squatters and economic displacement impacts on market women and informal business facilities; influx of labour force and its impacts on SGBV in the project area, land ownership of Lumley transit market. However, in particular, the stakeholders suggested that mechanisms in ESMF should ensure regular consultations, participation, communication, access to information, grievance redressal of project affected and beneficiary communities and other stakeholders; and mitigation of environment and social/resettlement impacts in an effective manner. The key issues and suggestions from the field visits/consultation process has been documented and reflected in this ESMF.

The ESMF shall be released on the project website, distribution of the cleared ESMF hard and soft copies shall be sent to all institutional stakeholders (e.g. MoTA, EPA offices etc.), and affected and beneficiary communities at the early stage of sub-projects. The ESMF shall be published at the World Bank website.

Other safeguard documents, namely (i) Resettlement Policy Framework, (ii) Resettlement Process Framework (PF), (iii) ESIA and EMPs, (iv) annual environmental and social audits, (v) livelihood improvements impact evaluation report, (vi) Periodical RAP monitoring reports, (vii) RAPs and other studies will be disclosed on the website and hardcopies available for public consumption in various places.

7.0 Conclusions

The sub-projects under the IRUMP are feasible and consistent with the socioeconomic development plans of the city of Freetown. Apart from meeting the socioeconomic development needs of the municipalities, they support the sustainable development of the city, through the improvement of urban mobility and safety in three pilot areas and enhance institutional capacity to plan and manage urban transport in the city of Freetown. Detailed ESIA where applicable will be prepared for each subproject, whereby all potential environmental and social impacts will be identified and evaluated.

The positive impacts of the project include improved access to social facilities, business and transport facilities, reduced travel time, reduced traffic-related environmental problems, reduced road accidents etc.

During project implementation, some negative impacts may affect the local environment and local populations in the project areas. Land acquisition and associated compensation of project-affected households may take place in subproject areas in which case RPF and RAPs will have to be prepared. Typical of all construction activities, negative impacts relate to noise, air and water pollution, generation of solid wastes, disruption of public utilities, and occupational health risks, to mention a few.

Most impacts will be typical and can be mitigated using the mitigation principles detailed in the report. The mitigation principles will form part of the project contractors' contracts and the MoTA/TIDU and their PSC will ensure that the contractors comply with the provisions of their contracts, including those relating to environmental impacts. In accordance with their contracts, in case of site-specific impacts, contractors will be required to prepare site-specific detailed designs and ESMPs. The site-specific ESMPs will be approved by the PSCs prior to the work commencing. Periodic monitoring reports will be prepared by the environmental and social safeguard specialist and the results will be submitted to the MoTA and the World Bank.

To facilitate effective mitigation of impacts during operation, the project will also provide substantial support for capacity building, including training courses, at various levels to ensure that the ESMPs will be implemented and their performance monitored. Environmental monitoring will be carried out to ensure that the project activities will not create adverse impacts. The monitoring results will be periodically reported to MoTA/TIDU and World Bank

1.0 INTRODUCTION

1.1 Background

The Government of the Republic of Sierra Leone (GOSL) through the Ministry of Transport and Aviation (MoTA) intends to establish the Integrated and Resilient Urban Mobility Project (IRUMP) with an investment loan from the World Bank (WB). The Transport Project (IRUMP) focuses on improving urban mobility and safety in three pilot areas and enhances institutional capacity to plan and manage urban transport in the city of Freetown.

The proposed IBRD/IDA/World Bank funded Integrated and Resilient Urban Mobility Project (IRUMP) will allow the Ministry of Transport and Aviation (MoTA) and their respective Agencies to achieve and expand outcomes in three key areas: (i) improve of transport services, (i) comprehensive corridor improvements which will include: comprehensive traffic management measures including intersection improvement, coordinated traffic lights, improvement of sidewalks for pedestrian movement, drainage etc.; (ii) provide institutional capacity building and studies for MoTA staff and management and their agencies.

The overall IRUMP is to (i) pilot short-term remedies in order to obtain immediate relief and demonstrate the value of good management of existing infrastructure, efficient implementation, and good coordination across multiple department and agencies within the government; (ii) build institutions, develop appropriate policies and regulations, and identify arrangements to strengthen the delivery of public transport services and climate resilience.

The Environmental and Social Management Framework (ESMF) is to be implemented by the IRUMP in order to ensure that all environmental and social safeguard issues are adequately addressed and that the requisite capacity building and training needs are met in order for the recommended measures to be effectively implemented.

The main purpose of the ESMF is to:

- Establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under IRUM;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- establish the project funding required to implement the ESMF requirements;
- Provide practical information resources for implementing the ESMF.

1.2 Scope and Objectives of the ESMF

The ESMF was prepared because the location, design and magnitude of impacts of the eventual sub-projects would not be known at project appraisal stage, even though the types of potential sub-projects would be fairly well defined. The ESMF, therefore, provides an overarching safeguards document governing the approach, processes and specific instruments for proposed sub-projects. As such, the ESMF provides the safeguard instrument decision support tool and guide to inform the Environmental, Social and Health Impact Assessment (ESHIA), Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs), and other safeguard instruments (if applicable) during subproject feasibility and design phase. The ESMF will inform and guide the Ministry of Transport and Aviation and their respective Agencies and EPA (SL-EPA 2008 (as amended) for ensuring safeguard requirements of proposed subproject investment initiatives and activities are compliant with policies, legal, principles, institutional framework and procedures of GoSL.

The ESMF focuses on the nature and extent of significant adverse environmental impacts that may result from the road corridor improvement and the ferry terminal/ the ESMF also serves as a framework for screening environmental issues for all possible road improvement activities that will be undertaken. It establishes a unified process for addressing all environmental and social safeguard issues for sub-projects from preparation, through review and approval to implementation.

The ESMF also describes a process that will ensure that the substantive concerns of the relevant WB Safeguard Policies and Sierra Leone's legislation are addressed during the implementation of the IRUM project activities.

1.3 Approach and methodology

The focus of the assignment was to highlight the potential environmental and social impacts for the planned future activities of the project, and recommend a management plan for addressing potential negative impacts. In order to achieve these targets, the consultant adopted an extensive participatory and consultative approach involving meaningful engagement with the MoTA, MoWPA and other related agencies/institutions (e.g. SLRA, SLRSA, FCC etc.), and key stakeholders (including project beneficiaries, community leaders, community leaders, civil society organizations and relevant identifiable groups). This was intended to enhance awareness, ownership and general understanding of the ESMF safeguards instruments, roles and responsibilities, and perceptions as the basis for improving collaboration, co-ordination and achievements of the project objectives. The participatory and consultative approach ensures coordination and communication with all stakeholders and different interest groups.

The strategies of executing this assignment followed the five steps:

- (a) Review of relevant literature to obtain background information on the proposed transport project – project description and activities, coverage/locations that the project will impact, key actors and institutional arrangements, and an analysis of project components and activities that are likely to trigger the OP 4.12, OP 4.11 and OP 4.01

of the WB. In addition, a number of policies, legal and legislative framework were reviewed.

- (b) Review of typical implementation approach and processes for the proposed project and sub-projects
- (c) Identification and analysis of potential environmental and social impacts the implementation processes will likely trigger and generate within and around the project activities.
- (d) Development of screening process for negative impacts for proposed project sites and project activities.
- (e) Identification of appropriate mitigation measures for the predicted impacts and compilation of a management plan for addressing environmental and social impacts during implementation, operation and maintenance of the project activities.

The ESMF study was conducted based on the premise that key project activities will entail among other issues, (i) comprehensive corridor improvements, (ii) institutional capacity building and studies, and (iii) ferry terminal and service improvements. .

The study was then prepared in accordance with applicable World Bank safeguard policies and Sierra Leone environment project agency act environmental impact assessment procedures and guidelines. The distinct phases of the study include:

- Review of project documents
- Regulatory review (Sierra Leone) ;
- Review of World Bank Safeguard Policies
- Technical reports
- Visits to selected project and sub-projects sites;
- Key stakeholder consultations
- Characterization of the baseline conditions;
- Identification of potential impacts;
- Identification of impact mitigation measures;
- Preparation of an Environmental and Social Management Plan; and
- Preparation of sub-project guidelines

The consultant evaluated relevant baseline data related to the physical, biological and socio-economic environment of Freetown through visits to project sites, and investigations, stakeholder consultations, review of related literature from published and unpublished documents:

1.3.1 Field visits /consultation

The consultants undertook site investigations to projects and sub-project sites. The consultants visited Lumley, Congo Cross and Kiss Ferry Terminal.

The field visits enabled the consultants to identify the environmental and social setting of the project activities, identify some of the existing physical conditions and gaps within the programmes. In addition, the site visits allowed consultations of key stakeholders and project beneficiaries on their understanding of the current problems, as well the potential impacts of the proposed project and subsequent operations. The following stakeholders were consulted:

- Officials in the relevant government ministries
 - Ministry of Transport and Aviation
 - Ministry of Social Welfare, Gender and Children's Affairs
 - Ministry of Finance and Economic Development
 - Ministry of Lands, Country Planning and the Environment
 - Ministry of Trade and Industry
 - Ministry of Local Government and Rural Development
 - Ministry of Agriculture, Forestry and Food Security
- Environmental Protection Agency
- Freetown city council
- Sierra Leone road authority
- Sierra Leone Police
- Sierra Leone Road Safety Authority
- Sierra Leone Road Transport Authority
- Potential project beneficiaries – pedestrians, drivers, street traders, market women, association

2.0 DESCRIPTION OF THE PROJECT

2.1 Project rationale

Sierra Leone is among the most disaster-prone countries in the world, regularly suffering disasters related to natural events such as landslides, heavy rains and floods. These hazards have caused significant and recurrent damages to national infrastructure including housing, road networks, schools, and other facilities such as water and electricity. The resulting impacts significantly affect human welfare, national economic activities, property, and natural resources. The city of Freetown has an increasing population and a growing economy recovering from several years of calamity. Urban mobility is severely impaired by poor infrastructure, poor management of road space and poor public transport. It has often been argued that the recent political instability in Sierra Leone is a primary cause of these deficiencies.

In addition to the physical condition of the road system, traffic management and control of the use of road space is also generally ineffective. There are very limited pedestrian crossing points with the busier intersections only controlled by traffic police and traffic wardens. Enforcement of traffic rules and regulations are generally weak and this, combined with generally poor driving skills, results in poor traffic discipline.

Another serious problem in several streets in the central area of Freetown is the use of road and footpath space for street trading. These traders have encroached upon road space, thereby reducing motor traffic speed and severe congestion. The main road between Lumley and Ferry Junction has a low municipal and national carrying capacity, thereby increasing the time required to cross the city. The improvement of these road segments along with other ancillary works would increase the city's carrying capacity, reduce transport costs, increase the volume of traffic and develop urban economic activities

2.2 Project development objectives

The Development Objective of the project is to improve mobility, resilience and road safety in selected areas of Greater Freetown and enhance institutional and academic capacity in the transport sector. Given the difficult economic and political environment, the inability of government to keep pace with the growing demand and decades of neglect, the main targeted improvements are to pilot short-term remedies in order to obtain immediate relief and demonstrate the value of good management of existing infrastructure, efficient implementation, and good coordination across multiple departments and agencies and to build institutions, develop appropriate policies and regulations, and identify arrangements to strengthen the delivery of public transport services and climate resilience.

2.3 Project components triggering the World Bank Policies

The project is composed of 3 components as follows:

- Component 1: enhancing transport services

- Component 2: comprehensive corridor improvements
- Component 3: institutional capacity building and studies

Component 1. Enhancing Transport Services

This component will support the enhancement of transport services in three sub-sectors: (i) public transport services; (ii) mobility services to access education centers; and (iii) on-demand mobility services, to serve key sectors for social and economic development and economic diversification. Public transport services: this component will finance improvements to public transport system, including: a) ancillary facilities to support operation of buses (integrated ticketing, bus priority measures, control center, information system, etc.); b) bus stop, depot, terminal; c) technical assistance to support the transition of informal private sector operator in a formal and regulated provision of transport service along priority corridors.

Mobility services to access education centers in Western Region: this component will support the government "Access to schools" program that aims to enhance the physical access to schools in Western region. The project will support the route optimization of school buses to access education centers, preparation of the operation and maintenance service plans and the definition of institutional framework to regulate, operate and maintain the vehicles.

On-demand transport services: In partnership with Directorate of Innovation, line Ministries and agencies and with private sector actors, this activity aims to facilitate the development of private sector on-demand mobility services using new technologies and support the government to define regulation of these new services. The component will facilitate the environment to develop apps and other technical solutions adapted to the local context for on-demand mobility services for people and logistics. The on-demand services will facilitate access to health centers, touristic destinations, enhance logistic processes, and provide safe last time connectivity for women, among others.

Component 2: Comprehensive Corridor Improvements

This component will use an integrated and comprehensive approach to improve safety mobility for pedestrians and vehicles, and overall management of the public rights of way in a pilot area of Freetown from Lumley to central Freetown. The project investments would focus on: (a) improving pedestrian infrastructure; (b) improving road conditions and rehabilitating key road sections; (c) providing traffic management, signalization, parking, and intersection improvements; (d) providing a transport operator's terminal; and (e) addressing the needs of street traders through off-street market areas. Depending on the credit amount, the project may also finance the rehabilitation of sections of urban roads which are currently unpaved or in extremely poor condition, such as Motor Road and/or King Harman Way.

Component 3: Institutional Capacity Building and Studies

The activities of this component may include: (a) strengthening the ministry’s and departments’ capacity to develop a long-term vision and regulatory framework to support effective management of the urban transport system; (b) diagnosing problems with public transport and developing a comprehensive strategy to improve bus services; (c) conducting a public relations/communication campaign to educate stakeholders, schoolchildren and the public about road-space management and road safety; (d) developing a road-safety database; and (e) supporting climate-resilient activities, for example by developing guidelines to incorporate climate and disaster resilience into road design by providing specific cost-effective requirements and good practices for slope stabilization in mountain areas of Freetown; and mapping tools for prioritization of urban transport projects using network analysis and giving consideration to climate-related risks.

2.4 Project activities

The corridor improvement will involve the rehabilitation of feeder roads and drainage structures clearing to demarcate the road corridors and to improve safety, earthworks to achieve engineered road profiles and excavation of materials for road layers. Installation of drainage structures will include channels, culverts, drifts and small bridges. The details of the project activities are outlined in Table 1.

Table 1: Key project components

Component Name	Description of activities
Enhancing transport services	<ul style="list-style-type: none"> • Improve ancillary facilities to support operation of buses (integrated ticketing, bus priority measures, control centre, information system, etc) • bus stop, depot, terminal • technical assistance to support the transition of informal private sector operator in a formal and regulated provision of transport service along priority corridors. • Technical assistance to prepare plans for school buses • Technical assistance to design apps for on-demand services
Improvement of road corridors	<ul style="list-style-type: none"> • Rehabilitation of existing ground conditions, flood prevention, resettlement of existing traders/residents, vehicle access arrangements • Formalizing pedestrian footways • Improvement of intersections • Improve traffic management • Improve signalization • Road rehabilitation • Re-planning of traffic routes • Improvement of bus terminals/ on-street parking

	<ul style="list-style-type: none"> • Improving road safety • Relocation of existing street trader • Improve pedestrian circulation • Construction of market • Improvement/rehabilitation of access roads • Management of road-space following relocation
Strengthening of institutional capacity to manage urban transport	<ul style="list-style-type: none"> • Formulation of the National Urban transport policy and strategy for the country • Training of urban transport stakeholders • Twining of local universities • Road safety database in place • Road maintenance database in place • Number of climate-resilient activities supported • Establishing an institutional framework for land use and transport integration • Establish improved framework for public transport operations, including for SLRTC • Enhance competences of FCC

2.5 Project areas

The proposed Integrated and Resilient Urban Mobility Project activities will cover the selected three areas which are: Lumley Circle, Congo Cross and Kissy Ferry Terminal. Other areas in the project will be selected having into account a prioritization analysis, and will be located in Greater Freetown. See Figure 1 below.

2.5.1 Lumley

Lumley centre is the largest transport hub in the western part of the municipality and offers similar services as the PZ area in the centre of the city. The area has a poor, skeletal tertiary-road system. The relatively steep terrain in the north and north-east of this service centre does not offer the opportune linkage with Spur Road, which is a significant trunk road north of this service centre. The Malama part of the area has many criss-crossing seasonal streams that adversely affect access to the plots. A significant commercial, informal market and street trading mostly done by women, and banking area is developing around Lumley centre with banks, a police station, wholesale and retail shops, a local market, and a transport interchange terminal all accessible within a 0.5 km distance of each other.

Apart from employment in commerce in Lumley centre, other employment opportunities are limited as there are no significant manufacturing entities in the area. Lumley has potential for the development of hospitality and entertainment industries as the area connects to the Lumley Beach area.

At Lumley there are negative impacts on the bypassing traffic flow and that commuters spend most of their travel time delayed. However, the circumstances must be taken into consideration as market places and traffic centres seem to synergize into sustainable trading locations.

2.5.2 Kissy ferry terminal

Kissy Ferry Terminal is a sites within the Sierra Leone River Estuary (SLRE) (Central Coordinates 8o37'N & 13o03 W'), which is the drowned estuary of the Seli and Rokel River. The Estuary stretches across the coastal regions of the Koya, Maforki, Loko Massama and Kaffu Bullom chiefdoms, Northern Province and the northern coast of the Freetown Peninsula and covers an area of 259,00ha. The Bai Bureh and Ferry Road is an uncontrolled intersection which connects to the Ferry Terminal in Freetown. The intersection is a hub of trading and informal transit services, which adds to the chaotic movement of traffic and people. There is a traffic signal which may or may not be functioning and there appears to be unmarked left turn lanes on Bai Bureh Road.

Furthermore, the area has port facilities and jetties, and public transport facilities are good. Water supply lines and electricity grid-line facilities are available in the lower part of the area, although maintenance is a problem and urban health and sanitation infrastructure is poor. Employment is available in the ports and marine sector, which have dry dock facilities at Kissy where the ferry terminal provides the principal ferry linkage for passenger, goods and services with the Kaffu Bullom area and with Lungi International Airport across the Sierra Leone River.

2.5.3 Congo Cross

The area is well serviced by secondary and tertiary roads, with lanes as well connected to other neighbourhoods in Freetown. Congo Cross is an important intersection surrounded by high pedestrian activities generating surrounding land uses such taxi ranks, restaurants; schools etc. There are however no pedestrian crossing points around the intersection, a challenge which needs to be addressed. There are reasonable transport facilities together with a water distribution network and electricity power lines. The intersection also experience high level of congestion. Commuters experience delays to travel time mostly in the AM and PM peak hours.

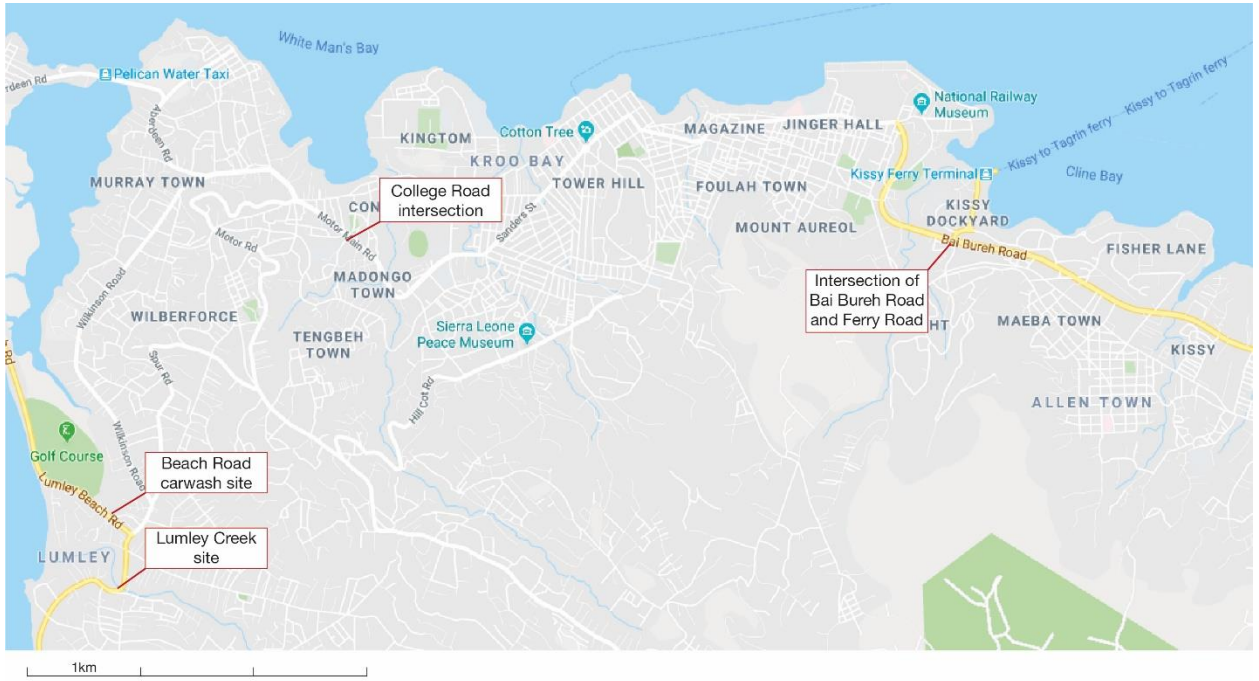


Figure 1: Map showing project areas

3.0 LEGAL FRAMEWORK: POLICIES, REGULATIONS AND GUIDELINES

3.1 Introduction

This chapter in the ESMF identifies the general legal and institutional requirements relevant to the identified project components and activities. In Sierra Leone, there are presently no legal or regulatory requirements for preparing environmental and social management framework studies such as this one. However, this chapter of the ESMF is meant to outline the environmental policy and environmental assessment legislation and procedures of Sierra Leone and those of the World Bank, which are relevant to the project, as outlined below. In principle, the two are similar in many respects though the World Bank policies are more stringent. Since this project is financed by the World Bank, the World Bank Requirements will prevail should any discrepancy arise without violation to national laws and legislations. Efforts will be exerted to avoid duplication of work and maintain the highest level of compliance to national and international requirements.

3.2 National and regulatory frameworks

3.2.1 National constitution of Sierra Leone 1991

The constitution of Sierra Leone is the overarching legal instrument that promotes for the protection of the rights of individuals private property and also sets principles under which citizens may be deprived of their property in the public interested as described in section 21 of the Sierra Leone Constitution. It also makes provision for the prompt payment of adequate compensation and access to the court or other impartial and independent authority for the determination of the land owner's interest or right, and the amount of any compensation to which he/she is entitled and for the purpose of obtaining prompt payment of that compensation. The IRUM project is a development activity that makes use of the human and biophysical environment. As such, an EMP procedure will be implemented to address these issues.

3.2.2 The National Environmental Policy

The National Environmental Policy (NEP) was approved by cabinet since 1990 and was subsequently revised in 1994 (GOSL, 1994). The NEP seeks to achieve sustainable development in Sierra Leone, through the implementation of sound environmental and natural resources management which will encourage productivity and harmony between man and his environment. It also promotes efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of nationals, and serves to enrich the understanding of ecological systems and natural resources which are important to the country.

The policy objectives are to:

- Secure for all Sierra Leoneans a quality of environment adequate for their health and well-being;
- Conserve and use the environment and natural resources for the benefit of present and future generation; restore, maintain and enhance the ecosystems and ecological processes

essential for the functioning of the biosphere; to preserve biological diversity, and uphold the principle of optimum sustainable yield in the use of living natural resources and ecosystems;

- Raise public awareness and promote understanding of the essential linkages between the environment and development and to encourage individual and community participation in environmental improvement efforts.

The NEP also contain among others sector policies on land tenure, land use and soil conservation; forests and wildlife; biological diversity and cultural heritage; mining and mineral resources; coastal and marine resources; settlements, recreational space and greenbelts and public participation. The policy goal for the land tenure, land use and soil conservation is to “use available land in such a way that its quality is conserved so as to enhance its potential for continuous productivity and to prevent degradation”. One of the major strategies which government is now pursuing to achieve the goals of the NEP is “to make as priority Environmental Impact Assessment (EIA) of proposed activities which may significantly affect the environment and the use of a resource.” (GOSL, 1994).

The NEP also has a specific goal and policy for water resource management which ensures adequate quantity and acceptable water quality to meet domestic, industrial, transportation, agricultural and fisheries by accelerating programmes for the utilization of water for the various uses and expending water quality management, monitoring and assessment programmes. Although laws prohibiting pollution of water bodies exist they are hardly enforced.

3.2.3 The Environment Protection Agency Act, 2008 (amended 2010)

This Act established the Environmental Protection Agency of Sierra Leone (EPA-SL), to provide for the effective protection of the environment and for other related matters. It mandates the EPA among others to:

- Advise the minister on the formulation of policies on all aspects of the environment and in particular make recommendation for the protection of the environment;
- Issue environmental permits and pollution abatement notices for controlling the volume, types, constituents and effects of waste discharges, emissions, deposits or other sources of pollutants of substances which are hazardous or potentially dangerous to the quality of any segment of the environment;
- Prescribe standards and guidelines relating to ambient air, water and soil quality, the pollution of air, water, land and other forms of environmental pollution including discharge of waste and the control of toxic substances;
- Ensure compliance with any laid down environmental impact assessment procedures in the planning and execution of development projects, including compliance in respect of existing projects; and
- Impose and collect environmental protection levies in accordance with this Act or regulations made under this Act.

Section 24 of the Act lists project activities requiring and Environmental Impact Assessment license which includes infrastructural projects such as roads and bridges. Further site-specific information will be given in the ESIA report to be prepared for this project. Section 25 and 26 describe factors for determining whether a project requires an environmental impact assessment

and the contents of the environmental impact assessment respectively. The Act describes the procedures to be followed to obtain permits for both existing and proposed undertakings through the conduct of environmental impact assessment.

The Environmental Protection Agency (amendment) Act 2010 gave executive powers to the board.

3.2.4 National Land Policy (2015)

The new National Land Policy is the guideline in the administration of, management, control, planning and execution of land matters in Sierra Leone. The Policy aims at the judicious use of the nation's land and its entire natural by all sections of Sierra Leone society in support of various socio-economic activities undertaken in accordance with sustainable resource management principles. The principles of the land policy include among others:

- The principle of land as a common national or communal property resource held in trust for the people and which must be used in the long term interest of the people of Sierra Leone.
- Compensation to be paid for lands acquired through compulsory government acquisition will be fair and adequate and will be determined, among other things, through negotiations that take into consideration government investment in the area.
- Local Authorities (City and District Councils) may negotiate for land for project development purposes, but all such grants should be properly documented and processed.
- No interest in or right over any land belonging to an individual or family can be disposed of without consultation with the owner or occupier of the land.
- No interest in or right over any land belonging to an individual or family can be compulsorily acquired without payment, in reasonable time, of fair and adequate compensation.

The law governing interest in land in the Western area is partly derived from the English law based on what used to exist in England, partly by Act of Parliament including the constitution of Sierra Leone Act No. 6 of 1991 especially section 21 and all amendments made thereto. Here, the law regulating acquisition of land and compensation is governed by the Public Land Act, Cap 116 of the laws of Sierra Leone 1960 particularly Sections 4,5,6,7,8,9,10, 15,16,18, and 19 etc of the Act (i.e. CAP 116 of the laws of Sierra Leone 1960).

3.2.5 The New Direction Policy Framework 2018

Sierra Leone's Country Development Agenda is pinned on the New Direction Policy Framework that outlines key development strategies. The policy framework has identified strengthening road infrastructure among core sectors that would contribute to lowering the cost of business as well as promoting competitiveness of the economy. Though roads account for over 80% of passenger and freight traffic only about 10% of the road network estimated at 11,500 km is paved and only 21% of rural population (60% of the country population) resides within two (2) kilometres of an all-weather road. These compounded effects ultimately result in high transaction costs and poor competitiveness of the economy particularly for the people residing in rural communities that depend on agriculture for their livelihoods.

In the “New Direction Manifesto 2018”, the President expressed his vision for improving transport in the Capital, Freetown by “address the current traffic congestion in Freetown not only by the construction of new roads but also by employing proven and practical traffic engineering mitigation measures such as the use of actuated traffic light signals, directional traffic flows, channelization, the use of pedestrian only roadways, commercial vehicles only roadway, peak and off-peak traffic directional flows, and effective traffic enforcement. Use of automated traffic signalization at key intersections in the cities of Freetown, Bo, Makeni and Kenema. Complete a four-lane express road from West to East Freetown within five years. Widen selected roads and build new flyovers at key junctions of Lumley, Congo Cross, Model, Eastern Police, Up Gun and Cline Town”. Provide more mass transit facilities, especially by buses in large urban areas like Freetown, Bo, Kenema and Makeni. Increase public bus services to all areas: 18 hours service a day” (p.).

3.2.6 Road Traffic Acts 2007

The Road Traffic Act of 2007 deals with registering and licensing of vehicles, carrying hazardous goods, non-roadworthy or overloaded vehicles, licences for commercial drivers, maximum work hours, the alcohol limit (i.e. 80 mg of alcohol in 100 ml of blood) and drugs.

3.2.7 Laws related to GBV and Sexual Exploitation and Abuse

At a national level, a number of legislative and policy frameworks have been established to provide supportive and conducive environment to stem and reduce incidents of SGBV and punish perpetrators. The passage of the three Gender Acts (the Domestic Violence Act (2007), the Devolution of Estates Act (2007) and the Registration of Customary Marriage and Divorce Act (2007) in 2007 provided concrete legal pronouncements on the rights of women and children which could be drawn on to prevent SGBV and seek redress in the event of occurrence. The Gender acts indicated a sea change to attitudes towards gender equity and gender equality and were a core part of the post reconstruction agenda to create a new social order. The Domestic Violence Act ‘situates domestic violence as a criminal act in and of itself and uses a broad definition of domestic abuse which includes physical and sexual abuses, economic abuses, verbal, emotion and psychological abuse’ (Swaine, 2012: 8) perpetrated against an individuals in a domestic setting. The Registration of Customary Marriage Act raises the legal marriageable age and requires customary marriages to be registered under Customary, Muslim, Christian and civil laws. The Devolution of Estates Act aims to address issues of women’s inheritance rights by allowing men and women to inherit equally and abolishing customary practices whereby widows were often required to marry a member of her deceased husband’s family. A child rights was also passed in 2007. Despite the plethora of laws and apparent institutional commitment to address SGBV, the committee remains limited in its ability to effectively coordinate activities, largely due to lack of funding. It is also detached from key government networks, including district coordinating bodies and ministries responsible for addressing SGBV (MSWCA, 2012).

In 2012, these Gender Acts were complemented by the Sexual Offences Act, which criminalizes rape (with marriage explicitly denied as a defence), indecent assault and harassment and imposes a maximum 15-year sentence for cases of rape. It also entitles victims of sexual offences to free medical treatment, as well as a free medical report (necessary for prosecution). This was designed to protect women and girls from rape and abuse from people in authority; bans rape in marriage, provided greater powers to Family Support Unit (FSU) to investigate and prosecute cases of sexual abuse. The mandate is to receive cases of SGBV, provide assistance to victims, investigate crimes and prepare a case for prosecution, as well as increase public awareness. NGOs and service

providers have also contributed efforts in stemming the problem by raising awareness on the issues, advocating increased access to services for victims – or in some cases providing those services- and promoting attitudinal change about women’s status, women’s rights and gender power relations within the society. These policy and legislative changes are clearly important in criminalizing VAW, building greater respect for women’s rights, and demonstrating how seriously the government takes issues of women’s security, owing in no small part to ongoing advocacy by women’s organizations and activists (UN Women, 2011).

The Prevention and Control of HIV/AIDs Act (2007) enacted to provide a legal framework for the prevention, management and control of HIV and AIDS, for the treatment, counselling, support and care of persons infected with, affected by or at risk of HIV and AIDS infection. It urges the government to assume to responsibility for educating and providing information to all citizens on HIV and AIDS, safe practices and procedures, testing, screening and access to healthcare facilities within the country. It prescribes safe practices and procedure to enhance prevention of transmission and prohibits compulsory testing. The law also prohibits discriminatory policies in the work place and schools, restriction of movement on the basis of HIV status, and denial of burial rites.

3.2.8 The Sierra Leone Roads Authority Act 1992

The Sierra Leone Roads Authority Act of 1992 creates the authority of the Sierra Leone Roads Authority to create regulations pertaining to the safe usage of roads.

IRUM project will comply with the rules and regulations on vehicles and goods transportation as they apply to its operations.

3.2.9 The Sierra Leone Road Safety Authority Act 1996 (amended 2016)

The Road Transport Authority (Amendment) Act 2003, the act established the Corps of Traffic Wardens to complement the Sierra Leone Police Force with regard to traffic duties and by exercising the following duties:

- To control and regulate traffic
- To render the roads free from unnecessary obstruction and ensure the free flow of traffic.
- To educate the public on road safety
- In the case of an accident – to divert traffic from the scene when necessary
 - To divert traffic from the scene when necessary;
 - To keep onlookers away and render first aid to any injured person;
 - To dispatch the injured, if any, to the nearest health centre or hospital without delay;
 - To report the accident to the nearest police station; and
 - To enforce all rules and regulations pertaining to the conduct of road users, including pedestrians, for the promotion of road safety.

Other regulations dealing with traffic law enforcement are the Road Traffic Act (RTA) 2007 and the Road Traffic Regulation 2011. The former was introduced as a means of consolidating the laws relating to road traffic, while the later was to clarify the powers of conferred on the Sierra Leone Road Safety Authority in accordance with Section 143 of the (RTA) 2007: *The Authority may make regulations generally as to the use of vehicles on roads, their construction and equipment and the conditions under which they may be used and otherwise for carrying this Act (Road Traffic Act 2007) into effect.*

3.2.10 Local Government Act, 2004

This Act deals with the establishment and operation of local councils around the country to enable meaningful decentralization and devolution of Government functions. It stipulates that a local council shall be the highest political authority in the locality and shall have legislative and executive powers to be exercised in accordance with this Act or any other enactment. It shall be responsible, generally for promoting the development of the locality and the welfare of the people in the locality with the resources at its disposal and with such resources and capacity as it can mobilize from the central government and its agencies, national and international organisations, and the private sector. The local council should initiate and maintain programmes for the development of basic infrastructure and provide works and services in the locality. A local council shall cause to be prepared a development plan which shall guide the development of the locality.

3.2.11 Environmental International Agreements

Sierra Leone is a party to many international agreements on biodiversity, climate change, desertification, endangered species, ozone layer protection, and others, including:

1. Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal (1999);
2. Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris;
3. Convention on Biological Diversity (1994);
4. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES,);
5. Convention on the Ban of the Import into Africa and the Control of Trans-boundary Movement and Management of Hazardous Wastes within Africa, Bamako, Mali (1993);
6. United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1995);
7. Montreal Protocol on Substances That Deplete the Ozone Layer (1987);
8. United Nations Framework Convention on Climate Change (1996);
9. Ramsar Convention on Wetlands (2005)
10. Stockholm Convention of Persistent Organic Pollutants (POPs) (2003)
11. Kyoto Protocol (1997); and
12. Vienna Convention for the Protection of the Ozone Layer (1993);

3.3 Administrative Framework

The following institutions would have various roles to play in the implementation of the ESMF:

3.3.1 Ministry of Transport and Aviation (MoTA):

This Ministry is mandated to deal with issues related to transport on land, air and sea as well as local and international communications. Transport sector contributes to habitat fragmentation and loss as well as the introduction of pollutants into the environment. The Ministry oversees the Sierra Leone Roads Authority (SLRA), Sierra Leone Road Safety Authority (SLRSA) and the Sierra Leone Road Transport Corporation (SLRTC). There is also recognition that effective project delivery would require collaboration across multiple departments and agencies, including Freetown City Council (FCC), SLRA, SLRSA, and Sierra Leone Police traffic division. To

strengthen coordination across multiple agencies, a Steering Committee has been established with members from key agencies responsible to support project preparation.

3.3.2 Ministry of Works and Public Assets (MoWPA):

The MoWPA is charged with several statutory responsibilities among which are: (i) road construction, supervision, monitoring and maintenance of the main road system through SLRA as well as public buildings; (ii) enhances the improvement of road networks by securing bilateral and multilateral agreements with donors for funding; (iii) provision of engineering infrastructure to roads (iv) Construction and maintenance activities can lead to habitat fragmentation and pollution problems and (v) to use the resources, both human and material available to the MoWPA to make roads the best and safest means of transport all the time.

3.3.3 Ministry of Lands, Housing and the Environment

The MLHE would be responsible for managing and protecting the environment as well as land valuation and compensation related to this project. The ministry provides advisory services to the public on land matters and is also responsible for physical planning and management of the forestry resources. The Town and Country Planning Department is responsible among others for: Planning, controlling and ensuring the harmonious, sustainable and cost effective development of human settlements in accordance with sound environmental and planning principles.

The Surveys and Lands Department

This Department is responsible for the management of public and vested lands transactions and they, in co-ordination with the relevant public agencies and governmental bodies, perform other functions related to involuntary resettlement.

The Land Valuation Committees of District Councils

Aim at delivering an open, timely and cost effective valuation service, with the view to supporting economic development.

The Land Title Registry

The Lands Title Registry aims at providing an open, cost effective and timely service in the registration of titles and interests in land that is state-guaranteed to meet the needs and expectations of the country and its inhabitants.

3.3.4 Ministry of Finance (MOF)

This ministry has the broad responsibility for financial management, procurement, and monitoring and evaluation functions of the project.

3.3.5 Ministry of Local Government and Rural Development (MLGRD)

Local Government in Sierra Leone is a sub-national structure to which some functions have been delegated to it from the Central Government to plan, administer and manage with accompanying resources. The Freetown City Council operates through a local council which is the highest political body in the Freetown. The elected council constitutes representative body with delegated powers and funds for local governance.

3.3.6 Ministry of Social Welfare, Gender and Children's Affairs

The MSWGCA is mandated to promote and protect the rights of women, children, the aged, persons with disability, and other vulnerable groups through development and review of policies, advocacy coordination with stakeholders, building capacity and effective monitoring and evaluation in order to enhance equity for all. The Ministry coordinates child welfare committees and Gender-Based Violence committees. These committees aim to provide a more holistic response to the problem of GBV and in particular sexual exploitation and abuse involving a range of different actors (Swaine, 2013).

3.3.7 The Environment Protection Agency

Environmental Protection Agency is a statutory agency for the protection of the environment and for other related matters. With reference to the road project, the EPA has the overall responsibility of permitting and monitoring the project's compliance in line the Approval Conditions as well as other standards relating to environment. It is further empowered to identify projects, plans and policies for which environmental assessment are necessary and ensure that the same is done in line with the provisions of EIA regulations. Its responsibilities include managing the EIA process, making decisions and ensuring that management occurs in accordance with the decision. As such, EPA approves the terms of reference for project assessments, reviews reports including the project brief, EIA and follow-up, monitoring reports. The Agency also helps the project proponent to establish a public consultation process.

3.3.8 Sierra Leone Roads Authority

Sierra Leone Roads Authority is a semi- autonomous government entity responsible for the administrative control, planning, development and maintenance of all national road network and related structures including bridges, street furniture, and government-owned ferries. It is also responsible for traffic management, including provision of traffic signals, road signs and markings; road layout and junction design, as well as the condition of the roads but in practice has limited internal capability in this area. With regard to the environmental and social aspects of this road project, SLRA's Environmental Division will take the responsibility of monitoring compliance during implementation and operational stages of the road project;

3.3.9 Sierra Leone Ports Authority

The SLPA is responsible for the jetties used for water transport services and private vessels.

3.3.10 Sierra Leone Road Safety Authority

The SLRSA reports to the MoTA through its board of directors, the SLRSA is responsible for testing and licensing all vehicles and drivers in Sierra Leone; road safety and employs traffic wardens to assist the traffic police in controlling traffic and enforcing traffic and parking regulations; planning of public transport routes in Freetown. Under the current legislation, the Sierra Leone Road Safety Authority is responsible for designating public transport routes as well as set fare levels.

Section 35 of the Road Traffic Regulations 2011 places the responsibility on the SLRSA to license all public transport in Sierra Leone. The Authority is also responsible under section 41 of the same Statutory Instrument (SI) to designate the various routes allocated to operators as well as the amount they should charge for the various stages along the routes.

3.3.11 Sierra Leone Road Transport Corporation

The Sierra Leone Road Transport Corporation is the state corporation established by an Act of Parliament in 1964 with responsibility for providing public passenger transport services in Sierra Leone. SLRTC will be instrumental in monitoring behavioural road safety aspects during the implementation and operation of the road in line with its mandate. The SLRTC has powers to provide and regulate passenger transport services throughout the country. .

3.3.12 Freetown City Council

Freetown City Council is the highest political authority in the City of Freetown, with legislative and executive powers. It is responsible for promoting the development of the city and the welfare of the people with resources at its disposal (Local Government Act, 2004). It has a major stake in all development programs and the collection of licenses and taxes within the city. Other responsibilities include:

- Mobilization of human and material resources necessary for the overall development of the city and the people living there;
- Promoting and supporting productive activity and social development;
- Initiating and maintaining programs for the development of basic infrastructure and provides works and services;
- Initiating, drawing up and executing development plans for the city;
- Determining tax rates, approving annual budgets and overseeing the implementation of such a budget; and
- The formation of committees

FCC does not have the mandate for urban transport. The Local Government Act 2004 empowers local councils to provide Public Transport Parks (commercial vehicle parks), to designate parking areas and to charge for parking; control street traders. The local councils are also responsible for controlling street traders. Responsibility for urban road maintenance (apart from main roads) should have been devolved from SLRA to local government, but it is understood that this has not been fully implemented. Street lighting should be provided by the Electricity Distribution and Supply Authority (EDSA), under the Ministry of Energy. Local councils have no responsibility for traffic management, other than parking control. There is no formal position within the FCC dealing with public transport.

3.3.13 Sierra Leone Police (SLP)

Police traffic functions include controlling operations and enforcing regulations; the police undertake some traffic planning functions, such as design and implementation of one-way traffic systems. In addition, they collect transport accident and fatality data.

3.3.14 Sierra Leone Maritime Administration

The SLMA operates and governs the registry of vessels in accordance with the Sierra Leone Merchant Shipping to ensure safety of life at sea and protection of the marine environment.

3.3.15 Transport Owners Association and Drivers' Union

The Union represents the interests of their members and liaise with relevant government agencies, in allocating operators to routes, and control of the informal transport sector generally. Informal transport terminals are managed by representatives of the drivers' unions. The principal unions are: Indigenous Transport Owners' Association Motor Drivers' Union; Bike Riders Union.

The transport associations and unions are an important component of the road transport industry in Sierra Leone. As well as their traditional functions of protecting and improving the working conditions of their members, they principally control the informal transport services and discipline operators and their employees. However, their objectives are determined by the interests of their members rather than those of the general public.

3.3.16 Sierra Leone Traders Union

The SleTU represents the members of country's main five traders unions. Its key function is to address the general welfare of its members. It has the power to revoke permits issued by the city council. There are several unions that represent the owners and drivers of commercial passenger and freight transport vehicles in Sierra Leone. The principal unions are: Motor Drivers' Union and Bike Riders' Union.

3.4 The World Bank Safeguard Policies

3.4.1 Description

To ensure the social and environmental sustainability of the projects, the World Bank developed its safeguard policies, divided in environment, social and legal areas (Table 2). Likewise, the World Bank has a Public Disclosure Policy that is of cross-character and applies in all the Safeguards Policies.

Table 2: World Bank Safeguard Policies

Environmental policies OP/BP 4.01 Environmental Assessment OP/BP 4.04 Natural Habitat OP/BP 4.09 Pest Management OP/BP 4.36 Forest OP/BP 4.37 Safety of Dams	Social policies OP/BP 4.10 Indigenous People OP/BP 4.12 Involuntary Resettlement OP/BP 4.11 Physical Cultural Property Legal Policies OP/BP 7.50 International Waterways OP/BP 7.60 Projects in Disputed Areas
World Bank Additional Safeguard Technical Reference Documents <ul style="list-style-type: none">- Environmental, Health and Safety Guidelines- Environmental Assessment Sourcebook (and updates)- WB Participation Sourcebook (1996)- Disclosure Handbook	

The Safeguard Policies pursue three objectives: (i) ensuring that environmental and social issues are evaluated in the preparation and decision-making process; (ii) reducing and mitigating the environmental and social risks of Bank-financed programs or projects; and (iii) providing mechanisms for consultation and information disclosure.

According to the agreements, the bank requires the borrower (MoTA) to prepare a document presenting the risks and impacts management mechanisms/measures in compliance with applicable WB safeguard policies. This document shall be reviewed by the Bank and revised by the borrower if and as necessary prior to approval.

3.4.2 The World Bank Environmental and Social Safeguard Policies triggered by the Integrated and Resilient Urban Mobility Project

The World Bank's Operational Policies (OP) includes guidance on Environmental Assessment requirements. The Bank's Safeguard Policies, ten of them, is meant to ensure that operations of the Bank do not lead to adverse impacts or cause any harm.

The Safeguard Policies are lumped into Environment, Rural Development, Social Development and International Law. The following three out of the ten are relevant for considerations under the ESMF. These are: Environmental Assessment (OP/BP 4.01); Involuntary Resettlement (OP/BP 4.12); and Management of Physical Cultural Property (OP/BP 4.11). Both the ESMF and RPF include specific considerations for project activities which are yet to be defined. These safeguards instruments entail extensive consultation and disclosure during the study and in the Bank's prior to appraisal.

3.4.3 Environmental Assessment (OP 4.01)

The OP 4.01 requires among others that screening for potential impacts is carried out early, in order to determine the level of EA to assess and mitigate potential adverse impacts. The Bank's project screening criteria group projects into three categories:

- Category A – Full Environmental Assessment, i.e. Project is likely to have significant adverse environmental impacts that are sensitive, diverse, irreversible or unprecedented (this type and scope of projects cannot be financed under specific project, which is a Category B);
- Category B – Partial Environmental Assessment – project has potential adverse environmental impacts but are site-specific, and reversible;
- Category C – No Assessment – project is likely to have negligible or no adverse environmental impact.

The EA ensures that appropriate levels of environmental and social assessment are carried out as part of project design, including public consultation process, especially for Category A and B projects.

The exact locations of some of the road corridors have already been determined and land acquisition along Lumley beach road and associated impacts on livelihoods have taken place. An ESHIA and RAP are already being prepared for these specific locations.

A Resettlement Policy Framework (RPF) will be prepared before the project appraisal to set an outline for handling any anticipated impacts on land or livelihoods once new corridors are identified at a later stage. In accordance with the policy requirements of OP 4.12, a Resettlement Action Plan (RAP)/ Abbreviated Resettlement Action Plan (ARAP) will be prepared to set detailed action plan for handling resettlement activities and compensation for the project affected persons (PAPs) (if any). Meaningful consultation with PAPs should be ensured along the process. Compensation should be paid in full for the PAPS prior to the commencement of any construction work.

3.4.4 Involuntary Resettlement (OP/BP 4.12)

This policy is the principal social safeguard policies of the World Bank applying specifically to involuntary resettlement. The key objectives of the policy on involuntary resettlement includes to (i) avoid or minimize involuntary resettlement and related disruption where feasible; (ii) explore all viable alternatives for project design; (iii) provide transparent compensation procedures for the involuntary acquisition of land; (iv) assist the affected and displaced persons in their efforts to improve their standards of living, income earning capacity, and production level, or at least in restoring them, implemented through a resettlement action plan; (v) encourage community participation in planning and implementing resettlement; (vi) provide assistance to affected people regardless of the legality of land tenure.. The policy covers not only physical relocation but any loss of land or other assets resulting in relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood whether or not the affected people must move to another location. When the policy is triggered, a Resettlement Action Plan must be prepared. An abbreviated plan may be prepared when less than 200 people are affected by the project. In situations, where all the precise impacts cannot be assessed during project preparation, provision is made for preparing a Resettlement Policy Framework (RPF). The RAP/RPF must ensure that all the Bank's policy provisions detailed in OP 4.12 are addressed particularly the payment of compensation for affected assets at their replacement cost

3.4.5 Physical Cultural Resources (OP/BP 4.11)

The policy is premised on the need to investigate and take inventory of cultural resources likely to be affected. Mitigations are provided for in cases of adverse impacts on physical cultural resources. Mitigation measures should be undertaken in conjunction with the appropriate authorities, organizations and institutions that are also required to be consulted and involved in the management of cultural property. The Chance find procedure included as an annex to this ESMF provides guidelines for dealing with Physical cultural resources encountered during project implementation.

The World Bank Safeguard Operational Policies which apply to this project are as follows (Table 3) while activities that may trigger additional safeguards policies will not be supported.

Table 3: World Bank Safeguard Operational Policies for this project

Safeguard policy	Triggered	Justifications
Environmental assessment (OP.BP 4.01)	Yes	The project is classified as Category B which requires site specific environmental assessment
Physical cultural resources (OP 4.11)	Yes	This policy is applicable during projects construction, although the project is executed in urban areas in Freetown along existing paved streets, three corridors may pass across important cultural sites. In addition, due to excavation works which will take place in case of replacement of underground pipelines, a Chance Finds Procedures Plan is included as and Annex to this ESMF and will be included in the ESMP as a precautionary measure.
Involuntary Resettlement (OP/BP 4.12)	Yes	Land is required for project infrastructure facilities. First option would be to reduce land requirement and the next would be to go for government land. It is likely that the proposed project will involve land acquisition or resettlement. Since land acquisition and resettlement cannot be excluded with full certainty before the corridors are identified; a Resettlement Policy Framework (RPF) is now being prepared which will be disclosed to the public and the Bank prior to appraisal. At this stage the specified road corridors and in cases where land acquisition and resettlement proved to be unavoidable, a Resettlement Action Plan (RAP) will be prepared and disclosed before the start of the civil work.
The Bank's Policy on Disclosure	yes	It is the belief of the Bank that the peoples residing in the project areas have the right to be informed of the proposed development project(s) in their respective areas. Therefore, prior to project appraisal, the summary of the study of undertakings along with other relevant information should be disclosed at the Bank's as well as the project area's (local) level. The World Bank Policy on disclosure requires that Category B Environmental Assessment reports should be self-standing documents, and thus disclosure is a pre-requisite for appraisal of the project.

According to the above classification criteria, the project is assigned Environmental Screening Category B because anticipated negative environmental and social impacts due to construction activities under Component 1 and 2 are site specific and easily manageable. This requires that a site specific Environmental, Social and Health Impact Assessment and Environmental

Management and Monitoring Plan (ESHIA/ESMP) would be prepared for the activities as they become identified.

A Resettlement Policy Framework will also be prepared as a precautionary measure to ensure appropriate compensation measures are implemented if any livelihoods are negatively impacted due to involuntary Resettlement or land acquisition. See Table 4 below.

Table 4: Safeguard Management Approach Component by Component

Components	Activities to be financed by the project	Safeguard documents	Timing for preparation and implementation of safeguards documents
Overall project level	Components 1-3	ESMF and RPF	ESMF and RPF prepared during project preparation, implemented in project
Component 1: Road Corridor Improvement	Technical Assistance Services and civil works	ESHIA/ESMP , RAP (where needed)	ESHIA/ESMPs, RAPs (where needed) and Cultural Heritage Management Plan (CHMP) (if required) prepared and implemented during the project
Component 2: Institutional Strengthening and Capacity Building	Technical Assistance Services	None	N/A
Component 3: Kissy Ferry Terminal	Technical Assistance Services and Civil works	ESHIA/ESMMP	ESMF and RPF prepared and implemented during the project

3.4.6 World Bank Policy on Disclosure

The Bank’s policy on disclosure currently under review requires that all the people residing in the given areas of a project have the right to be informed of the proposed development project in their respective areas. Therefore, prior to project appraisal, the ESMF document will be disclosed to project stakeholders, with public consultations conducted in a meaningful manner and in line with the World Bank Policies or at the level of the Bank and the project area.

3.5 Gap analysis for key environmental assessment procedures between GoSL and WB Policies

3.5.1 EIA Requirements

3.5.1.1 Sierra Leone EIA Requirements

According to the Sierra Leone’s Environment Protection Act 2008 (amended 2010) for the protection of the environment, new projects are required to carry out an environmental impact assessment (EIA) before embarking on the construction or the implementation of the project or the relevant expansions.

The Act has developed detailed principles of the EIA system which include the following aspects:

- Identifying the projects subject to the EIA system
- Indicating the rules and procedures for EIA
- Classifying the projects according to their environmental impact and the level of assessment.

The EIA system classifies the projects into three categories based on different levels of EIA requirements according to severity of possible environmental impacts and location of the establishment and its proximity to residential settlements:

- Category (A): projects which have highly adverse environmental impacts. These are required to prepare a full environmental impact assessment
- Category (B): projects with potential adverse impacts yet less adverse than category A. these are required to do environmental impact assessment.
- Category (C): projects with minimum environmental impacts

3.5.1.2 The World Bank Requirements

According to the World Bank EIA requirements, the Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of Environmental Assessment (EA) needed. The Bank classifies the proposed project into one of three categories, depending on the type, location, sensitivity, and scale of the project, as well as the nature and magnitude of its potential environmental impacts.

3.5.1.3 Category A

The project is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. The EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" scenario), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. For a Category A project, the borrower is responsible for preparing a report, normally an Environmental Impact Assessment (or a suitably comprehensive regional or sectoral EA).

3.5.1.4 Category B

The project has potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A assessment. Like Category A, a Category B environmental assessment examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. The findings and results of EA for Category B

projects are described in the project documentation (Project Appraisal Document and Project Information Document).

3.5.1.5 Category C

The project is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required.

Table 5 below shows a comparison between SL-EIA Requirements and the World Bank requirements on EIA.

Table 5: Comparison between GoSL and WB requirements on EIA

	WB Requirements	Sierra Leone EPA requirements	Proposal for compilation requirements
1.	The WB requirements on social and environmental safeguards policies are fully included in the ESIA process	The Social and Environmental Safeguard policies are partially included in the EIA process, and in most cases, are not required to be considered in detail in EIA studies	Include the request for safeguard studies in the TOR once the classification of the project is determined. Agree for social and environmental safeguard requirements from the scoping stage (agreement between WB and TIDU)
2.	WB Category B project has potential environmental impacts on human populations or environmentally important areas, which are less adverse than those of category A	SL category B implies a screening assessment 'Form B' which defines that a project has moderate environmental impact.	TIDU/Safeguard Officer need to consult with EPA-SL to ensure the proper categorization of the proposed project Once the project Category is nationally determined, there should be an agreement among all parties on the formal used for obtaining no objections from both the World Bank and EPA-SL
3.	Environmental Management Plans are required as part of the ESIA instruments used in cases of category B projects such as this one.	Sierra Leones legislation does not consider the EMP as a separate study, but only as a chapter of ESIA	The ESMP should be included in the Contracts of all contractors or contractors are required to develop a CESMP and budgeted for as well as incorporated in the implementation arrangements right from the bidding stage
4.	Developing of screening procedures in respect with WB plan	In case the project is not included in the ESIA indicative lists in the EPA Act 2008 (as amended in 2010), consultation with EPA-SL is undertaken using the criteria	TIDU sets up a meeting with EPA representatives and WB and agree on the way forward concerning EIA requirements and Project classification. An agreement should be reached with both EPA

		described in the ESIA Guidelines identifying the category of the project. The Bank safeguard policies remain when there is discrepancy in project EA classification.	and the World Bank to avoid duplication of work.
5.	Scoping is part of the early feasibility stage	Scoping is carried out during the first phase of a full-blown EIA or in the preliminary phase	TIDU to define responsibilities, time frame, project technical data, project stages etc.
6.	Social safeguard policies OP 4.12 are not part of the ESIA process	Social safeguard policies are not properly developed	The social safeguard policies developed by the WB will be adopted in this project. A standalone RPF document will be prepared to comply with the WB requirements
7.	Invitation to the preparation of EIA	Only registered consulting firms and individual consults are entitled to prepare the EIA studies	No action required
8.	Public disclosure needs a public hearing to be announced at least 1-2 weeks in advance	Public hearing is required mainly for Category C projects and should be announced 2 weeks in advance	Arrangements for the Public hearing and hold consultations that are meaningful in terms of stakeholder's participation and engagement should be agreed upon between TIDU and EPA-SL

4.0 DESCRIPTION OF ENVIRONMENTAL AND SOCIOECONOMIC BASELINE CONDITIONS

4.1 Country Context

Sierra Leone is located in West Africa and bounded by Guinea to the north and west, Liberia to the southeast, and the Atlantic Ocean to the west. Freetown, the country's capital city, is a densely populated, congested city situated on a peninsula surrounded by the Atlantic Ocean and the estuary of the Sierra Leone River. Freetown has an increasing population and a growing economy. The national population increased by 42 percent from 2004 to 2015, from approximately five million to 7.1 million. The urbanization rate nearly doubled from 21 percent in 1967 to 40 percent in 2015. The period from 1993 to 2002, during the devastating civil war, experienced an urbanization growth of six percent per year, prompted by the migration of Sierra Leoneans to urban areas to escape insecurity and poverty. Freetown represented a particularly attractive destination for internal migration, but providing employment, housing and services to migrants was a challenge. Like the rest of the country, it is recovering from many years of adversity. Despite favorable geography, a hospitable climate, abundant mineral and forestry resources, fresh water, and arable land, Sierra Leone remains one of the world's poorest countries. Its gross national income per capita is US\$490 (2016) and its national poverty rate is 52 percent.

Sierra Leone's economy experienced steady pro-poor growth averaging 5.6% from 2002 to 2014 when two major shocks hit. For example, the iron ore price dropped drastically reducing its contribution to the Sierra Leone's economy by 96% between 2014 and 2015. In the same year, the collapse of international commodities prices and the outbreak of Ebola led to reduction of 85.3% of the mining sector. The two shocks resulted in a 20 percent reduction in Sierra Leone's 2015 GDP. The country recorded more than 14,000 Ebola cases and nearly 4,000 Ebola deaths and also had a major impact on the country's economy. In 2016, Sierra Leone's GDP comprised of the following sectors: 60.9% agriculture, 2.7% mining and quarrying, and 1.9% manufacturing, 33.3% services (domestic authorities' data compiled by the AfDB, 2017)¹. Overall inequality fell between 2003 and 2011, with the Gini coefficient declining from 0.39 to 0.32 over the period. Income per capita rose dramatically from US\$157 in 2000 to US\$794 in 2014, and the national poverty rate declined from 66.4 percent in 2003 to 53.8 percent in 2011. Economic growths were driven mainly by agriculture, but natural resource extraction and, particularly, iron ore mining, were major contributors to growth. Between 2001 and 2014, agriculture grew by an average of eight percent per year, contributing nearly 50 percent to the total increase in the real gross domestic product (GDP) over this period.

Sierra Leone was declared Ebola free in 2016 and its economy has begun to recover, although a range of factors continue to limit economic growth and employment opportunities. Overall, real GDP growth was estimated at 6.1 percent in 2016, spurred by an increase in household

¹ There is also 1% construction and 0.2% electricity, gas, water.

consumption, growth in agriculture, and a resumption of iron-ore exports. The recovery started earlier in the primary and service sectors. However, growth in the industry, which is dominated by iron-ore mining, was subdued by continued low commodity prices. Economic growth is limited by lack of access to financial capital, underdevelopment of human capital, persistently weak government capacity and poor governance, and severe infrastructure gaps, particularly in energy and transport. The African Development Bank ranked Sierra Leone 46 out of 54 countries in its Infrastructure Development Index.² Only about 10 percent of the population has access to electricity, and 95 percent of those with access to electricity are located in Freetown.

Land administration in Sierra Leone is governed by a dual system of law, dispersed in about twenty statutes and regulations.

- In the Western Area of Sierra Leone, land tenure is governed by Property Statutes. Land is either State (publicly) owned or privately owned. The right of the state to public land is inalienable and indefeasible. Rights of occupation over public land may be granted under warrant. The state has the power, conferred by the Unoccupied Lands Act, Cap 117, to take possession of unoccupied land.
- In the provinces, customary Law co-exists with statute. The recognition of the force of customary law in the provinces is established by section 76 (1) of the Courts Act 1965.
- Through customary law, ownership of land is vested in the chiefdoms and communities; and can never be owned freehold. Land always belongs to the communities under the different forms of tenure under customary law. This principle is established by the Chiefdom Councils Act as well as by Section 28 (d) of the Local Government Act 2004.

The basic modes of overseas and foreign transport in Sierra Leone are the maritime and the air transport, while the major inland mode is the road transport, with 95% of freight and passenger travels. The location of Sierra Leone in the Atlantic Coast provides a good maritime communication between the country and other countries in Africa and Europe. The main port in Sierra Leone is located in Freetown but there are two other ports around the Sierra Leonean coast, and in some cases they are managed directly by mining companies to facilitate trade exchange. The port in Freetown is managed by the Sierra Leone Ports Authority, an autonomous public corporation created in 1964. The port is located in a natural harbor which permits a draft of 10 meters. In addition, there are about 400km of shallow but navigable river stretches, although regular river transport is very limited.

The major international airport of Sierra Leone is located in Lungi, which is about 10km from Freetown. Freetown International Airport carries with regular and commercial flights of the country. There are another two airports located to Hastings and Waterloo, and more heliports around the country. The road transport is the most relevant transport in Sierra Leone with 11,555 km of public roads. Road sector is responsible of the major national trade and it is operated almost entirely by the private sector mainly by individuals and small companies. Freight transport is

² The infrastructure development index methodology is explained in “The Africa Infrastructure Development Index (AIDI), May 2013.”

essential to connect rural areas to the markets of the cities and abroad. There is free entry to the transport market because of the minimal registration and licensing requirement.

4.2 Physical and biological environment of the project area

The project will be carried out in Freetown (Western Area Urban).

4.2.1 Climate

The country lies in the hot humid area of West Africa with wet and dry seasons. The mean annual temperature is 26⁰C ranging from a minimum of 22⁰C in August to a maximum of 35⁰C in February. Freetown experiences a tropical climate, with a rainy season from May to October and a hot dry season from November to April. Freetown has an average annual precipitation of more than 3500 mm. It receives the highest amount of rainfall in the country due to its proximity to the Peninsula Mountains and Atlantic Ocean. The annual average minimum temperature for Freetown is around 23.8 °C, while the average maximum temperature is 29.9 °C. In the project area, relative humidity level in the mornings is typically between 78.1 – 91.1% and in the afternoons between 62.4 and 82.8%, with low values occurring between January and March.

4.2.2 Topography and soil

The topography of Freetown, a peninsula constrained between the sea and the hills, limits the spatial expansion of the city, forcing low-income groups to settle mostly on marginal lands. Freetown has a total land area of 357 km² with a coastline of about 40km. Yet within this land space there exists two distinctive topographic zone that have considerably influenced growth and vulnerability which climate change will accentuate. Freetown's landscape is typically mountainous alongside a coastal line, which limits the spatial expansion of the city, forcing low-income groups to settle mostly on marginal lands. The city has developed into two zones. The first zone, which comprises both the city's coastline and its low-lying areas, has developed on raised beaches. These raised beaches which characterize much of the city's landscape, are generally very narrow, rising from the fringes of the Atlantic Ocean in the west to heights of between 140 to 160 feet eastward (Gleave, 1997: 251). The zone, which extends inland for some 5km in certain places, is characterized by a range of depositional features that have resulted in massive erosional activities associated with the Peninsula Mountains (Gregory 1962: 15).

The second zone is intermittently very undulating, consisting mainly of low hills and a chain of higher ground that corresponds with the peninsula. Towards its far end, the land rises sharply leading into a long and narrow peninsula with heights of over 800 meters. The topography/location of Freetown with these two zones, that is, Atlantic Ocean and the extensive Freetown Peninsula Mountain, has thus been the principal determinant of the generally east-west direction of growth of the city from the original settlement established in the central lowland areas in the west and central, and around the port in the east (Johnson nd). This has served as an impediment to its growth (outward expansion), since as a result of this topography, most development have tended to concentrate in the low-lying areas. In these settlements, flooding, rock-falls, building collapse,

and landslides are common phenomena, which result in significant economic and other losses such as the destruction of property and infrastructure.

The Freetown Peninsula has coastal plain formation near west periphery and mountainous formation in the southeast portion. Coastal plain area is formed with yellow-brown sandy soil. Uplifted coastal terraces are formed with shallow soils over laterite sheet. Mountainous portion has dissected hills formed on early Mesozoic gabbro. Shallow soil layer is formed over it with pockets of deeper loams to clays.

4.2.3 Geology

The geological characteristics, including description of the lithological units exposed in Freetown, about 75% of the country is underlain by rocks of Precambrian age, with a coastal strip of about 50 km in width comprising marine and estuarine sediments of Tertiary and Quaternary to recent age. Freetown consists of specific igneous rocks with minerals that have been eroded or weathered by frequent rainfall and high humidity. The Freetown igneous complex is a basic layered complex that forms an intrusive body on the coast. It is composed of gabbro, norite, troctolite and anorthosite. Platinum occurs in the gravels of the streams that drain the complex. The linkage between the weathering process and the types of geology that forms Freetown and their relation to the recent landslide events.

In the project area, the Ferry Terminal project sites, lie within the Bullom sediments occupying the low-lying coastal plain of Sierra Leone. These sediments extend up to 50 km inland. The areas consist of a laterally variable sequence of poorly consolidated, near horizontal, often iron-stained gravels, sands and clays with occasional intraformational laterites and lenticular seams of lignite. The literature suggests that the Ferry terminal sites has a muddy recent marine deposits, of limited thicknesses, lateritic material (sandy to clayey) with variable thickness, from a few metres to more than 15m, old marine deposits (down to elevations of – 30 to – 35 at the existing terminal area). There is also organic soil in some areas.

4.2.4 Geomorphology

About two-thirds of Sierra Leone comprise of a series of highly-dissected plains and plateau out of which rise a number of mountain ranges and massifs. The plains and plateau are aged erosion surfaces with generally accordant summits. Much of the landscape is outlined by numerous narrow, dendritic stream valleys which have been deposited by alluvial and colluvium material to form seasonally flooded swamps. In general, the geomorphology of Sierra Leone consists of the following geomorphological classes:

1. Coastal terraces, consist of estuarine swamps, alluvial plains, and beach ridges
2. Interior plains, which consist of undulating plains, bolilands.
3. Plateau, including undulating high-lying plains, rolling plains and hills
4. Highlands, including hills on basic and ultrabasic rocks and hills on acid rocks.

Freetown municipality is located in a hilly region at the foot of mountains. The rivers and creeks that originate at the mountains and hills flow through the heart of the city into the Atlantic Ocean

and the Sierra Leone River Estuary. Most of the urban developments have occurred and still occurring on the lower parts of the hills near the coast.

Freetown is surrounded by different types of coast: the western coastal fringe is characterized by long sandy beaches consisting mostly of steep slope and facing directly on to the Atlantic Ocean. The central northern coast area is rocky with a series of small bays. The small embayment along the northern shores is shallow with muddy shores and rocky headlands once covered by mangrove. The southeastern coastal zone is relatively straight with mudflats and mangrove vegetation for much of its length. These coastal zones are the main outfalls for the city's drainage system.

The peninsula hills south of Freetown rise steeply to heights of between 1,000 and 1,500 m above mean sea level and continue southwards as a once-protected forest highland and are now threatened by encroachment of uncontrolled urban developments. These developments have caused significant increase in storm water runoff and erosion resulting in pronounced changes in natural channels. Furthermore, the cutting down of forests on the hillsides is causing soil erosion and increased landslides and flooding in the City.

In the project area, the new transit market and car park project area in Lumley is drained by a seasonal stream which originates from the peninsula mountain. This stream empties into the Atlantic Ocean through a floodplain and tidal flats. The drainage system around the project site is not properly constructed and there is frequent flooding exacerbated by scattered structures which obstruct the free flow of excess water. The main drainage structure is an earth channel with a 12m footbridge across it. There are some minor tributaries to the main drainage channel.

There is no defined drainage at the existing market site except the drainages along the Lumley Juba main road. The market area close to Lumley Bridge is not suitable for the building of any structure as originally envisaged due to its exposure to natural flooding events, potential increase in pollution of the Juba stream and the safety concerns due to proximity to the proposed road expansion works. Also, the site is exposed to flooding, and a sizable portion of it is used as an active solid waste dump site. Seepage from the site could pollute the Lumley creek downstream in the event of severe rainfall.

Preliminary studies by Sawaneh Associates (2018) shows that the existing drains at the Lumley and Congo Cross intersections are mainly covered u-drains with curb-opening inlets. At the Ferry Junction Intersection, the side drains are mainly a combination of covered u-drains and opened concrete lined trapezoidal drains. The drainage structure within the project area for the transit market and car park at Lumley is an earth channel with a 12m footbridge across it. There are some minor tributaries to the main drainage channel.

4.2.5 Land use

Freetown is sited on the Southern Bank of the estuary of the Sierra Leone River. The city lies on sloping ground at the foot of a range of hills. The lack of adequate planning and development control over the years, as well as constraints to development posed by conflict (1991-2002) has led to rather inefficient land use. The residential settlements are expanding on the coastal lowlands

with increasing encroachment on the hill slopes. Generally, conditions of housing in the central parts of the city have deteriorated due to overcrowding in the low income areas. Commercial activities are concentrated in the central business district and development of shops. Offices and workshops are expanding along the roads leading to the city centre. Industrial activities, on the other hand, are concentrated in the eastern part of the city.

In the project area, for instance, Kissi Ferry Terminal has mix-use developed community which comprises of residential, commercial, cultural, and institutional and entertainment facilities. Ferry terminal forms one of the main intersections that provides access to the Kissi Ferry Terminal for services to Tagrin.

4.2.6 Ecology

The ecology within the various project areas has been greatly modified by human activities, including housing, road construction and human presence. There is sparse plant cover in these area, with 30 species of vascular plants including stands of old fruit trees in private premises. Some of the remnants of the original vegetation in these areas prior to the urban development the area has experienced.

The Lumley transit market and car park lies in a part of Freetown where the mountain range is within two to three kilometres of the Atlantic coast and less than 1 km to the Lumley Beach. A stream with few streamlets, which mainly drains from the mountain range, runs along the northern edge of the site and empties into the Aberdeen Creek. The ecology of the creek has been degraded by indiscriminate deforestation of the mangrove, primarily housing and fuelwood.

At Congo Cross, species such as bread fruit, cocoa tree and coconut were noted. Some of the private residences also exotic ornamental plants, flowers and grasses mainly beautification and boundary demarcation for their private properties. No significant vegetation presence observed along the road, except for the herbs, flowers and grasses used for decorating the islands along the main road and the roundabout itself.

At Ferry Junction, there is very little vegetation cover in the immediate surroundings, except for few stands of planted trees such as mango and some species of ornamental flowers. Much of the land space is covered in asphalt and concrete and the roadsides and neighbourhood are dominated by business facilities such as shops, stores and car parks. The faunal diversity is insignificant and is obviously a consequence of the high degree of depleted vegetation, necessitated by the development of infrastructure. No major stream traverses the area, but the Granville Brook is within 300 metres of the junction, into which the constructed drainage system along the road empties.

4.3 Socioeconomic Environment

4.3.1 Demography and economy

The population of the Western Region, which comprises Freetown and its environs, increased by 57 percent, from under 950,000 to nearly 1.055, 964 million (approximately 21.1% of the total population), from 2004 to 2015.³ Faced with this growth, Freetown has been unable to create adequate housing, infrastructure, and service provision to keep pace with population growth. Yet the vast proportion of this growth comes from unplanned development of informal settlements that have sprouted along the hill slope areas, and on the shorelines of the Atlantic (Synder et al., 2014; van de Vijver et al., 2015; UNOCHA, 2015 cited in Howard, 2016). Urban growth has brought an inadequate and inefficient infrastructure within the city resulting in environmental degradation

Much of the Freetown's growth has been termed 'peri-urban sprawl', that is, growth which creates spaces of significant opportunity and connection between the urban and rural area but nonetheless remains compounded by inadequate access to safe water, inadequate access to sanitation and underdeveloped transportation infrastructure and services, multi-hazards of poor waste management, poor structural quality of housing, they are also overcrowded and shows an insecure residential status, challenging topography, as well as other constraints (Africa Research Institute, 2015; Waldman, 2015). Already, the overcrowded settlements that have developed outside any planning approval system are among the most hazard-prone areas of Freetown.

4.3.2 Urban poverty

The Sierra Leone Integrated Household Survey estimate that poverty rate in Freetown has increased from 13.6% to 20.7% between 2003 and 2011. Despite the increase in poverty in Freetown, 'urban poverty as a whole declined from 47% in 2003 to 31% in 2011' (World Bank, 2016:12). District level poverty analysis also shows that most districts had converged to poverty levels between 50 and 60% with the exceptions being Freetown at 20.7% and 64% of households in the top two quintiles were found in the Western Urban Areas (SLIHS, 2011). The increase in poverty level in the western region is driven by a large number of economic migrants, moving to the capital city of Freetown seeking employment, which reflects the anemic growth of the formal manufacturing and services sectors, are among the key causes of this increase in the poverty rate. Jobs are scarce and those that are available are low-skilled and low-paying. The increase could be attributed to the fact that Freetown is a stronger and more attractive pull centre compared to other urban areas and so is characterized by inward migration (World Bank and Statistics Sierra Leone, 2013).

4.3.3 Urban labour force

In the urban areas of Sierra Leone, about 70% of the population is self-employed and largely engaged in petty trading, in the informal sector. Many of the women, and men, involved in informal trading do so on a survival consumption basis, to sustain the welfare and basic consumption of

³ Sierra Leone 2015 Population and Housing Census Provisional Results. Statistics Sierra Leone, March 2016.

their households. While there is no data on the proportion of Freetown's economy that is informal, in Sierra Leone more generally, the informal sector accounts for about 70% of the labor force (GoSL, 2015). Freetown has the lowest employment rate (84.7% of the labor force). The formal sector is less well developed, and an opportunity to transition from the informal to formal sector is poorly documented. Majority of inhabitants of informal settlements also work within the informal labor market. Formal employment in Freetown is limited; informal employment, often in petty trading, has become a default livelihood for migrants

Wide gender disparities exist in terms of employment opportunities, with 35% of all women working as unpaid family or domestic workers, compared with just 12% of men. More men have access to paid jobs, while women tend to occupy less well-remunerated enterprises within the informal sector. In the urban slum setting in Freetown, mostly along the coastline, cross-border trade is an important source of livelihood support, with 63% of urban women engaged in informal economic activities, mostly petty trading and farming (Howard, 2016). These disparities result from cultural and social barriers that discriminate against women's full socioeconomic participation (African Development Bank, 2016). Youth un(der)employment also remains a major concern, and even for those who are fortunate enough to secure paid work, this gives little relief from poverty.

In the Ferry terminal area, employment is available in the ports and marine sector, which have dry dock facilities at Kissy where the Ferry Terminal provides the principal ferry linkage for passenger, goods and services with the Kaffu Bullom area and with Lungi International Airport across the Sierra Leone River. The Sierra Leone Roads Authority, which has its headquarters in the area, contributes to employment possibilities.

Apart from employment in commerce in Lumley centre, other employment opportunities are limited as there are no significant manufacturing entities in the area. Lumley has potential for the development of hospitality and entertainment industries as the area connects to the Lumley beach area. Artisanal workshops and car-repair garages are dotted around and some degree of market gardening is undertaken in the flood plains of the seasonal streams. Extensive stone quarrying is being carried out at a subsistence level.

4.3.4 Roads and transportation

Urban roads and streets in Freetown have deteriorated their condition in the past years. The standard in which the city grid was created does not meet the urban needs anymore. The demand for road space has increased dramatically in Freetown during the last twenty years, with consequent traffic problems caused by the high presence of street traders and pedestrians, poor traffic management, maintenance. In Freetown the urban road network is divided in three categories: main roads, feeder roads and lanes. The Road Authority executes construction and rehabilitation works of roads with the city of Freetown, while other city/urban streets are in charge of Freetown City Council.

The transport in Freetown depends considerably on mechanized transport, both public and private. The informal sector has by far the largest share of the market, but it is disorganized and delivers an expensive and poor quality of service for citizens. The use of collective transport is the most common form of personal transport. Traffic congestion in Freetown has increased with the rapid growing population and number of vehicles, degradation of the roads, street parking, street trading, and inefficient traffic management. Conditions for pedestrians are poor with blocked walkways and damaged or non-existing pavements. The existing problems of traffic congestion and inefficient public transport will become more serious if no action is taken to reverse present trends.

The roads in the Lumley area has a poor, skeletal tertiary road system. The relatively steep terrain in the north and north-east of this service centre does not offer the opportune linkage with Spur road, which is a significant trunk road north of this service centre.

4.3.5 Road safety

Freetown has the relative highest number of traffic accidents in the country. Around 70 people are being killed a year in traffic accidents and around 300 seriously injured. The most frequent reasons for the accidents are; no safety audits for road construction schemes, the poor and unsafe condition of many vehicles, as well as poor enforcement of traffic regulations and rules. Reporting and analysis of accident statistics is weak. Okadas (motorbike taxis), present special challenges as they travel at speeds greater than the average traffic, they are many, and they frequently ignore the traffic rules. However, traffic culture in Freetown seems evolved with much care taken and consideration given towards the other road users. The inner city could, in the future, be considered a special circulation area where all sorts of traffic could mix while taking care of the weakest actor.

The western part of Freetown is the best served, and the secondary and tertiary road system is, with improved functionality, considered to be more or less defined and functional. However, the parking problem remains and the traffic flow is troublesome at Congo Cross roundabout and the other road junctions along Wilkinson Road.

4.3.6 Health

Health facilities within Freetown are presented in Table 6 below.

Table 6: Distribution of Health facilities within Freetown

Category of Health Facilities	CHC	CHP	MCHP	Clinic	Hospital
Government	20	10	15	7	12
Mission	-	-	-	11	2
Private	-	-	-	23	2
NGOs	-	-	-	3	-
TOTAL	20	10	15	44	16

Source: Freetown Structure Plan, 2014

4.3.7 Access to basic infrastructure

Freetown has no central sewage treatment plant. At the household level, 60 percent of the city's total population uses pit latrines, and over 30% rely on septic tanks. Untreated sewage flows into the sea and other water bodies across the city to the sea. Poor access to water and sanitation and the use of streams and rivers as outlets for sewage and solid waste disposal are aggravated by overcrowded living conditions in informal settlements. These factors together with a high reliance on pit latrines have all increased the incidence of waterborne diseases across the city (Blinker, 2006).

In 2012 alone, flooding led to a cholera outbreak that killed 250 people. Furthermore, the discharge of leachates from open dumps to surface waters exposes down-gradient residents to disease organisms in their bathing, food irrigation, and drinking water supplies, as well as through eating (contaminated) food and fish,

Solid waste management in Freetown is poor and this situation leads to multiple hazards. Before the civil war, the city had in place a solid waste collection system, established through a bilateral agreement with the German Government. The German team left at the end of the assignment in 1995, and the contract for the local private sectors refuse collectors lapsed after the coup. Waste management in Freetown has been under various organizations, both public and private. Unfortunately, each change further deteriorated the system, bringing it on the verge of collapse. The Freetown Waste Management Company (FWMC), the current authority, is struggling to manage the wastes under tight budgets, limited trained but inexperienced manpower, and little or no legislative authority and experience in waste management.

Total quantities of wastes generated and characteristics of the Freetown's waste streams are not known but estimates indicate that over 85% of the city's refuse is largely vegetable, biodegradable organic waste. Poorly collected, it is subject to quick putrefaction which in turn contributes to various health hazards. In addition, the critical conditions of the city's SWM system also contribute to floods as waste blocks canals and storm drains *creating breeding sites for malaria* and also to fire outbreaks, as people often resort to waste incineration across the city.

Lumley Centre is the largest transport hub in the western part of the municipality and offers similar services as the PZ area in the centre of the city. A significant commercial, market and banking area is developing around Lumley centre with banks, a police station, whole sale and retail shops, a local market, and a transport interchange terminal all accessible within a 0.5km distance of each other. There is a challenging low level of water and electricity services, concentrated mainly in the Northern and Western Part of the Lumley. Facilities such as schools, vocational centres, recreation and community centres, churches and mosque are present, but concentrated in the West and North. There are two cemeteries. Except for Lumley hospital, there are only a few health facilities available within the catchment of this service centre.

The Kissi Ferry Terminal is easily accessible from the primary Bai Bureh Road and links to Lungi and the airport within a ferry service. The vicinity of the ferry terminal serves as a transport intersection serving the municipality. Furthermore, the area has port facilities and jetties and public transport facilities are good. Water supply lines and electricity gridline facilities are available in the lower part of the area, although maintenance is a problem and urban health and sanitation infrastructure is poor. There is a range of education institutions including vocational training centres, which will also in the future provide possibilities for the location of new needed education and health infrastructure, facilities such as health, recreation, playing fields and community centres are available within the area as well as places of worship and cemeteries. The housing areas are dense along the Bai Bureh Road and in the Kissy Housing Estate but less dense as the housing climbs up the steep hillsides.

5.0 PROJECT ENVIRONMENTAL AND SOCIAL RISKS, POTENTIAL IMPACTS AND MITIGATION APPROACH

5.1 Introduction

This section details out the potential environmental and social impacts of the project funded by World Bank under the Integrated and Resilient Urban Mobility Project. The environmental and social impacts of the IRUMP, for most part, are expected to be moderate, site specific, and easily manageable through the implementation of mitigation measures to an acceptable level.

Below is a list of activities and issues which may give rise to negative impacts on the environment, social groups and cultural properties supported under similar projects. To ensure these are identified and mitigated or avoided as early as possible, potential adverse impacts at the subproject construction/rehabilitation/restoration phase and during operations and maintenance phase must be considered in the process of the subproject preparation and later implementation.

During project Implementation, project activities will have adverse social impacts. Adverse social impacts in accordance with OP/BP/4.12 refer to relocation or loss of shelter, loss of assets or access to assets and loss of income sources or means of livelihood. Such impacts are most likely to affect the families and businesses that may have to be permanently relocated from the location for example, near or on the Lumley Circle (intersection of Lumley Beach Road and Wilkinson Road), Congo Cross / Signal Hill Road and Ferry Terminal / Bai Bureh Road. Adverse social impacts are also likely to come upon families who may be relocated from near these areas and who currently enjoy easy access to livelihood from small vending and other commercial activities.

A list of activities and issues which may give rise to adverse impacts on the environment, social groups and properties is presented below.

Component 1. Enhancing transport services

- Improve ancillary facilities to support operation of buses (integrated ticketing, bus priority measures, control centre, information system, etc.)
- bus stop, depot, terminal
- technical assistance to support the transition of informal private sector operator in a formal and regulated provision of transport service along priority corridors.
- Technical assistance to prepare plans for school buses
- Technical assistance to design apps for on-demand services

Component 2: improvement of road corridors

- Rehabilitation of existing ground conditions, flood prevention, resettlement of existing traders/residents, vehicle access arrangements
- Formalizing pedestrian footways
- Improvement of intersections
- Improve traffic management
- Improve signalization
- Road rehabilitation
- Re-planning of traffic routes

- Improvement of bus terminals/ on-street parking
- Improving road safety
- Relocation of existing street trader
- Improve pedestrian circulation
- Construction of market
- Improvement/rehabilitation of access roads
- Management of road-space following relocation
- Constructing a permanent transit loading and parking area

Component 3: Institutional Capacity Building and Studies.

- Formulation of the National Urban transport policy and strategy for the country
- Training of urban transport stakeholders
- Twining of local universities
- Road safety database in place
- Road maintenance database in place
- Number of climate-resilient activities supported
- Establishing an institutional framework for land use and transport integration
- Establish improved framework for public transport operations, including for SLRTC
- Enhance competences of FCC

5.2 Potential Impacts

The potential environmental and social impacts likely to arise as a result of the IRUM Project were identified by matching the project activities with the surrounding environmental and socio-cultural resources. This section presents both the likely positive and negative impacts that can arise from the activities of the project.

Information regarding the social, cultural, natural and coastal resources, etc., was sourced from related literature, visits to the project site and consultation with relevant stakeholders.

To ensure these are identified and mitigated or avoided as early as possible, these potential adverse impacts must be considered in the process of the subproject preparation and later implementation. These are presented below for ease of reference and further action by MoTA. A list of potential adverse environmental, social and cultural heritage impacts that subprojects under the project may trigger. Discussed below is potential beneficial and negative impact that could be associated with the proposed IRUM.

5.2.1 Potential Project Benefits

The potential benefits include improved transport conditions for the city of Freetown, the population of the city, and transporters from the outskirts of the city centre such as:

- Improved access to social facilities (education and health), business and transport facilities.
- Reduced number of road accidents; and
- Increased value added for land located along the upgraded roads.
- Improvement of key intersections

- Higher traffic carrying capacity on already dual carriageways
- Improved traffic flow arising from better roads signalled junctions
- Reduced travel time and cost benefiting the motoring public
- Impacts on employment creation
- Aesthetic city and smarter junctions
- Jobs and contracts to implementation contractors
- Improved service delivery (Ferry services); and
- Reduction in vessel turnaround time

5.2.1.1 Gender-specific benefits

The IRUMP will benefit women by providing improved access to market facilities. Mobility will considerably increase while more efficient road transportation systems will be in place. Women, in specific, may therefore get into a better position to get involved in various programmes. Corridor improvement will thus contribute to women's empowerment and facilitate their struggle in escaping widespread discrimination and economic disadvantages.

5.2.2 Potential Negative Social and Economic Impact associated with IRUMP

Though it is envisaged that subprojects will involve very generic social issues that are manageable, there might be some subproject activities proposed in due course, that may carry a higher social risk and/or disruptions and/or impacts. The possibility of such issues arising in the subprojects sites will be identified during the subproject screening process.

For the construction/rehabilitation phase, the main potential social issues are:

- Loss of livelihood or sources of livelihood: There may be negative economic impacts on small businesses and individuals informally working in the project area to be rehabilitated. Vendors or small businesses removed or displaced from their original locations may be unable to return to these once they have been rehabilitated, thus facing significant loss of income.
- Loss of private land: Little or no private land taking is foreseen under this project
- Relocation of structures: Structures, such as street vendor stalls, may need to be moved or relocated in order to rehabilitate the road corridor. Removal/displacement of vendor stalls or small businesses may have adverse impacts with regards to security of said vendors. This can especially impact women vendors or small business owners; and
- Loss of and/or access to public, common and/ or private property: Fences may need to be erected to protect current public grounds, and they could block access to people's lands or assets Vendor stalls may need to be moved to be outside or inside the fence.
- An increase of GBV and SEA risk: The project will bring job opportunities to the local community and potentially increase their purchasing power, exacerbating, at the same time, income differences. The already present risks for women and girls could be aggravated.
- Inconvenience and nuisance during construction: It is expected that the construction work will result in some temporal traffic obstruction that may result in impacts like increasing commuting time and creating inconvenience to road users.

5.2.3 Negative Environmental Impacts

Generally, the type of civil works anticipated under the project will involve:

- Demolition and new construction; provision of basic services;
- Rehabilitation, restoration and/or maintenance of existing infrastructure construction of new or extended facilities on existing land signage and interpretation; and
- Public amenities (Public utilities that may be affected due to the construction of the project road include overhead electricity poles underground cables and water supply lines

Preliminary impact identification shows the possibility of the occurrence of the following negative impacts associated with the projects. Table 7 provides a summary of potential negative impacts.

Table 7: Preliminary identification of Potential Impacts during construction

Activity	Potential negative impacts	Significance	Remarks
Road corridor improvements	<ul style="list-style-type: none"> • Occupational safety and health risk to workers • Temporary/permanent land acquisition (specifically for road improvements/park and construction of markets) or to livelihoods of self-employed persons operating at the sites • Temporary disturbance or no access to site during construction works • Dust, debris during construction may affect nearby residents. • Restricted or limited access and road detours during civil works • Traffic and community safety issues • Clearing or impingement upon wetland habitat for construction of market and parking lots • Incompatibility of selected design with community wishes 	<ul style="list-style-type: none"> • Potentially significant and long-term in both construction and operation 	<ul style="list-style-type: none"> • Typical civil works impacts can be addressed through standard measures • Any potential land acquisition is anticipated to be discrete and can be readily mitigated by the use of standard measures. • Any potential land acquisition and/or economic displacement is expected to be temporary and discrete • Issues of accessibility and land acquisition/economic displacement can be mitigated using standard social safeguards instruments and measures • Wetland habitat concerns require a detailed assessment and management plan

	<ul style="list-style-type: none"> • Displacement of market women from their original place trading • Temporary increase of waste generation • Risk to traffic and pedestrians • Compatibility with flood control schemes • Noise, dust, vibration, spills, air pollution • Ensuring accessibility for physically disabled individuals via the installation of ramps and other measures as necessary, at sub-project sites undergoing infrastructure construction and upgrading 		
Ferry terminals	<ul style="list-style-type: none"> • Turbidity or other damage and modification to marine environment • Temporary/permanent land acquisition • Increase marine traffic safety and pollution issues • Poor fuelling, waste or other operation practices • Temporary interruptions to livelihood practices and businesses in the project areas • Temporary increase of waste generation • Unavailability of ferry terminal areas during construction works • Modification to marine environment 	<ul style="list-style-type: none"> • Moderately significant and long-term 	<ul style="list-style-type: none"> • Natural habitat concerns may be relevant and require additional assessment • Typical civil works impacts can be addressed through standard measures • Any potential land acquisition is expected to be discrete and can be readily mitigated using standard measures

5.3 Cumulative/secondary impacts

Since all the sites are located in urban areas already developed, additional impacts are expected to be minimal. Improvements in road corridors, transit sites, and signalization could lead to urban re-development rather than new development. Secondary impacts of traffic from road corridors and diverted traffic from road crossing closures are expected to be minimal since traffic volumes on surrounding streets are low and can absorb added traffic without degradation of operations.

5.4 Potential Impacts of the IRUMP Project – Road Corridor Improvements

During the construction/rehabilitation/operation phase, the general environmental issues are:

5.4.1 Dust/Air Quality

Impacts during construction and operation phase

Materials supply including environmental compliance of suppliers dust, and material spillage/loss during transport, delivery and storage: Construction works will result in emissions of fugitive dust and products of combustion. Dust emissions would result from loading and unloading of trucks, excavation and grading. Dust generated would be a function of construction activities vehicle traffic and vehicle type. Fugitive emissions would be greater during dry season.

The operation phase of the road corridor improvement could cause noise impact at some sensitive receptors due to higher speed of buses, okada, etc. However, since the intended road corridor is already operating in high density traffic areas which are characterized by high noise levels, it is not anticipated that the operation of the road corridors will contribute significantly to the increase in the current noise levels.

5.4.1.1 Mitigation measures

At present there is no noise baseline data developed at the Lumley – Congo Cross corridor improvements. However, the following impacts and mitigation measures can be generally utilized. These impacts will be mitigated by employing the following measures:

- Covering trucks to minimize particulate emission
- Minimizing drop heights from vehicles
- Limiting vehicle speed during construction.
- Employing dust suppression technique such as applying water;
- Avoiding open burning of wastes at the construction site;
- Provision of latest engines characterized by low noise emissions
- Consider installation of sound barriers especially near to sensitive receptors (subject to availability of funds); and
- Consider planting trees which are characterized by having the ability to absorb noise (subject to availability of water networks).

Implementation of the mitigation measures will result in minor impacts (low severity, medium likelihood).

5.4.2 Noise

Impacts of noise during construction phase

The construction activities might cause a potential noise impact to the surrounding environment and receptors mainly due to:

- Noise emissions from the equipment engines using during the construction activities (removal of old pavements and old street items, re-pavement in some areas and
- Heavy traffic induced as a consequence of the on-site construction activities (movement of construction vehicles)

The road construction/rehabilitation activities will require the use of heavy machinery. Most of these construction activities will be intermittent and localized. However, these activities will contribute to sustained noise levels during equipment operation.

Construction activities will produce noise levels above the alert threshold of 86 decibels (dBA) from heavy-duty and earthmoving machines operation. Exposure to noise levels above the internationally accepted level of 90 dBA can cause noise induced hearing loss. Noise levels above the tolerable threshold of 72 decibels may result in tiredness and decreased production levels.

The road corridors will experience high density traffic areas where noise levels are generally high. The construction phase is considered temporary and its impacts are reversible once the construction activities are completed. Therefore, the noise impact generated by the road corridor improvements construction activities to the surrounding environment is to be considered minor reversible and on a local scale. The impact is generally low.

5.4.2.1 Mitigation measures

Noise impacts during construction will be mitigated by implementation of the following:

- Mandating that equipment be maintained to manufacturer's standards
- Installation of sound suppression devices (such as mufflers) on earthmoving equipment, generators etc.
- Avoiding unnecessary idling of vehicles and machinery that are used intermittently
- Employing best available work practices on-site to minimize occupational noise levels
- Provide noise protection equipment to employees
- Periodically monitoring noise levels to ensure compliance with recommended threshold levels;
- Posting visible warning signs in areas of high noise levels instructing employees to wear ear protection

Implementation of these measures would reduce the likelihood and impacts of noise occurrences. Noise impacts to receptors would as a result be minor (low severity; medium likelihood).

Impacts during the operation phase of the project

The operation phase of the road corridor improvement could cause noise impact at some sensitive receptors due to higher speed of buses, okada. Considering the above, the environmental impact on the noise component is assessed as low.

5.4.2.2 Mitigation Measures during the operational phase of the project

Mitigation measures include:

- Provision of latest engines characterized by low noise emissions
- Consider installation of sound barriers especially near to sensitive receptors (subject to availability of funds); and
- Consider planting trees which are characterized by having the ability to absorb noise (subject to availability of water networks).

5.4.3 Land use

Impacts during construction and operation phase of the project

The construction of the road corridor improvement will entail:

- Temporary occupation of land to set up the construction sites, and
- Storage of construction equipment, materials and wastes

During both construction and operation phases, land occupation is limited and temporary and in case of potential livelihoods impacts, this will be mitigated through the RPF (and subsequent RAP/ARAP as needed). Therefore, impacts connected with land occupation in terms of restrictions on the land use are considered negligible during the construction and the operation phase.

5.4.4 Soils

Impacts during construction and operation phase

Construction/rehabilitation at the project site could result in potential impacts to soil. Potential impacts could result from landscape grading, and re-contouring to ensure proper drainage, and other construction activities. Significant impacts to soils are expected to occur in steeply sloping areas and where the soils erosion potential is severe or very severe. Short-term impacts are expected to occur in areas where the soils have a severe or very severe erosion potential and where slopes are steep. These are moderate impacts (medium severity, medium likelihood).

5.4.4.1 Mitigation measures

The likelihood of soil erosion and sedimentation will be minimized or avoided by the implementation of the following mitigation measures:

- Implementation of best management practices in a Storm Water Management Plan for soil erosion, storm water runoff, and sedimentation control;
- Installation of channel control structures;
- Implementation of an Interim Reclamation Plan following clearance activities; and
- Implementation of a long-term Reclamation Plan for disturbed areas.

Implementation of these mitigation measures will result in minor impacts (low severity, low likelihood) on soil.

Soil contamination

Soil contamination may occur by accidental release of fuels, oils, grease and other hazardous materials from equipment and/or from the failure of fuel/hazardous material containment areas. The impact on both surface and subsoil is considered negligible (low severity, low likelihood).

5.4.4.2 Mitigation measures

The potential for accidental spills of fuels and other hazardous materials and associated soil contamination will be minimized or avoided by the implementation of a Spill Prevention and Contingency Plan (SPCP). Implementation of these mitigation measures would result in insignificant impacts (low severity, low likelihood) on soil during construction.

5.4.5 Traffic Flow

Impact during construction and operational phase of the project

The traffic volume due to construction activities could potentially increase overland traffic volume to the project site. The situation can be aggravated without carefully planned detours and road closures. The effect of traffic disruptions includes increased travel time, congestion, social stress and agitations and increased risk of accidents on the road. This is a moderate impact (medium severity, medium likelihood).

5.4.5.1 Mitigation measures

Appropriate mitigation measures like a well enforced traffic management plan will reduce the impact rating to minor (low severity, medium likelihood). Speed limits will be imposed for vehicles during construction activities. Use of signboards and other public information mechanisms to inform the public in advance of construction work, schedule closure or diversions etc. Construction equipment will be equipped with manufacturer specified equipment to minimize the likelihood of accidents on site roads. Traffic impacts during construction will therefore be minor (low severity, low likelihood).

5.4.6 Solid and Hazardous Wastes

As a guiding principle, where waste cannot be recovered or reused, the contractor will treat, destroy, or dispose of it in an environmentally friendly way that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material.

5.4.6.1 Waste impact assessment during the construction phase

The potential adverse impacts resulting from the generation of waste during the construction phase of the waste management process include:

- Temporary storage on the site area, and
- Management and disposal of wastes

The construction phase will be carried out through different activities as civil, mechanical, piping electrical etc. which in turn will generate volumes of waste with typology characteristic of the nature of each activity. In general, waste generated during construction phase shall be divided into:

- Construction waste, and
- Municipal solid waste

Solid construction waste typically includes concrete, asphalt, wood, plastic, glass, metals and other composite materials. The solid waste generated during construction of the bus corridors will either be recycled or sent to a transfer facility for disposal. For solid waste generated during construction to be recycled, it needs to be source separated at the construction site. The most efficient way to accomplish this separation is to make recycling containers available to all construction personnel (i.e. place such containers at all parts of the jobsite where work with recyclable materials is likely to occur) and make separation of materials mandatory for all workers. The re-use of on-site soil will be implemented to the greatest degree possible.

Hazardous waste potentially generated during construction activities includes asphalt, street lighting mercury lamps, fluorescent lamps containing mercury waste, paint canisters and remains and trash such as oil contaminated material, and similar. These materials should be segregated in appropriate, dedicated and sealed containers placed under a roofed and protected area. Furthermore, hazardous waste should be collected and treated by licensed contractors.

The Freetown City Council (FCC) will continue to pick up the municipal solid waste generated during the construction activities from the working site where it will be taken to transfer stations for eventual transport to landfills.

The potential adverse impacts resulting from the generation of waste during the construction phase may be summarized as follows:

- increasing of traffic to dispose of the waste at licensed landfills/dumpsites;
- possible contamination of groundwater or soil caused by an improper waste management; and
- Potential negative impact on community health.

Waste from construction sites, road works, related debris. Oil waste, medical waste, management of cut to spoil and stockpile materials from wetland areas etc. present a significant negative impact. The contractors will prepare decommissioning plan to be approved by EPA with clear provisions for site restoration.

5.4.6.2 Mitigation Options (Construction Phase)

Regarding the construction phase, in order to minimize the potential negative impact on the environment and community health the following environmental standards for waste management shall be adopted:

- waste storage facilities must be fenced on the perimeter, properly lighted and with access constraints for unauthorized people;
- all types of waste generated during the construction phase should be sorted into a number of waste streams (groups of wastes requiring common handling methods, i.e. re-use decontamination/processing, authorized disposal, etc.);
- Construction debris will not be allowed to accumulate so that it presents an EHS hazard for workers. This material will be removed to the solid waste disposal sites at the earliest opportunity and as the material is produced;
- no uncontrolled disposal of waste will be carried out during the construction phase, as all waste streams will be directed to proper treatment
- wastes will be temporarily stored in site and sent to an appropriate off-site disposal facility;
- Transporting vehicles will be properly marked and drivers will carry the appropriate documents describing the nature of the transported waste and its degree of hazard. A register of the quantities and characteristics of the wastes sent for disposal, indicating origin, type, quantities and landfill locations will be maintained;
- all vehicles and containers will be designed to prevent the release of transported liquid and solid wastes; and
- Construction sites will be periodically cleaned.

5.4.6.3 Waste impact assessment during the operation phase

The road corridor may attract improper disposal and accumulation of solid waste along the corridor and in the terminals. The type of wastes expected to accumulate are mainly domestic such as plastic, paper, etc.

It is not possible to assess the quantities of general waste that may accumulate along the corridors and in the terminals. However, the quantities of waste generated especially at the terminals from waiting passengers, are relatively small.

The improper disposal of these wastes could result in contamination of surface water and ground water resources and soils. The disposal of wastes at existing dumpsites will exacerbate associated environmental problems such as windblown litter and disease vectors. There are health impacts related to the direct contact of waste scavengers with the disposed waste.

5.4.6.4 Mitigation Measures (Operation Phase)

The overall impacts during operation should be considered as low if the following mitigation measures will be implemented during the bus corridor operation phase:

- a waste management plan shall be developed including requirements for separation, handling and disposal of all wastes generated especially at bus stops;
- improper disposal of wastes along the roads corridors should be prohibited;
- waste bins should be properly located along the road corridors and at waiting terminals.
- suitable disposal sites shall be identified with capacities for disposal for general and hazardous wastes prior to the operational phase; and
- waste shall be separated on site and waste storage areas shall be roofed and bounded to prevent potential cross-contamination.

5.4.7 Health and safety impacts

5.4.7.1 Injuries

Accidents constitute one of the most important risks in road construction and maintenance resulting in injuries. These are likely to arise from moving machinery in the course of operation, unguarded parts of equipment and a disregard for health and safety measures. These are likely to pose risks to the workers. Injuries may also arise from road traffic accidents which may occur when parts of roads are being plied while road construction is still underway. This has the potential of harming both workers and road users, including pedestrians. Other sources of injuries are noise, vibration and heat, and lubricants some of which contain solvents with potential to cause skin irritation and allergies, respiratory disorders and acute poisoning

5.4.7.2 Public Health Impacts

These include damage to health from air pollution, communicable diseases such as tuberculosis, and also malaria whose transmission may be enhanced by pits (collecting water) created from excavation and quarrying during constructional activities, as well as injuries.

5.4.7.3 Mitigation measures

Community outreach programs will be factored in all subprojects planned in any location. This will help protect the communities from injury or ill-health caused directly or indirectly by the road corridor improvement activities. All open ditches and other potential hazards and sites will be marked with visible tapes to avoid accidents, or else the contractor will be held accountable for accidents that occur on project site and area of influence.

5.4.8 Biodiversity

The project is intended to be implemented in densely populated and highly urbanized area in Freetown. No biodiversity are identified in any of the subproject sites. Therefore there are no predicted negative environmental impacts on biodiversity during construction or operation.

5.4.9 Public utility disruption impacts.

Construction activities usually require re-alignment of utility supply lines such as water, electricity and telephone especially along the road corridors.

This can disrupt the supply of essential services to communities for rather longer periods, especially where the project execution takes unusually long durations - short to medium negative impact. It is reversible and can be avoided if the parties concerned collaborated in the early planning of the project.

5.4.9.1 Mitigation measures

The following mitigation principles will be followed by the contractors to minimise impacts of utility disruptions:

- Issuance of advance public notices about disruptions;
- Collaboration with utility providers to plan and quickly re-align utility services;
- Provision of alternative supplies where applicable, e.g. water supply tankers to affected communities; and
- Restoration of utility lines and other structures damaged during the construction

5.4.10 Disruption to street trading/vendors' livelihood activities

Street trading activities (kiosks or small shops and markets) will be affected by destruction and disrupted access routes. The potential impacts include loss of street/roadside businesses and social activities, including informal business that might be removed as a result of the development of the corridors, increased land and property values leading to higher rents and displacement of lower-income tenants. This will be mitigated through resettlement process and re-designation of temporary or permanent sites during construction and purposefully constructed roadside markets.

5.4.11 Cultural heritage

The IRUMP will be implemented in an already existing paved roads within Freetown. In addition, new access routes will be created along Lumley market area. The construction and operation of the road corridor may result in increased vibration levels which could affect the safety of buildings. During construction, shallow excavations will take place. In some cases, there may be a need to replace or move underground piping. This will require deeper excavation and use of heavy equipment. Chances of finding important archaeological sites or items during excavation are rare but not completely impossible.

5.4.11.1 Mitigation measures

Before construction starts, all culturally sensitive sites and buildings should be identified. During construction, no heavy equipment which generates high levels of vibration should be allowed. Chance find procedures (Annex 2) should be implemented during construction.

5.4.12 Gender-Based Violence (GBV) and Violence against Women

The prevalence of SGBV incidences in Sierra Leone poses a serious challenge in the advancement of women's rights. SGBV issues such as rape, wife beating, sexual harassment and molestation, forced marriages and wife inheritance continue to be a daily occurrence. A number of strategies have been embarked on by government and various organizations, notably, the Family Support Unit of the Sierra Leone Police, Rainbow Homes for Survivors, Irish Aid, IRC, ActionAid and UN agencies like UNICEF, UNFPA and many others are providing important support to enable us confront the problem of SGBV.

In the IRUMP, GBV and VAW related impacts are potential issues during the construction phase. During the construction and operational phase, the project will attract men and women looking for employment, as well as local vendors and sellers. This will most likely increase project-related risks such as mount of works, impact of having workers earning relatively more than the people around the area, closeness to women and girls in situation of poverty and the prevalence of child labor. Also working in close proximity of local communities inevitably creates opportunities for social interactions. Some of these interactions may lead to insensitive behavior and relationships, including some that are disrespectful of local bylaws and others fostering and/or directly resulting in gender-based violence (GBV, sexual harassment, etc.)

Avoiding such adverse social impacts is a shared responsibility with the Contractor having the onus of ensuring employees are sensitive to and respectful of local cultures and upholding an acceptable standard of behavior when interacting with outsiders and local communities. Sierra Leone's obligations as a party to the UN Convention on the Rights of the Child, and the Convention for Eliminating Discrimination Against Women (CEDAW), requires that acceptable standards of behavior are made understood by all parties involved, encouraged through various ways with enforceable measures for ensuring accountability for non-compliance agreed to.

IRUMP will address GBV and VAW issues through mainstreaming of GBV and VAW codes of conduct and training to increase the protection of women and children.

5.4.12.1 Mitigation Measures

- Shall maintain gender equity in providing employment
- Codes of Conduct for contractors and workers on their obligations regarding SEA and SH, trainings for construction workers on their obligations and behaviours on these topics to be signed by workers and contractors,
- awareness raising to communities on SEA risks and the different entry points to provide support to potential survivors of SEA and SH derived from the project, and development of GBV Action Plan by the IA, including a response and accountability framework,
- mapping of GBV prevention and response actors in the project area with a response and accountability framework (in case the risk goes above low),
- Prohibit recruiting child labour

Table 8: Generic Environmental and Social Impacts and Mitigation Measures during Construction and Operations

Issues	Component	Potential impacts from project activities (construction and/or operation phase)	Impact evaluation and extent	Mitigation measures
Air/dust	Ambient air quality deterioration due to gaseous pollutant emissions	Construction phase Emission of pollutants from construction site equipment (e.g. NO _x , SO _x , particulate) Dust generation due to earth moving and vehicle traffic	Duration: medium Extent: local Significance: low	Conduct baseline air quality measurements, machineries at work sites will be kept turned only if necessary, avoiding unnecessary emission. Repair and maintenance of construction equipment and vehicles. Covering trucks and soil piles to reduce wind transportation; paved construction sites to reduce dust levels.
		Operation phase Air pollutant emissions from buses and other vehicles	Duration: long term Significance: to be determined	Use of alternative fuel (such as GNG) for buses and other vehicles should be encouraged. Enforcement of compliance with air quality emission standards.
Increase of noise levels	Noise	Construction phase Noise emission from engines of machinery and equipment	Duration: medium Extent: local Significance: low	Comply with international legislation for noise emissions maintenance of machinery in good condition. Equipment running only when necessary. Positioning of the noise source in a concealed area with respect to acoustic receptors, consistent with the needs of the construction site.

				Identify sensitive receptors and agree on work schedules as much as possible.
		Operation phase Increased noise emission from higher speed buses	Duration: long term Extent: local Significance: low	Low noise emissions. Consider installation of noise barriers reflectors along the road corridors (subject to availability of funds).
Traffic patterns	Traffic congestion and diversion	Construction phase Increase in road traffic due to: movements of vehicles for transporting earth and materials, construction site machining activities, and movements of the workers involved in the construction-site activities. Congestion due to construction activities.	Duration: medium term Extent: local Significance: low	Alternative traffic management plan to create alternative routes should be implemented to avoid traffic congestion. Heavy construction equipment and vehicles should avoid rush hours and high traffic times. Regular TV and Radio traffic bulletin to alert drivers about congestions and detours.
		Operation phase Not determined		
Solid waste	Waste management and disposal	Construction phase Production of construction waste and other waste related to the maintenance	Duration: medium term Extent: local Significance: low	No open burning of wastes will be conducted All types of waste generated during the construction phase should be stored into a number of waste streams.

		activities of machines etc.		<p>Recycling and waste generation reduction measures will be implemented.</p> <p>Solid waste will be transported to designated official landfills (dumpsites).</p> <p>Waste storage facilities must be fenced on the perimeter, properly lighted and with access constraints for unauthorized people; furthermore waste storage on construction site should not exceed 7 days.</p>
		<p>Operation phase Improper disposal and piling of solid wastes along the routes of the corridors</p>	<p>Duration: long term Extent: local Significance: medium</p>	<p>Disposal of solid wastes along the road corridors should be prevented.</p> <p>Waste collection contractors should regularly remove any accumulated wastes.</p> <p>Public awareness campaigns should encourage proper disposal of solid wastes.</p> <p>Waste disposal bins should be adequately and appropriately located especially at bus terminals.</p>
Demographic economic social structure and road traffic issues	Socioeconomic	<p>Construction phase Migration to or from the area is not expected. Construction of the project brings the opportunity for job creation. Public nuisance due to construction activities.</p>	<p>Duration: medium term Extent: local Significance: high</p>	<p>Place signs to inform the public about the duration of construction and completion dates.</p> <p>Avoid blocking access to residential buildings or commercial shops.</p> <p>Avoid resettlements and land acquisition.</p> <p>A Resettlement Policy Framework (RPF) is being prepared. At a later stage and when the corridors are specified and in case land acquisition and</p>

		<p>Disturbing access to shops due to excavations or other construction activities.</p> <p>Land acquisition or resettlements and physical relocation as well as economic displacements at the location of the terminal and market.</p> <p>Gender biased wages, unfair payment to women labour Child labour in spite of legal provisions.</p> <p>An increase in income disparities within the community exacerbating gender gap and increasing risk for women and girls in the community.</p>	<p>resettlement proved to be unavoidable. A Resettlement Action Plan (RAP) will be prepared and disclosed before the start of any civil work. A grievance redress mechanism will be available and functioning on the local level to handle local complaints and concerns.</p> <p>Stringent monitoring of contractors that provisions made on the contracts for equal and fair payment to women labour is followed. Ensure legal provisions defined in the Child Rights Act are fully followed and included in the contracts.</p> <p>Supervision and monitoring of contractors during construction phase. Make certain the availability of an effective grievance redress mechanisms prepared and trained to refer GBV and SEA survivor to service provider</p> <p>Define the requirements to be included in the bidding documents for a Code of Conduct.</p> <p>During the stakeholder engagement process of the project keep communities informed about project activities and GBV related issues.</p> <p>Make certain the availability of an effective grievance prepared and trained to ask questions and refer GBV survivors service providers.</p>
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		<p>Operation phase Attraction of informal markets and vendors to occupy sidewalks and block the traffic especially close to the bus terminal stops.</p>	<p>Duration: long term Extent: local Significance: low</p>	<p>Efforts will be exerted to avoid the development of informal markets at the early stage of the project operation. As alternative, formal markets selling goods at affordable prices can be placed in well-chosen locations which will not obstruct traffic and in the meantime create jobs for low income groups.</p> <p>Once the corridors are identified, further analysis for the potential impacts on local businesses should be carefully examined. Consultations with the potentially affected businesses should be conducted during the design stage to help in minimizing negative socioeconomic impacts especially on affected local business.</p>
Health and safety	Health and safety issues	<p>Construction and operation phase Impact on Public Health connected with the production of Emissions into the air and noise emissions and risks related to operation phase.</p>	<p>Duration: long term Extent: local Significance: medium</p>	<p>Provision of appropriate training on EHS issues for all construction and operation workers, including initial induction and regular refresher training. Provision of trainings on GBV and HIV for construction workers and requirements of CoC on OKS and GBV requirements for contractors and workers Provision of health and safety information Regular inspection, review and recording of EHS performance</p>

				<p>Pre-construction and operation assessment of the EHS risks and hazards associated with construction and operation, including consideration of education level of workforce and local work practices.</p> <p>Establish an H&S committee</p> <p>EHS Management during construction and operation</p> <p>implementation of EHS procedures as a condition of contract with contractors and their sub-contractors</p> <p>Establish emergency and accident response procedures</p>
Utility disruptions	Disruption of utility services	Construction and operation Affected utility lines may have to be relocated leading to disruption in services	<p>Duration: temporary</p> <p>Extent: limited to local area</p> <p>Significance: low</p>	<p>Adequate Notice for the general public.</p> <p>Collaboration with utility providers.</p> <p>Install new lines before disconnection where applicable.</p> <p>Restoration of utility lines and other structures damaged during the construction.</p>
Impacts on cultural heritage	Impacts on sites with tangible and intangible heritage values	Construction and operation Road corridor improvement may result in increased vibration which could affect safety of buildings. There may be a need to replace or move underground piping requires	<p>Duration: Temporary</p> <p>Extent: Local</p> <p>Significance: Minor to moderate</p>	<p>Before handling over the project sites to contractors, MoTA and the project engineering consultant will carry out pre-construction surveys to identify cultural heritage resources and existing ecologically sensitive areas (if any) that the project will avoid and take adequate care/notice of</p> <p>The project will implement a change find procedure and reporting</p>

		deep excavation.		<p>system to be used by contractors in the event that a cultural heritage feature or ecologically sensitive item/issue is encountered.</p> <p>Discuss and agree with owner/community if a cultural heritage resource identified can be relocated if possible. The relocation of any cultural heritage resource will be done in line with the provisions of the RPF</p>
Gender and vulnerable groups	GBV, including Sexual Exploitation and Abuse	<p>Construction and operation phase Influx of labor force, impact of having workers earning relatively more than other people around the area, closeness to women and girls in a situation of poverty, prevalence of child abuse etc.</p>	Moderate to low	<p>Shall maintain gender equity in providing employment.</p> <p>Codes of Conduct for contractors and workers on their obligations regarding SEA and SH, trainings for construction workers on their obligations and behaviours on these topics to be signed by workers and contractors, awareness raising to communities on SEA risks and the different entry points to provide support to potential survivors of SEA and SH derived from the project, and development the basis of a GBV Action Plan by the IA, including a response and accountability framework, mapping of GBV prevention and response actors in the project area with a response and accountability framework (in case the risk goes above low), prohibit recruiting child labour.</p>

It is expected that the projects would receive adequate technical review by qualified technical professionals to ensure their technical and environmental soundness and social sustainability. Engineering review for all construction details and designs should be integral in this process in order to ensure meaningful all proposed or identified mitigation measures. The tender documents and in the works contracts (see box 1). Under such consideration, the mitigation measures will automatically become part of the project construction and operation phase. By including mitigation measures in the contract or in specific items in the Bill of Quantities, monitoring and supervision of mitigation implementation will be covered under the engineering supervision provisions of the contract.

Box 1: Environmental and Social Safeguard and Mitigation Measures must be included in:

Project Design: Mitigation measures should be integrated in the design of the project itself. The need to adhere to the Environmental Code of Practice. Such approach will enhance the mitigation measures in terms of specific mitigation design, cost estimation of the mitigation measure, and specific implementation criteria. Integration of mitigation measures in the design phase will also help in strengthening the benefits and sustainability of the project.

Project Work Contracts: The project contractor should be bound by the parameters contractual clauses (will include obligations regarding GBV, including SEA and Sexual Reproductive Health) identified in the environmental and social assessment pertaining to specific mitigation measures in the contract. It needs to be ensured that the contractor is aware and understand the respective contractual clauses and obligations. The final acceptance of the completed works should not occur until the environmental clauses have been satisfactorily implemented.

Bill of Quantities: the tender instruction to bidders should explicitly mention the site-specific mitigation measures to be performed, the materials to be used, the specific and excluded sites for material retrieval, labor camp specifications, arrangements, and waste management and disposal areas, as well as other site specific environmental requirements. Such a definition would clearly exhibit the cost requirement to undertake mitigation measures, which otherwise might be lost as the bidders in an attempt to be more competitive may not include the price realistic enough to fund mitigation measures and other protection measures.

Supervision and monitoring: the purpose of supervision is to make sure that specific mitigation parameters identified in the environmental and social assessment and as bound by the contract is satisfactorily implemented. Likewise, monitoring is necessary such that the mitigation measures are actually put into practice.

6.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLAN

6.1. Introduction

This section presents the basis for the environmental and social monitoring and management programs to be implemented over the course of the corridor improvement project. The purpose of this Management Plan is to ensure that social and environmental aspects, impacts and thus risks of the project are identified throughout all phases of the Project. It will identify the set of responses to potential adverse impacts; determine requirements for ensuring responses are made effectively and in a timely manner. The implementation of this plan will be the overall responsibility of MoTA. As such, having a dedicated environmental and social person or Monitoring and Evaluation officer within the TIDU (PIU) is a necessary requirement. The person would be in charge of:

- Screening proposed project interventions, identifying potential environmental and social impacts, including risks related to sexual exploitation and abuse and sexual harassment and management of safeguard policies implications;
- Designing implementation arrangements by IRUMP including institutional roles and responsibilities;
- Training and ensuring adequate capacity of institutions to carry out their desired functions
- Ensuring compliance with the Sierra Leone's laws and procedures
- Communication with the relevant transport sector related authorities as well as the world Bank team
- Ensuring provisions of the ESMF are conducted during project implementation
- Adequately identifying and engaging with stakeholders
- Monitoring the ESMF implementation
- Determine the costs related to the implementation of the ESMF

The TIDU (PIU) will also transfer their obligation to implement the ESMP through contractual obligation with the works contractor, while supervision of the ESMP will be the responsibility of the contracted supervisor. The PIU specialist will be responsible to ensure that the ESMPs for each of the sites has been prepared, disclosed with public consultations, and properly included in the bidding documents and the contracts for each of the corridors. The specialist will also be in charge for on-site supervision together with the appointed supervisor body, and also for ensuring all adequate monitoring has been conducted. The components of the ESM plan, potential impacts arising out of the Project and remediation measures are summarized in the following Tables. Responsibilities, frequency of monitoring and estimated budgets are also presented. The Table below identifies the management actions.

Table 9: Environmental and Social Management Plan

ISSUE	Objectives	Impact Source	Receptors	Impact Rating	Mitigation Measures	Responsibility
Air Quality	-To control/minimize the generation of dust from the movement of haul trucks and other heavy equipment. -To suppress dust during tailings recovery and transportation -To minimise the impact on air from the release of exhaust fumes to the environment.	-Land clearing - loading and unloading of trucks -excavation and grading -Rehabilitation of roads; -And use of diesel and/or gasoline fired heavy duty Equipment.	- Communities in proximity to work -- Workmen at the site.	Moderate (Severity - low; Likelihood - high)	-Cover trucks to minimize particulate emission - Limiting vehicle speed to a maximum 50 km/hr. - Employ dust suppression technique - Maintain equipment according to manufacturer's specifications	TIDU/ Contractor/ SLRA
Noise	To prevent Noise on health and safety.	Heavy-duty and earthmoving machines operation.	- communities around area -Workers	Moderate (Severity – medium; Likelihood - medium)	-Avoid unnecessary idling of vehicles -Best Available Work Practices; - Provide employees with noise reduction equipment. -Enforce speed limits within and near community areas. -Dust monitoring according to the proposed dust monitoring plan;	TIDU
Soil Management	To ensure that the site is cleared fall overburden soil.	Topsoil removal;	Workers; Nearby community.	Low (Severity - low; Likelihood - Medium)	Proper stockpiling at site	Contractor/ SLRA
Traffic	Increase Traffic and safety risks.	Transportation of materials, deposit and employees.	Local communities; Employees.	Moderate (Severity - medium,	Develop and enforce Traffic Management Plan	TIDU/SLRA/ Traffic Police

				Likelihood – high)		
Health and safety	To reduce likelihood of accidents and work-related illnesses	Accidents and work-related illness, the risk of spreading communicable diseases	Communities, employees and their families	Medium (severity – medium, Likelihood -low)	<p>Develop health and safety plan and ensure its strict implementation</p> <p>Construction area shall be fenced off at entry point to avoid disturbance and risk</p> <p>Construction site shall have the provision of first aid health facility and rescue during emergency;</p> <p>Provide Personal Protection Equipment (PPE) for construction workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection.,</p> <p>Maintain the PPE properly by cleaning dirty ones and replacing them with the damaged ones,</p> <p>Provide Safety training to prevent accidents, injury etc</p> <p>Except for areas secured by fencing, all active construction areas will be marked with high-visibility tape to reduce the risk accidents involving pedestrians and vehicles</p>	Contractor/ TIDU/SLRA/ Road Users

6.2. Air Quality and Dust

Air, dust and other air emissions at the project site can negatively impact air quality and adversely impact the health of personnel due to continuous exposures.

- Water will be periodically sprinkled on roads and spoil piles to control dust emissions.
- Personnel working around the site will be required to observe health and safety precautions to avoid exposure to dust and fumes.
- Contract specifications for contractors will include dust control measures
- Hauling trucks carrying sand bound for any of the sub-projects sites will be completely covered and secured to dust emission.
- Workers in the loading and transportation phases of the operations would be exposed to windblown/fugitive dust being blown into the eyes and causing eye irritation. These employees will be provided with clear goggles and eye wash lotion will at all times be available for washing the affected eyes.

The implementation of these measures will commence immediately and TIDU will be responsible for the implementation of air quality management measures. The costs associated with these measures are part of the project costs.

6.3. Noise

Excessive noise can damage the hearing of employees at the site and disrupt communications between animals in the area. These emissions will be reduced to minimum levels by following the protocols of the manufacturer for equipment use and maintenance. Equipment will be fitted with special exhaust systems (mufflers). Additionally, the employees will be required to wear personal noise-protection gear, e.g., ear protectors.

For intermittent noise along the roads, TIDU will erect warning signs for people to be aware of the safe zone and minimize the exposure. People selling goods at the site and along the road will be told to move and trade on the safe zone.

The implementation of these measures will commence immediately and TIDU will be responsible for the implementation of air quality management measures. The costs associated with these measures are part of the project costs.

6.4. Soil Management

Improper management of overburden soils could increase sediment discharge to surface water in the wet season. As construction progresses, soils will be disposed of as part of the progressive rehabilitation. In addition, contractors will ascertain that all raw materials, including sand aggregates and other construction materials are sourced from approved sites. As contractor's obligations, the various sub-project contracts will specify provision for erosion controls, spillage prevention during construction. The costs associated therewith are part of the project costs.

6.5. Transport/Road Traffic

Clear lines of responsibility will be established for all aspects of transport including the safety, security, and emergency response procedures in event of unplanned releases of fuel oil. The Emergency Response Plan addresses spill response scenario during transport to the to the project site. The Contractor will enforce speed limits, for company vehicles, of less than 70 km/hr. on the access road and 50 km/hr. Signs will be posted along the roads to indicate to other road users' safe driving speeds on that road. The costs for the implementation of the traffic management plan are a part of the overall project cost and no additional specific costs would be incurred to undertake this aspect of the EMP.

6.6. Employee/Public Health and Safety

During the operation of the facility, emphasis will be placed on providing a safe and healthy environment for the workers. A health and safety plan will be implemented to ensure compliance with the WB regulations. Occupational Safety & Health plans will be implemented in the following areas:

- Industrial Accident prevention and management;
- Occupational Hygiene;
- Illness & Infectious disease prevention and management;
- Sewage and Waste Disposal.

All open ditches, barricade, barriers and other potential hazards at the various worksites will be marked with bold and visible tapes to ensure avoidance of accidents. Where contractors are negligent in the provision of safety instructions and warnings, the contractor will be held accountable for accident that occurs on such project site and areas of influence.

6.7. Training & Education of Employees

The company will run periodic training program in:

- Basic first aid programs (all employees).
- Accident investigation & reporting seminars (supervisory personnel & safety reps.)
- Training on HIV and GBV

The basic first aid program will be extended to all employees and would be geared to ensure that in the event of an accident or injury, someone with first aid knowledge will always be present to render initial assistance until further medical attention can be made available. Advanced first aid program will constitute an upgrading course from the basic first aid program in which selected employees including supervisors and the Safety representative will be exposed to advanced first aid knowledge and techniques which will enable them to participate in the recognition and the initial management of serious injuries and illnesses e.g. Fractures, Spinal Injuries, Malaria, Typhoid fever etc.

The contractor will also provide training to employees regarding the obligations contained in the Code of Conduct.

6.8. ESMF Monitoring and Reporting

The MoTA through the respective implementing entities will monitor all the subprojects to ensure conformity to the requirements of this ESMF. The objective of monitoring is to provide the GOSL and the WB with feedback on ESMF implementation and to identify problems and successes as early as possible. This will allow timely adjustment of implementation arrangements for the subprojects. MoTA will monitor and report on the effectiveness of ESMF. The implementation will mean the development of appropriate safeguards instruments (RAP or other due diligence reports). The monitoring will cover all stages of planning and implementation. The monitoring will be carried out through the environmental and social safeguard compliance reports that will form a part of Quarterly Progress Reports (QPR) for all subprojects. The Environmental and social monitoring data will be entered into electronic database which will be updated regularly to respond to the updates on the ground.

Towards enhancing the quality of ESMF implementation and in addition to the internal monitoring, external monitoring will be done by a third-party agency or Social Management Consultant (SMC) for technical as well as environmental/social aspects. The role of third-party agency/environmental and social development specialist towards external monitoring of social safeguards will include the following:

- Review the ESIA, ESMP and RPF compliance and will be responsible for monitoring the implementation of RAPs which will cover Social Impact Assessment of the delivery process of compensation and related resettlement assistant in cash or in-kind, to the affected households on quarterly basis;
- Conduct mid-term, annual and end term monitoring to assess target achievements and slippages with respect to implementation of RAP;
- Grievance redress mechanisms and processes along with complaints received and resolved will be monitored.

The following aspects should be considered for monitoring and evaluation:

- Number of persons engaged during the preparing of RAP
- Number of complaints/grievances received and resolved.
- Number of informed and consulted PAPs about the entitlements;
- Number of events organised for information and consultation;
- Number of agreements signed with PAPs Entitlement matrix agreed with all stakeholders, including PAPs
- Rate of compensations; and
- PAPs perceived level of welfare impacts from land management improvements.

All the information collected during the monitoring periods will be included in report that will be presented quarterly by MoTA to WB representatives.

The ESMF will contain indicators and benchmarks for achievement of the objectives under the ESMF.

These indicators and benchmarks will be:

- Completed safeguards screening forms prepared by Environmental and Social Cell of PMU or consultants
- ESIA/ESMP prepared and approved
- GRM records prepared for Grievance Redress Committee (GRC) or consultants during implementation phase
- Training records prepared by Environmental and Social Cell of PMU or Consultants
- ESMP monitoring records prepared by Contractors, Environment and Social Cell of PMU and/or Consultants

Table 10 illustrates the monitoring measures and responsible persons for monitoring.

Table 10: Monitoring Responsibility of Major Stakeholders

Party Responsible	Parameters To Be Monitored	Output	Action Time Frame
EPA	<ul style="list-style-type: none"> • Overall Environmental Performance of the project 	Instructions to contractor and the Engineer	Throughout project life cycle
Sierra Leone Road Authority Environmental Unit	<ul style="list-style-type: none"> • Overall Environmental Performance of the project • Community relations • Payment of appropriate compensation • HIV/AIDS and GBV awareness raising campaigns 	Monthly Environmental Reports	Once a month but responsibility runs throughout the project life cycle
The Contractual Engineer	<ul style="list-style-type: none"> • Construction methods and material • Environmental management of construction sites • Implementation of mitigation measures for air, water, soil, traffic, occupational health and safety, trees etc. • Environmental management of construction camps • Environmental management of borrow pits and quarries • Contractor's waste management • Staged rehabilitation of impact areas • Environmental performance of contractors equipment • Accidents (traffic, spills etc) • Environmental performance of mitigation measures 	<p>Monthly Environmental Reports</p> <p>Incident Reports as and when required (spills, accidents and the like).</p>	On-going responsibility throughout construction phase.

Party Responsible	Parameters To Be Monitored	Output	Action Time Frame
	<ul style="list-style-type: none"> SEA mitigation and responses measures to be in place and working appropriately, including the implementation of the GBV action plan (if required) 		
The contractor	<ul style="list-style-type: none"> Environmental performance of equipment and plants. Implementation of interim and permanent mitigation measures. Occupational Health and safety measures Air quality Accidents of any kind Implementation of the CESMP Implementation on GBV requirements 	<ul style="list-style-type: none"> - Maintenance records - Accidents Reports - Mitigating actions e.g. Sprinkling of water, traffic signs, safety barriers 	On-going responsibility throughout construction phase.
Traffic Police	<ul style="list-style-type: none"> Traffic nuisances Traffic safety measures Traffic accidents Traffic volume measurement 	Police reports and instructions to contractor	On-going responsibility throughout construction and operational phases
Road safety authority	<ul style="list-style-type: none"> Speed measurements at selected spots Nos and type of road accidents recorded in the traffic police and in local health service centres Suitability of road signs Record on road safety awareness campaigns 	Reports	On-going
Health Authorities	<ul style="list-style-type: none"> Change of frequency of diseases Occurrence of new disease in the area 	Health reports	Upon observation of incidence of diseases
Local Communities	<ul style="list-style-type: none"> Negative environmental impacts. Social disturbance 	Complaints to contractor, supervising Engineer	Throughout project life cycle

7.0 FRAMEWORK FOR THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The framework for the Environmental and Social Management Plan (ESMP) provides guidance to be followed in implementing the IRUMP which should be in agreement with national and World Bank Safeguard provisions. Institutional arrangements with clearly defined roles and responsibilities as well as monitoring protocols to be followed to ensure that the required provisions are adhered to. Budgetary estimates are provided to support the implementation of the ESMP under Chapter 10.

7.1. The Environmental and Social Screening

The screening process is the first step in operationalizing the ESMF process. Environmental and Social screening process is to determine whether projects/sub-projects and activities are likely to have significant potential negative environmental and social impacts and therefore to confirm the appropriate level of assessment required in consistence with the requirements of the EPA-SL and the provisions of the World Bank Operational Policy on Environmental Assessment (OP 4.01). The environmental and social screening of each proposed sub-project will result in its classification in one of the three categories A, B or C, depending on the type, location, sensitivity and scale of the subproject and the nature and the magnitude of its potential environmental and social impact.

Under component 1 and 3, the safeguard officer will, on behalf of the MoTA and other implementing agencies, carry out the preliminary environmental and social screening of proposed projects by using the checklist suggested in Annex 2. If significant impacts are anticipated then the EPA-SL must be consulted and the national Environmental Assessment (EA) procedures duly followed.

In other words, based on environmental screening, sub-projects with no noticeable impacts are cleared from an environmental perspective; subprojects with some impacts proceeds for the conducting an environmental assessment which will be evaluated to clear the subproject. Environmental assessment will determine the extent of impacts and how the impacts will be mitigated, or minimized by planning, approaching the activities in an environmentally sensitive manner and adopting specific mitigation measures.

The formal environmental approval and permitting processes will also be guided by the EPA-SL environmental procedures. All environmental assessment must be materially consistent with the applicable World Bank Safeguard Policies, which provides guidance on the environmental assessment procedures for WB Funded projects. The SL procedures (EPA Act 2008, amended 2010) have also established a process to screen and evaluate all development projects and programmes which have the potential to give rise to significant environmental impact. There is consistency with both provisions.

Those projects requiring EPA clearance will only commence when an environmental license has been procured from the EPA-SL. The Agency has provided the list of projects for which ESIA is mandatory as shown in the box below:

Environment Protection Agency Act, 2008 (amended 2010)

FIRST SCHEDULE (Section 24)

Projects requiring Environmental Impact Assessment Licenses

A license is required for the projects whose activities involve or include the following:

- (a) substantial changes in renewable resource use (e.g. conversion of land to agricultural production, forestry or to pasture land, rural development, timber production);
- (b) substantial changes in farming and fisheries practices (e.g. introduction of new crops, large scale mechanization or use of chemicals in agriculture);
- (c) exploitation of hydraulic resources (e.g. dams, drainage and irrigation projects, water basin development, water supply);
- (d) infrastructure (e.g. roads, bridges, airports, harbors, transmission lines, pipelines, railways);
- (e) industrial activities (e.g. metallurgical plants, wood processing plants, chemical plants, power plants, cement plants, refinery and petro-chemical plants, agro-industries).
- (f) extractive industries (e.g. mining, quarrying, extraction of sand, gravel, salt, peat, oil and gas);
- (g) waste management and disposal (e.g. sewerage systems and treatment plants, landfills, treatment plants for household and hazardous waste);
- (h) housing construction and development schemes;
- (i) establishment of places of entertainment, motor repair garages and welding shops;
- (j) importation of second hand vehicles.

The EPA- SL procedures for environmental licensing have been provided in the Annex 2 and these will be followed to ensure compliance with national regulations and also to be consistent with the requirements of the WB policy on environmental assessment. However, as stated earlier, this is a WB category B project and environmental and social impacts are expected to be moderate, site specific, and easily manageable through the implementation of mitigation measures to an acceptable level.

7.2. Environmental registration of the project

The project proponent/developer will be responsible for the registration of the projects with the EPA-SL using the prescribed form from the Agency. For the components 1 and 3 activities, the registration will be carried out by the safeguard officer who will be appointed by the MoTA. All documents will be submitted through the TIDU to the EPA-SL to ensure transparency and accuracy. The mitigation measures suggested in this ESMF as well as the checklist used in the screening exercise should assist the safeguard officer and the TIDU of the MoTA to complete this form accurately.

The EPA-SL will screen this registration forms and determine the next course of action which may include any of the following:

- Objection to the project
- No objection to the project (equivalent to World Bank Category C Project)
- Preliminary Environmental Assessment will be required (equivalent to World Bank Category B Project).
- Environmental and Social Impact Assessment (ESIA) required (equivalent to World Bank Category B or A Project)

For projects receiving the ‘no objection’ from the EPA (World Bank Category C project) and therefore have only minor environmental and social risks, the PIU may move to implementation in accordance with pre-approved standards or codes of practices or the pre-approved guidelines for environmental and social management.

7.3. Conduct of Environmental and Social Assessment Studies

For Projects for which the decision is to conduct environmental impact assessment studies, stand-alone reports will be prepared. The EPA- SL statutorily requires an EIA for projects in sensitive areas as listed in the box below.

Environment Protection Agency Act, 2008 SECOND SCHEDULE (Section 25)

Factors For Determining Whether A Project Requires An Environmental Impact Assessment
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- | |
|--|
| (a) the environmental impact on the community;
(b) the location of the project;
(c) whether the project transforms the locality;
(d) whether the project has or is likely to have substantial impact on the ecosystem of the locality;
(e) whether the project results in the diminution of the aesthetic, recreational, scientific, historical, cultural or other environmental quality of the locality;
(f) whether the project will endanger any species of flora or fauna or the habitat of the flora or fauna;
(g) the scale of the project;
(h) the extent of the degradation of the quality of the environment
(i) whether the project will result in an increase in demand for natural resources in the locality; (j) the cumulative impact of the project together with other activities or projects, on the environment. |
|--|

The MoTA safeguard officer in consultation with the TIDU, will prepare the Terms of Reference for the ESIA, and follow procurement rules for the recruitment of consultants for the ESIA. The ToR may be prepared using issues identified during the screening exercise and also the registration of the project with the EPA- SL. Also, the impact mitigation measures provided in this ESMF may provide some basis for the design of the ToR. The outline of the report will include the following:

Outline of the ESIA

- Description of the study area
- Description of the subproject
- Discussion and evaluation of alternatives
- Environment description
- Legal and regulatory
- Identifying potential impacts of proposed sub-projects
- Identification of GBV risk by the project
- Process of public consultations
- Development of mitigation measures and a monitoring plan, including estimates of costs and responsibility for implementation of surveillance and monitoring

The ESIA report must document clearly and impartially the project's impacts, the proposed measure for mitigation, the significance of effects and impacts on the environment, and the concerns of the interested public and the communities affected by the project. In this regard, management plans including the Environmental and Social Management Plan (ESMP), Community Development and Action Plan (CDAP), Resettlement Action Plans (RAP), etc., must be clearly articulated in the document.

Upon completion of the ESIA studies, the Proponent should submit eighteen (18) hard and soft copies of the ESIA report to the EPA-SL for circulation to the EPA-SL's Board members and other relevant professional bodies.

7.4. Review and approval of the ESIA for the project; publication and dissemination of ESIA

The PIU will review the draft reports from the MoTA Safeguard Officer (as prepared by the consultant) and will submit same to the EPA-SL. The EPA-SL will determine whether the ESIA report meets the terms of reference and provides a satisfactory assessment of the proposed project and contains the information required for decision making and also share the report with relevant stakeholders for their comments.

The ESIA report will be publicized in gazette and circulated to professional organizations by the EPA-SL for comments. The Proponent will have to disclose the ESIA report through publication of dates for disclosure in newspapers, and hold two or more public hearing meetings for public participation in the decision-making process. The placement of the ESIA report in specific places will enable the affected or interested persons to make comments on the ESIA studies and submit to the EPA-SL for decision making. The EPA-SL staff will also visit the site or operational areas of the project to ascertain the component and content of the ESIA report in the review stage.

Where the draft ESIA is found acceptable, the MoTA will be notified through the TIDU to finalize the reports to obtain the license. The TIDU shall pay processing and permitting fees prior to collection of the license. The fees are determined based on regulations and formula presented by the EPA-SL.

8.0 INSTITUTIONAL ARRANGEMENTS FOR IMPLEMENTATION OF THE ESMF

8.1. Institutional and Implementation arrangements of ESMF

The ESMF project implementation will be a responsibility of the Transport Infrastructure Development Unit (TIDU) of the Ministry of Transport and Aviation in collaboration with multiple departments and agencies, including FCC, SLRA, SLRSA, SLRTC, and Sierra Leone Police traffic division. Technical oversight will be provided by the Steering Committee to strengthen the coordination across multiple agencies. The main function of the steering committee are to: (i) ensure multi stakeholder consultation, collaboration, coordination, and information dissemination for the project; (ii) advise on a common policy framework for urban transportation in Freetown; (iii) approving the annual work plans; (iv) approving the annual procurement plan; (v) review progress made towards achieving the project's objectives, and make recommendations for its efficient implementation, including taking responsibility on fiduciary oversight responsibilities following world Bank procedures on financial management and procurement. However, the implementation of the project strongly depends on synchronized action of all actors in the steering committee to facilitate land acquisition and related activities (effecting compensation, provision of infrastructure, conformation to the structure plan etc.). Absence of representation of utility providers (Guma Valley Water Company, SIERRATEL, EDSA etc.) in the committee could create delays on project implementation. There is also the need for the inclusion of the Ministry of Social Welfare, Gender and Children's Affairs into the Project Steering Committee.

The Steering Committee will be supported by a Technical Support Group/PIU, consisting of a mix of Government Staff and consultants. The TSG will support the implementation and maintain all project data and information. The TSG aims to build capacity within the government, by integrating government staff from MoTA or other relevant stakeholders.

The Ministry of Finance is charged with budgeting and financial management responsibilities. As the ministry is responsible for mobilizing and managing public resources in a transparent and accountable manner for sustainable national development, it will be a channel through funds from the WB will be transmitted to MoTA/TIDU. In the implementation of this project, the Ministry has the broad responsibility for Financial Management (FM), procurement, and monitoring and evaluation functions of the project. It will ensure that annual work plans are prepared, budgeted and implemented in a timely manner and that management of project funds is in line with the provisions of the project's eligibility guidelines. The MoTA will coordinate with the Project Financial and Management Unit (PFMU) and provide technical support in the performance of its functions. The Integrated Project Administration Unit (IPAU) in the MoF which is currently supporting project management for some of the donor financed projects will be absorbed within the new PFMU. The PFMU will be responsible for the management of the Designated Accounts; disbursement of the project funds, replenishment of the bank accounts

and submission of withdrawal applications; and consolidation of annual work plans, budget planning, arrange for project annual audit, project reporting and M&E.

The Bank together with the MoTA will carry out a Mid-Term Review (MTR) to assess the status of the project as measured against the performance indicators. Such a review would include an assessment of: (i) the overall progress in implementation of the project; (ii) results of M&E activities and impact evaluation; (iii) progress on procurement, disbursement, and financial management; (iv) progress on the implementation of the Environmental and Social Management Framework (ESMF) and other safeguards measures; (v) implementation arrangements; and (vi) need for any other project adjustments or reallocation of funds to improve performance. At least three-month prior to the mid-term review, PMU will provide the WB with a project progress report with updated results indicators, project cost and disbursement estimates and plans for completion. This report will be reviewed with the WB and the Project Steering Community to PMU takes measures required.

Effective implementation of this ESMF will require technical capacity in the human resources of implementing institutions as well as logistical facilitation. Sufficient understanding of the mechanisms for implementing the ESMF will need to be provided to the various stakeholders implementing the IRUMP investments. The Bank will provide training to the PIU staff in Project Management, Environment and Social Management Plans and roles and responsibilities. The TIDU will be responsible for coordinating and supervising the day-to-day implementation of the project. In order to ensure that there is adequate capacity to implement and monitor the performance of this ESMF and its provisions, the coordinator will be assisted by the professional and support staff such as:

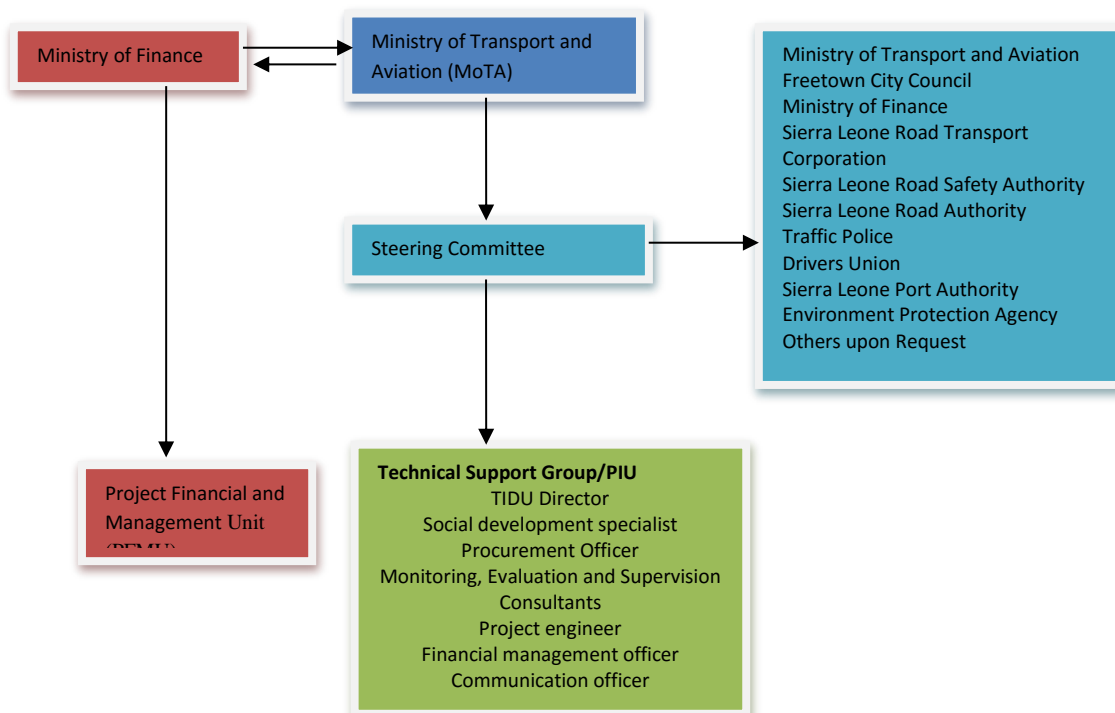
- **Project Coordinator;** who will be responsible for the smooth implementation and day-to-day running and administration of the project with an overall oversight in Procurement, Financial Management, Communication and Monitoring and Evaluation and Safeguards;
- **Project engineer;** who will provide support related technical advice on operations and management of the project; review of bid documents and ensure inclusion of E&S Safeguards (EMPs of subprojects), periodic review of EMP implementation (monthly)
- **Monitoring and Evaluation Officer;** who be responsible for keeping a tag on the key performance indicators agreed for the project;
- **Financial Management Officer;** to undertake financial management, disbursement and selected administrative functions of the project;
- **Communication officer;** to coordinate an effective communication strategy to enable the project achieve its goal; and
- **Procurement Officer;** who will coordinate all procurement functions of the project, The Procurement Officer ensure inclusion of the E&S safeguards in bid documents, contractor's responsibilities towards EMP implementation are clearly defined and the roles and responsibilities of various stakeholders on the implementation of ESMF is clearly defined and there is no ambiguity or overlapping.

- **Environment and social safeguard officer/ social development specialist coordinator** with Project Implementation Units, Programme and Project Management Consultants, Contractors, Local stakeholders for implementation of the ESMF and EMPs, review terms of reference (TORs) for ESIA of subprojects as prepared by consultants, review and approval of ESIA and EMPs, conduct EMP monitoring including visits to the subproject sites at once in a quarter, and review EMP Monitoring reports and develop internal reporting on Legal Compliance and Safeguard Conformance. The person will also facilitate independent audit by external agency, reporting of Safeguard implementation to World Bank and update ESMF (if required) (with approval of the World Bank) and record changes in the Revision Sheet.

The function of the PIU will include (i) ensure the overall coordination of the project, make sure implementation of components activities complement each other; (ii) manage project funds on behalf of the executing agencies, keep financial records according to international standards, implement internal management control, and ensure regular external audit, (iii) prepare and implement annual work plans and budgets aggregating demand from beneficiary institutions/agencies, and work plans and budgets linked to EMPs proposed by implementing agencies/services providers; (iv) identify potential implementing agencies/goods and service providers, organize their selection/hiring, negotiate and sign contracts with selected implementation partners/goods & service providers, and carry out all procurement work related to the project as per approved procurement plans; (v) monitoring project progress as it relates to compliance with the ESMF guidelines, resolving implementation bottlenecks, and ensuring that overall project implementation proceeds smoothly, (vi) prepare quarterly, semi-annual and annual project progress and monitoring and evaluation (M&E) reports, (vii) collecting and managing information relevant to the project and accounts (i.e. Environmental and social monitoring and audit reports), (viii)organizing and providing training sessions, including a training plan and its modules, in environmental screening and environmental management; similarly, training is also need in land acquisition and involuntary resettlement safeguard policies for field supervision staff, and representatives to familiarize them with the principles and procedures as set out in the ESMF. The PIU will be adequately resourced with skillsets and competencies required for project implementation and monitoring.

The Environmental and Social Management Unit will be directly responsible for compliance with ESMF and subproject screening, development of subproject specific ESMPs and RAPs and their effective implementation, internal monitoring and progress reporting. The unit will be supported by an additional environmental specialist and a social specialist. Additionally, the PIU would be also support community participation, consultation and other social activities from the subproject identification to completion stage. See Figure 2 below.

Figure 2: Implementation Arrangements for IRUMP



Source: World Bank Mission 2018

8.2. The Roles of key stakeholders and institutions in the ESMF Implementation

The ESMF provides the environmental and social safeguards for Integrated and Resilient Urban Mobility Project and its successful implementation will depend largely on the key stakeholder institutions. This will ensure that the sub-projects are undertaken with due regard for the integrity of the resources to be affected by the project development activities. The roles of the major stakeholders are identified in an institutional role in which the various activities of the Ministry of Transport and Aviation were matched with the institutions which have jurisdiction in the area of transport are stated below. These institutions and their stakeholders have a role to play in the Integrated and Resilient Urban Mobility Project ESMF preparation as well as implementation of the sub-projects. See Table 11 below.

Table 11: The Role of Key Stakeholders and Institutions in the ESMF Implementation

Ministry/Agency	Functions/Role
Ministry of Transport and Aviation (MOTA):	The MoTA is in-charge of the successful implementation of IRUMP and all sub-projects with respect to the technical and environmental and social components. MoTA will therefore play the following roles: preparation of the ESMF, main implementer of ESMF, submits ESMF to the World Bank for review and approval and implementation of the ESMF for the sub-projects.
Project Steering Committee	The Project Steering Committee will provide policy guidance and orientation to the implementation units of the IRUMP and will also ensure coherence of IRUMP with the national policy interventions
Environmental and social safeguards unit	Environmental safeguards Liaise closely with the EPA, World Bank and relevant department in preparing a coordinated response on the environmental and social aspects of project development respectively Collate baseline data on relevant environmental characteristics of the selected project sites Analyse potential community/individual sub-projects and their environmental impacts Ensure that project activities that are implemented will be in accordance to best practices and guidelines set out in the ESMF and site specific ESIA/ESMPs Identify and liaise with all stakeholders involved in environmental related issues in the project; and be responsible for the overall monitoring of mitigation measures and the impacts of the project during implementation Coordinate and ensures the implementation of the RAPs Identify and liaise with all stakeholders involved in social related issues in the project; Establish partnerships and liaise with organisations, community based organisations and civil society organisations
Ministry of Works and Public Assets (MOWPA)	Issues works permits; maintenance of the main road system through the SLRA
Ministry of Social Welfare, Gender and Children's Affairs	Provide a more holistic response to the problem of GBV and in particular sexual exploitation and abuse involving a range of different actors
Environmental Protection Agency	Responsible for reviewing and approving ESIA and monitoring implementation of the Environmental Management Plans Assist with training and capacity building of other institutions Assist with external monitoring and evaluation RPF implementation and social impacts

	Initiates and evolves procedures and safeguards for the prevention of accidents which may cause environmental degradation and remedial measures where accident occur Provides advice and technical support, where possible
Sierra Leone Roads Authority (SLRA)	Semi-autonomous institution, overseen by the MOW, responsible for managing and maintaining the national road network, including roads, bridges, street furniture, and government-owned ferries. It is also responsible for traffic management, including provision of traffic signals, road signs and markings; road layout and junction design, as well as the condition of the roads;
Sierra Leone Ports Authority (SLPA)	Responsible for the jetties used for water transport services and private vessels
The Road Fund Unit	Administers revenue collected to fund road maintenance from road user charges (fuel) and from international donors. It is being transferred from SLRA to the Ministry of Finance.
Sierra Leone Road Safety Authority (SLRSA)	reporting to the MOTA through its board of directors, SLRSA is responsible for testing and licensing all vehicles and drivers in Sierra Leone; road safety, and employs traffic wardens to assist the traffic police in controlling traffic and enforcing traffic and parking regulations; planning of public transport routes in Freetown is by SLRSA
Sierra Leone Road Transport Corporation (SLRTC)	Government owned organization, established to provide passenger transport services. It has powers to provide and regulate passenger transport services throughout the country; operates approximately 120 buses throughout Sierra Leone, including about 60 on Freetown urban services.
Freetown City Council	Project implementation will involve aspects such as land acquisition, employment and issues to do with the livelihood of the people in the community which will accommodate the sub-projects. Land demarcation and general development plans of communities lie with the council as well as the communities. The FCC roles are land allocation/acquisition; zoning of land within communities which lies within the FCC jurisdiction and monitoring of land use to ensure adherence to designated use schemes. FCC does not have the mandate for urban transport. The Local Government Act empowers local councils to provide commercial vehicle parks, to designate parking areas; control street traders; Local councils have no responsibility for traffic management.
Sierra Leone Police	Responsible for executing traffic plans, such as design and implementation of one-way traffic systems and recommending alternative routes in addition to controlling operations and enforcing traffic laws and regulations.
SLMA	SLMA operates and governs the registry of vessels in accordance with the Sierra Leone Merchant Shipping to ensure safety of life at sea and protection of the marine environment.

Sierra Leone Road Safety Authority	Responsible for road safety, including parking
FBC/SLURC-Njala	Review and enrich ESIA study with feedback
Students	Provide input concerning the interests of the students who represent large group of bus/car/okada/Kekeh users along the selected road corridors
Researchers/consultants/contractors	Review results of the study and provide feedback Consultants will be engaged to prepare ESIA's if necessary and assist with implementation and capacity building Contractors will be engaged to carry out the rehabilitation/renovation works and will have to comply with the ESMF requirements on impacts and mitigation actions
Environmental NGOs/CBOs	Provide input to the environmental studies and monitor environmental performance Ensure community participation by mobilizing, sensitizing community members on environmental management and social awareness Stakeholders' platform for voice Have active representation in the Grievance Redress Committees (GRC) Provide necessary support in resettlement and land acquisition related issues
Transport Owners Association and Drivers' Unions	Represent the interests of their members and play a role, in liaison with relevant government agencies, in allocating operators to routes, and control of the informal transport sector generally. Transport terminals are managed by representatives of the drivers' unions. The principal unions are: Indigenous Transport Owners' Association; Motor Drivers' Union; Bike Riders' Union
Donor – World Bank	To be involved with supervision of the project through periodic implementation support missions to MoTA and supervision missions to monitor progress of implementation

Table 12 provides a summary of the stages and institutional responsibilities for the environmental screening, assessment, approval and implementation of the IRUMP activities.

Table 12: Summary of Environmental Screening and Assessment Process and Responsibilities

	Stage	Institutional responsibility	Implementation responsibility
1	Preliminary screening of infrastructure sub-project to determine their safeguard requirements and also to assist in project formulation using checklist	MoTA	Environmental and social safeguards specialist (ESSS)

2	Advise on which IRUMP subprojects to register with the EPA following preliminary screening	EPA	EPA
3	Statutory environmental registration of IRUMP subproject	MoTA/TIDU/PIU	TIDU/PIU/ESSS
4	Determination of appropriate environmental assessment level/category	EPA	National EPA
5	If ESIA is necessary	EPA/MoTA	-
6	Preparation of terms of reference	MoTA	ESSS
7	Validation of ESIA/ESMP TOR	EPA/World Bank	-
8	Selection of consultant	MoTA/	ESSS/Procurement Specialist
9	Preparation and publication of scoping reports	Consultant	-
10	Preparation of ESIA report	Consultant	-
11	Review and approval of ESIA	MoTA/EPA/World Bank	MoTA/ESSS
12	Issuance of environmental permit for project implementation	EPA	-
13	Public Consultant and Disclosure	MoTA/EPA/World Bank	ESSS/Contractor/Consultant
14	Implementation of ESIA	MoTA, Contractor	ESSS/Project Implementers
15	Surveillance and monitoring	MoTA/EPA/World Bank	ESSS, M&E Specialist, EPA

9.0 INSTITUTIONAL NEEDS AND CAPACITY BUILDING

9.1. Strengthening of project capacity for implementing the ESMF

One of the project components is to build capacity within the MoTA and other agencies to be able to manage the Project and to improve the staff skills in general. To enhance the respective roles and collaboration of the relevant stakeholders and further strengthen their capacity for planning, management and overall regulation of the transport sector, the following broad areas of capacity building needs and technical support required have been identified as deserving attention in the implementation of the ESMF requirements of this Project and future projects:

- Strengthening the ministry's and departments' capacity to develop a long-term vision and regulatory framework to support effective management of the urban transport system;
- Developing a comprehensive strategy to improve public transport services incorporating different sectors of the population needs and requirements;
- Conducting a public relations/communication campaign to educate stakeholders, schoolchildren and the public about road-space management and road safety;
- Developing a road-safety database; and
- Supporting climate-resilient activities, for example by developing guidelines to incorporate climate and disaster resilience into road design by providing specific cost-effective requirements and good practices for slope stabilization in mountain areas of Freetown.
- GBV prevention and response in infrastructure projects

9.2. Capacity building programmes

The objectives of the environmental and social trainings include providing basic knowledge and information on the key environmental and social issues associated with the proposed interventions to the key project personnel including the safeguards focal persons, other PIU staff, and project beneficiaries.

The training plan is presented in Table 13. The Environmental and social specialists will be responsible for the implementation of this plan, including providing trainings. At the subproject sites, the field staff will be responsible to provide such trainings to their construction staff and workers. Additional capacity building requirements may be included in the ESMPs of the subprojects.

The environmental and social specialist will be responsible for preparing the reports for trainings conducted by the PIUs. Similar reports will be prepared by the contractors also for the trainings conducted by them. The training reports will include the summary of proceedings, objectives of the training, copy of the training materials and presentation, list of resource persons and list of participants.

It is also highly recommended that all project implementing agencies be provided with two days' workshop on implementation of the ESMF. This training will ensure all project staff and

their agencies are able to manage and monitor the environmental and social aspects of the project activities. The workshop should take place as part of the project preparation process. The workshop should be conducted by an external consultant with knowledge on the environmental management requirements for IRUMP project, including knowledge on World Bank safeguards policies and requirements (OHS Standards). Other relevant staff of the project units can be included in the training in order to familiarize with the implementation of the ESMF.

An outline for the training is provided in Table 13 below.

Table 13: Proposed Training Format for ESMF Implementation

Module	Duration
Day 1: Introduction <ul style="list-style-type: none"> • Objectives of the ESMF • Key stakeholders with a role in the ESMF • Relevant legislative and regulatory acts and World Bank Safeguard Policies • Structure and role of relevant environmental/transport authorities as relates to the IRUMP 	1
Day 2: Summary of Guidelines for sub-projects <ul style="list-style-type: none"> • Screening • Appraisal/ approval • Disclosure • Annual review • Annual reporting 	0.5.
Capacity building requirements	0.5
Budgeting	0.5

The following (Table 14) is the recommended training program in environmental and social issues.

Table 14: Recommended Training Courses

Training course	Aspects to be covered	Participating parties	Responsibility	Proposed scheduling
Training on environmental and social management and monitoring for the project	<ul style="list-style-type: none"> • Environmental and social awareness • Key environmental and social issues associated with the projects and subprojects • ESMF findings; subproject- 	MoTA/TIDU, Traffic Police, stakeholders communities	Environmental specialist and social safeguard specialist	Design phase of the project

	<p>specific ESMPs and their components, ESMP implementation</p> <ul style="list-style-type: none"> • Project screening techniques; subproject monitoring and reporting; involuntary resettlement; GBV prevention and response, Grievance Redress Mechanism and Consultation 			
OHS Aspects	<ul style="list-style-type: none"> • ESMP Implementation Health and safety in construction sites 	MoTA/TIDU, operators of construction equipment, contractors staff and workers	Contractors	Ongoing at least once in a month (starting before project) construction

10.0 ESMF IMPLEMENTATION BUDGET

The proposed budget for implementation of the measures and recommendations outlined in the ESMF is provided in Table 15 below. This cost is included in the overall project cost. Additional costs could be included in the sub-project.

Table 15. Proposed budget for implementation of the ESMF

#	Item	Unit	Unit Cost	Total	Source of financing
			US\$	US\$	
1	Preparation of specific ESIA	LS	200,000	200,000	Project funds
2	Capacity Building	3	50,000	150,000	Project funds
3	Implementation of specific ESMP (purchase of equipment, cost of meeting)	3	30,000	90,000	Project funds
4	Mid-term audit of ES performance	No	150,000	150,000	Project funds
5	Completion audit of ES performance	No	80,000	80,000	Project funds
6	Health and safety at construction sites and environmental monitoring	No	135,000	135,000	Project funds
7	Preparation of RAPs	1	90,000	90,000	Project funds
8	Grievance Redress Management	No	30,000	30,000	Project funds
9	Miscellaneous expenses	No	15,000	45,000	Project funds
X	Total			940,000	

11.0 GRIEVANCE REDRESS MECHANISM

TIDU will establish a Grievance Redress Mechanism (GRM) for the project to address complaints and grievances in implementing the ESMF. Based on discussion and consensus, the GRM will try to resolve the issues/conflicts, among landowners and to give opportunity to those not covered by the land acquisition and compensation, amicably and quickly to ensure unhindered implementation of the project activities. GRM will serve as a way to prevent and address community concerns about routine project activities or perceived incidents or impacts, reduce risk, identifying and responding to grievances supports the development of positive relationships between projects and affected groups/communities, and other stakeholders.

The World Bank standards outline requirements for grievance mechanisms for some projects. Grievance mechanisms should receive and facilitate resolution of the affected institutional or communities' concerns and grievances. The World Bank states the concerns should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project.

MoTA/TIDU, as part of GRM, will set up project and sub-project specific Grievance Redress Committees (GRCs) which will include representatives of communities, local authorities, representatives of civil works contractors, social safeguard officers and other relevant stakeholders (similar to the grievance redress set up under the RPF). The GRC will carry out all its transactions in a transparent manner with full disclosure of the relevant information to the stakeholders. Decisions agreed at any level of the GRC hearings will be binding on MoTA/TIDU and its partners agencies involved in the implementation of the project.

In addressing grievances, a bottom up approach will be adopted. Grievances will be discussed at the community level, that is, in group level to solve among the community themselves. If required, the issue will be referred to the second tier GRCs and finally if not resolved, it can be escalated to Project Safeguard Unit (Environmental and Social Safeguards Team of the IRUMP PIU) to constitute an appropriate team including key stakeholders including the local authorities for the area (or his/her representative) to resolve the matter. The GRM will ensure to have confidential and safe procedures for GBV reports and it will consider a survivor center approach.

MoTA/TIDU will prepare the relevant process for smooth operation of the GRM (See Table 16). It will develop a related Communication Policy which will be disclosed to the public and relevant stakeholders. The aggrieved stakeholders will be able to register their grievances. Further, at the subproject/field level, it will also maintain a grievance register where by any cases of grievance brought by aggrieved persons will be received and duly registered. All cases of grievance will be resolved with a reasonable timeframe not exceeding one month. In this regard, MoTA/TIDU project management team will develop an appropriate monitoring

mechanism so that all concerned will know and understand the status of grievance redress progress at implementation level.

When these two tiers of amicable mediation arrangement fail, the complainant is free to seek redress in the court of law of Sierra Leone. In this regard, MoTA/TIDU will facilitate the concerned person from the community in getting free legal aid. The PIU will also ensure that there is no cost imposed on the aggrieved person if the person belongs to a vulnerable group. In case communities and individuals who believe that they are adversely affected by a World Bank Group (WBG) supported program, may submit complaints to existing program-level grievance redress mechanisms or the WBG's Grievance Redress Service (GRS).

11.1. World Bank Group Grievance Redress Service

The GRS ensures that complaints received are promptly reviewed in order to address program-related concerns. Project affected communities and individuals may submit their complaint to the WBG's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WBG non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WBG's attention, and WBG Management has been given an opportunity to respond. Information on how to submit complaints to the WBG's corporate Grievance Redress Service (GRS) can be obtained from the website (<http://www.worldbank.org/GRS>). Information on how to submit complaints to the WBG Inspection Panel can be obtained from the website (www.inspectionpanel.org).

The World Bank is supporting more effective approaches to problem solving to help strengthen its performance and development outcomes. This strengthened corporate approach focuses on a preventive approach to identify, track and resolve grievances early; and offering lower-cost, rapid citizen redress at the project and country level through mediation, facilitation or other problem solving processes where it is most needed.

The approach proposes three interlinked steps: (i) a risk-based assessment of potential grievances, disputes or conflicts that may arise during project preparation and implementation; (ii) identification of the client's existing capacity for grievance redress; and (iii) an action plan that identifies priority areas for strengthening grievance capacity, or if necessary, establishing new mechanisms at the project level and where applicable, dedicated resources should be allocated to realize the action plan.

Table 16: Proposed grievance redress mechanism

	Process	Description	Time frame
1	Grievance receipt and registration/ logging	<ul style="list-style-type: none"> • Face-to-face; phone; letter, e-mail, recorded during public/community meetings etc • Significance assessed and grievance recorded or logged using the model complaint form and filed. Significance criteria: Level 1 – one off event; Level 2 – complaint is widespread or repeated; Level 3 – any complaint (one off or repeated) that indicates breach of law or policy or this ESMF/RPF provisions 	1 – 2 Days
2	Development and implementation of response	<ul style="list-style-type: none"> • GRC meets or takes a decision on the grievance • Grievance assigned to appropriate party for resolution of necessary • Response development with input from relevant stakeholders • Redress response/action approved by GRC and logged • Redress response/update of progress on resolution communicated to the complainant • Start implementing redress action 	5 – 10 Days
3	Verifying the implementation of redress action	<p>4 Redress action implemented and verified by GRC</p> <p>5 GRC satisfied with implementation of redress action</p>	10-15 Days
4	Close grievance or refer grievance to 2 nd tier resolution	<ul style="list-style-type: none"> • Completion of redress action recorded or logged • Confirm with complainant that grievance can be closed or determine what follow up is necessary • Record final sign off of grievance • If grievance cannot be closed, return to step 2 or recommend 2nd level settlement 	15-25 Days
5	Court of law	<ul style="list-style-type: none"> • if 2nd level settlement does not address dispute, complainant can resort to court of law 	Unknown
6	Monitoring and evaluation, and reporting	<ul style="list-style-type: none"> • Grievance Redress Mechanism Process is documented and monitored 	

12.0 PUBLIC CONSULTATION AND DISCLOSURE PROCESS

12.1. Process for public consultation in the ESMF

During the course of the implementation of the project, consultations should be carried out with all important stakeholder groups (17).

Table 17: Key Stakeholder Groups in the IRUMP

Government and regulatory agencies	Relevant MDAs, EPA-SL, SLRA
Public and private sectors	SLPA, SLMA, Police, GVWC, EDSA, SLRSA, SLRTC
NGOs	International and local stakeholder groups, including environmental NGOs
Local stakeholders	Community Based Organisations, Councillors, Unions and other local groups
Academic and Research Institutions	Universities, research and technical institutes, research groups etc.

For sub-projects that can be developed, concerns and suggestions must be included in the consultation process for the environmental and social evaluation so that they can be considered in the final evaluation.

12.2. Stakeholder consultation

Stakeholder consultations were carried out during the preparation of ESMF and RPF. These consultations were held with institutional as well as representatives of community stakeholders (councilors) and transport operators such as drivers, okada riders, women and youth groups, in the project affected area (Lumley, Congo Cross and Kissy Ferry Terminal) between May and June 2018. Extensive field visits and consultations with the relevant stakeholders at the environmental and social assessment stage are required to overcome this shortcoming throughout the program sites to collect feedback/comments on the components, sub-components, activities, potential positive and negative impacts and measures taken to mitigate those impact. The consultations served to learn lessons from the environmental and social issues which were associated with the IRUMP and also to gather information on the likely IRUMP activities, issues of environmental and social concerns, institutional mandates and requirements for IRUMP to inform the preparation of the ESMF.

The consultations have revealed that the project is considered to have a number of positive social and environmental impacts. The main issues/comments and concerns raised during consultation meetings include: land acquisition and associated compensation caused by physical relocation/displacement of squatters and economic displacement impacts on market women and informal business facilities; influx of labour force and its impacts on SGBV in the project area; confusion over land ownership, particularly the Lumley transit market; Good communication, respect and cooperation between the contractor and the communities;

Sensitization of the road workers so as to avoid luring school girls and married women to sex relations as this brews conflict. These issues are part of the ESMP and some form the core of the training and awareness program.

However, in particular, the stakeholders suggested that mechanisms in ESMF should ensure regular consultations, participation, communication, access to information, grievance redressal of project affected and beneficiary communities and other stakeholders; and mitigation of environment and social/resettlement impacts in an effective manner; proper Memorandum of Understanding (MoU) arrangements for either cash or in-kind compensation should be put in place for squatters whose plots are used for demonstration purposes; every subproject or activities under IRUMP should be screened before it starts; final advice on screening should be done by the EPA, and the involvement of EPA in IRUMP ESMF implementation will ensure compliance

12.3. Proposed Disclosure Plan

For project such as the IRUMP, the World Bank procedures require that an ESMF and RPF be prepared and publicly disclosed prior to project appraisal. This allows the public and other stakeholders to document on the possible environmental and social impacts of the project, and the appraisal team to strengthen the frameworks as necessary, particularly measures and plans to prevent or mitigate any adverse environmental and social impacts.

Towards this end, this document will be publicly released through the World Bank website and on project websites once established, institutional stakeholders and affected and beneficiary communities at the early stage of sub-projects implementation. The documents should be made available in English in compliance with the World Bank's *Public Consultation and Disclosure Policy*.

12.4. Disclosure of sub-projects EMPs

EMP prepared for sub-projects under the IRUMP project will also need to be disclosed to the public. Copies of the EMPs should be made available to communities where the project is implemented and interested parties in accessible locations through the Freetown Municipal Council and local authorities (e.g. tribal heads, councilors etc.). Copies of the EMPs should be provided to the implementing agencies and submitted to the World Bank. This will ensure record keeping of all activities implemented under the ESMF and ensure that third-party audits have adequate information when undertaking annual environmental audits/appraisal.

13.0 CONCLUSIONS

The sub-projects under the IRUMP are feasible and consistent with the socioeconomic development plans of the city of Freetown. Apart from meeting the socio-economic development needs of the municipalities, they support sustainable development of the city, through the improvement of urban mobility and safety in three pilot areas and enhance institutional capacity to plan and manage urban transport in the city of Freetown. Detailed ESIA's where applicable will be prepared for each subproject, whereby all potential environmental and social impacts will be identified and evaluated.

The positive impacts of the project include improved access to social facilities, business and transport facilities, reduce travel time, reduce traffic-related environmental problems, reduced road accidents etc.

During project implementation, some negative impacts may affect the local environment and local populations in the project areas. Land acquisition and associated compensation of project-affected households may take place in subproject areas in which case RPF and RAPs will have to be prepared. Typical of all construction activities with negative impact relate to noise, air and water pollution, generation of solid wastes, disruption of public utilities, and occupational health risks, to mention a few.

Most impacts will be typical and can be mitigated using the mitigation principles detailed in the report. The mitigation principles will form part of the project contractors' contracts and the MoTA/TIDU and their PSC will ensure that the contractors comply with the provisions of their contracts, including those relating to environmental impacts. In accordance with their contracts, in case of site-specific impacts, contractors will be required to prepare site-specific detailed designs and ESMPs. The site-specific ESMPs will be approved by the PSCs prior to the work commencing. Periodic monitoring reports will be prepared by the environmental and social safeguard specialist and the results will be submitted to the MoTA and the World Bank.

To facilitate effective mitigation of impacts during operation, the project will also provide substantial support for capacity building, including training courses, at various levels to ensure that the ESMPs will be implemented and their performance monitored. Environmental monitoring will be carried out to ensure that the project activities will not create adverse impacts. The monitoring results will be periodically reported to MoTA/TIDU and World Bank.

The ESHIA and RAPs will be disclosed to local communities and authorities in the project areas.

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15.0 ANNEXES

15.1. ANNEX 1: CHANCE FIND PROCEDURES

Cultural property include monuments, structures, works of art, or sites of significance points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves.

Chance find procedures will be used as follows:

- a) Stop the construction activities in the area of the chance find;
- b) Delineate the discovered site or area;
- c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Tourism and Culture take over;
- d) Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Tourism and Culture immediately (within 24 hours or less);
- e) Responsible local authorities and the Ministry of Tourism and Culture would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures.;
- f) Decisions on how to handle the finding shall be taken by the responsible authorities mainly Ministry of Tourism and Culture. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage;
- g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Tourism and Culture; and
- h) Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Tourism and Culture concerning safeguard of the heritage.

These procedures must be referred to as standard provisions in construction contracts, where applicable. During project supervision, the Site Engineer shall monitor the above regulations relating to the treatment of any chance find encountered are observed.

Relevant findings will be recorded in World Bank Project Supervision Reports (PSRs), and Implementation Completion Reports (ICRs) will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

15.2. ANNEX 2: TERMS OF REFERENCE (TOR) FOR THE PREPARATION OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) AND RESETTLEMENT POLICY FRAMEWORK (RPF)

1. BACKGROUND

The Government of Sierra Leone through the Ministry of Transport and Aviation (MoTA) has received IBRD/IDA/World Bank credit facility to be used for implementation of the Integrated and Resilient Urban Mobility Project (IRUMP). Urban mobility issues in Freetown are a result of the difficult economic and political environment, the inability to keep pace with the growing demand, and decades of neglect. It will take many years to address the underlying problems in a sustained manner. The way forward will focus on testing and scaling up pilot solutions and building capacity to ensure the sustainability of results. Following this logic, the objective of this proposed multiphase programmatic urban transport project is two-fold: first, to pilot short-term remedies in order to obtain immediate relief and demonstrate the value of good management of existing infrastructure, efficient implementation, and good coordination across multiple departments and agencies within the government; and second, to build institutions, develop appropriate policies and regulations, and identify arrangements to strengthen the delivery of public transport services and climate resilience. The project will finance studies and training to strengthen the capacity of government agencies and departments and support the development of laws, regulations and frameworks for the sustainable delivery of urban transport services. It is expected that the lessons from the project will enable the government to incrementally scale up interventions to a wider area over time.

The Project Development Objective (PDO) is to improve mobility and safety in a pilot area and enhance institutional capacity to plan and manage urban transport in the city of Freetown. The project will have three components: (i) Comprehensive Corridor Improvements; (ii) Institutional Capacity Building and Studies; and (iii) Ferry Terminal and Service Improvements.

Component 1: Comprehensive Corridor Improvements. This component will use an integrated and comprehensive approach to improve safety mobility for pedestrians and vehicles, and overall management of the public rights of way in a pilot area of Freetown from Lumley to central Freetown. The project investments would focus on: (a) improving pedestrian infrastructure; (b) improving road conditions and rehabilitating key road sections; (c) providing traffic management, signalization, parking, and intersection improvements; (d) providing a transport operator's terminal; and (e) addressing the needs of street traders through off-street market areas. Depending on the credit amount, the project may also finance the rehabilitation of sections of urban roads which are currently unpaved or in extremely poor condition, such as Motor Road and/or King Harmon Way.

Component 2: Institutional Capacity Building and Studies. The activities of this component may include: (a) strengthening the ministry's and departments' capacity to develop a long-term vision and regulatory framework to support effective management of the urban transport system; (b) diagnosing problems with public transport and developing a comprehensive strategy to improve bus services; (c) conducting a public relations/communication campaign to educate stakeholders, schoolchildren and the public about road-space management and road safety; (d) developing a road-safety database; and (e) supporting climate-resilient activities, for example by developing guidelines to incorporate climate and disaster resilience into road design by providing specific cost-effective requirements and good practices for slope stabilization in mountain areas of Freetown; and mapping tools for prioritization of urban transport projects using network analysis and giving consideration to climate-related risks.

Component 3: Ferry Terminals and Services: This component will finance investments to improve safety and passenger comfort at ferry terminal facilities and their access to these terminals. These interventions aim to improve the image of ferry services, enhance the quality of travel for ferry users, and increase demand. This component will also include the development and implementation of a coordinated market development strategy that identifies and secures additional customers and revenue for the ferry operators.

2. DESCRIPTION OF ASSIGNMENT

The proposed urban transport project will consist of several sub-projects whose specific locations and sub-activities have not been defined at this stage of project preparation. It is therefore proposed that an ESMF and RPF be prepared to outline the principles, criteria and procedures to follow during project implementation. The ESMF will provide guidelines for screening all project activities and provide for further assessment and preparation of Full ESHIA or RAP as may be applicable. The two frameworks; ESMF and RPF will also guide the determination, preparation and implementation of the appropriate Environmental and Social Management Plan (ESMP) and Resettlement Action Plans or Abbreviated Resettlement Action Plans (RAP) to address specific impacts that may arise during project execution.

3. OBJECTIVES

The purpose of this consulting service is to develop a set of frameworks (ESMF and RPF) and actions for mitigating the adverse environmental and social impacts of the Project. The ESMF and RPF are statements of the policies, legal, principles, institutional framework and procedures that the Government of Sierra Leone (GoSL), through the Ministry of Transport and Aviation (MoTA) and their respective Agencies will follow in each subproject in addressing environmental, social and resettlement issues. The ESMF and RPF set out guidance for which subprojects will be subjected to as they are identified and prior to implementation. Preparation of these documents will allow the MoTA and other implementing partners to apply it to all activities / contracts included in the project.

The ESMF and RPF will meet requirements of both the SL EPA Act, 2008 (amended 2010) and the applicable World Bank safeguards policies:

- OP/BP 4.01 (Environmental Assessment)
- OP/BP 4.11- Physical and Cultural Resources
- OP/BP 4.12 (Involuntary Resettlement)

The Frameworks (ESMF and RPF) will apply to the program and provide the basis to prepare site specific Environmental, Social and Health Impact Assessments (ESHIA), accompanied by mitigation plans (RAPs, ESMP etc.) together with the engineering design.

4. SCOPE OF THE STUDY

4.1 Environmental and Social Management Framework (ESMF)

The Integrated and Resilient Urban Mobility Project (IRUMP) is in the preparatory and design stage. Although the MoTA and the World Bank have a general design framework, the design of sub-projects, the exact locations of such projects, as well as the scale of their likely impacts are not determined at this stage of project preparation. For this reason, an ESMF outlining the general principles as well as regulatory and institutional arrangements for identifying and addressing any potential environmental and social impacts arising from these investments is to be prepared under this consultancy service. The ESMF will also include instruments for screening sub-projects for environmental and social impacts; and provide guidance and procedures for measures to be followed when specific project sites are identified. The ESMF will be specific on the nature of mitigation measures but generic on location and scope of interventions as these are not known at this stage. The ESMF will provide clear guidance for the preparation of site-specific Environmental Social and Health Impact Assessments (ESHIA) during project implementation. At the ESHIA stage, specific environmental and social issues will be investigated in detail and a full ESHIA undertaken.

In preparing the ESMF, the consultant shall undertake the following;

- (i) **Description of Project:** Provide a brief description of the Integrated and Resilient Urban Mobility Project (IRUMP) to place the ESMF in the relevant context. This would include a summary of the background to the project, the different components and most importantly, the consultant shall identify the possible environmental and social issues that each component and subcomponents are likely to generate and for which reason this ESMF is being developed.
- (ii) **Legislative, Regulative and Administrative Regime:** The Consultant shall provide policy, legal and institutional framework for environmental and social management, description of the legislative, regulatory and administrative regime regarding the triggered Safeguards Policies that the project will be operating. In addition, the consultant shall include the requirements and approval processes/procedures for specific environmental issues. The Consultant shall clearly identify and highlight any significant changes in regulations/legislation and develop a stakeholders' consultation process that ensures that all key

stakeholders, including potentially affected persons, are aware of the objectives and potential environmental and social impacts of the proposed project and their views are incorporated into the projects' design as appropriate.

- (iii) **Description of Baseline** The consultant shall establish the baseline profile of Project coverage area including environmental and natural characteristics, utilities and hydrology, population, economy and livelihood activities, health, education and cultural heritage.
- (iv) **Determination of Potential Environmental and Social Impacts:** The Consultant shall determine the types of environmental and social impacts/aspects that are commonly associated with the proposed sub-projects highlight the positive and adverse impacts, proposing measures for mitigation and monitoring.
- (v) **Environmental and social screening system:** This marks the beginning of the ESHIA/ESMP process, which should be initiated as early as possible along with the sub-project planning process after the subproject is conceived. The consultant shall design environmental assessment screening/initial system to be used for evaluation and future reviews and assessments of investments. The screening system should establish the important functions needed to be performed during the screening stage, and the follow-up steps. The screening form shall be attached to the main ESMF report as annex.
- (vi) **Environmental and Social Checklist:** The consultant shall develop an environmental and social checklist. The checklist shall outline simple mitigation measures for the identified potential negative environmental and social impacts. The implementation of these will be guided by an Environmental and Social Management Plan. The Management Plan shall consist of mitigation measures and monitoring indicators.
- (vii) **Institutional Needs and Capacity Building:** The Consultant shall identify the existing institutional needs and the capacity of the implementing agency. This is to help assess what needs and capacities will be required for implementing and monitoring the appropriate safeguards instrument to achieve the intended objectives. Based on this analysis, the consultant shall develop a training and capacity building Programme on environmental and social safeguards for the institution and any other implementing partners. Any other technical support considered important may also be outlined by the consultant.
- (viii) **Budget:** The Consultant shall propose appropriate budget for the implementation of the entire ESMF based on the complexity of the potential foreseeable impacts and aspects to be considered by the project.
- (ix) **Public Consultations and Disclosure:** The Consultant will undertake public consultations with the relevant stakeholders including the different categories of project participants and other affected people like the elderly, the youth, women, disabled and other marginalized groups. The Consultant shall prepare in close liaison with the MoTA, a Consultation Programme for the entire process, which:
 - a. Defines the terminology and methodology to be used in the consultation process. The following terms should be defined and distinguished from each

other: consultation, information sharing, information dissemination, workshops, meetings, and public hearings.

- b. Identifies all stakeholders likely to be involved in the consultation process. The stakeholders will encompass organizations, state authorities (relevant metropolitan/ municipal/district assemblies, SL EPA, project beneficiaries, community leaders, civil society organizations and relevant identifiable groups etc.),
- c. Specifies the roles of MoTA, the Consultant and the key stakeholders during the consultation process.
- d. Presents an organization plan and schedule for the consultation of stakeholders. The program will define the form of consultations (focus group meetings, community meetings, workshops, etc.), the category of stakeholders to be included, and the schedule for consultation.
- e. Includes a schedule for information dissemination to the public.
- f. The Consultant shall plan: (i) informal and formal meetings for information sharing, (ii) public dissemination of reports and studies, and (iii) public consultations as required by the SL EPA Act 2008 (Amended 2010). The location and schedule of which will be discussed and decided upon with key stakeholders.
- g. In compliance with the SL EPA Act 2008 (Amended 2010) and the World Bank policies, in a way which meets Bank and SL EPA requirements.

The consultation Programme shall be designed very early during the studies and submitted to the MoTA. The Consultant shall (i) lead the consultation process on behalf of the MoTA, (ii) participate in planning and implementing the consultation process (iii) arrange workshops including relevant stakeholders (including project beneficiaries, community leaders, civil society organizations and relevant identifiable groups), and shall participate in public hearings and other activities defined in the SL EPA Act 2008 and World Bank safeguard policies. Details of the consultations shall be attached to this report as an annex.

- (x) Procedures for screening sub-projects. The consultant shall establish clear procedures and methodologies for the E&S planning, review, approval and implementation of sub-projects;
- (xi) Design an EA screening/initial assessment system to be used for sub-projects; and
- (xii) Formulate the Environmental and Social Management Framework and its implementation measures indicating (i) Environmental and Social Screening Process including the steps and responsibilities of implementing organizations or persons; (ii) General and specific mitigation measures;(iii) Providing clear guidance and procedures to follow for the preparation of site-specific Environmental Social and Health Impact Assessments (ESHIAAs), and Environmental and Social Management Plans (ESMPs) during project implementation. (v) Responsibility and institutional arrangement for implementation; and (vi) Monitoring measures including schedules;
- (xiii) Prepare and include a template ESMP to guide sub-project preparation of ESHIAAs/ESMP

- (xiv) Provide mechanisms for ESMF disclosure/dissemination. The ESMF will be disclosed in country by MoTA and on the Bank website.

The selected consultant will work in collaboration with the safeguards officer, within the Technical Group, for the preparation of the ESMF. The selected consultant will remain responsible to deliver the ESMF.

4.1.1 Outline of the ESMF Report

The minimum content of the ESMF Report should include an executive summary, and all sections outlined under the scope of works of this TOR. The report should include the method adopted by the Consultant for carrying out the preparation of the ESMF. The Consultant should attach technical annexes to the Report. Annexes of the report should include records on institutions and people consulted; minutes of public consultation; photographs of meetings; general environmental management conditions for construction contracts; Environmental and social Screening forms for sub-projects, a summary of World Bank Safeguards Policies and how they will apply to the future project activities; a summary of the relevant sections of the SL EPA Act 2008 (amended 2010) and how they will apply to the future project activities and the scope of work for this assignment.

4.1.2 Consultant Qualification and Experience

For this assignment, the MoTA proposes to recruit an individual consultant who is at minimum a Senior Environmental Scientist/Natural Resources Specialist with at least 8 years of relevant experience, with an emphasis on environmental and social impacts assessments in urban setting, and related issues. The Consultant should have proven experience with World Bank Safeguards Policies and requirements as well as application of SL EPA Act 2008. Proven experience in preparation of ESMF, in minimum of six (6) previous assignments, is essential.

4.1.3 Estimated Duration of Assignment

The target period for the start of the consultancy is February 2018. It is anticipated that the Consultant should complete the outputs of the work over a maximum duration of 50 working days over a period of about two months from contract signature. Specific deliverables include:

- Inception report by D+10d
- First Draft ESMF for review and comments by MoTA and World Bank by D+30d
- Final Draft Report Review and comments by MoTA and World Bank by D+40d
- Final ESMF and RPF report by D+50d

Where D = the date of signing the contract, and d = calendar days.

4.1.4 Schedule of Work and Deliverables

The Consultant will submit to the MoTA a final report of Environmental and Social Management Framework (ESMF). Prior to submission of the final report, the following reports would be submitted:

- a. **Inception Report:** The inception report shall specify the schedule of work with output indicators of performance, as well as the methods and tools for consultation. This will be discussed by the consultant, MoTA and other experts to ensure quality of final outcome. Three (3) copies shall be submitted to the MoTA. This will be delivered one (1) week after signing of contract;
- b. **First Draft Report:** This report will be circulated for comments and relevant issues raised incorporated into revised version. Three (3) copies shall be submitted to the MoTA. This will be delivered four (4) weeks after signing of contract.
- c. **Final Draft Report:** This will be circulated for comments and relevant issues raised shall be incorporated into the revised version. Three (3) copies shall be submitted to the MoTA. This will be delivered three (3) weeks after submission of first draft.
- d. **Final Report:** The final report should include a concise Executive Summary and should have all annexes and bibliography and the dissemination/disclosure plan. Six (6) copies of the report will be delivered one (1) week after receipt of comments from the MoTA.

The Consultant shall submit all reports to the MoTA both in electronic and paper forms.

4.1.5 Administrative Arrangements

The MoTA will supervise this assignment and provide the necessary administrative support and make available necessary documents, reports, data and contacts to the Consultant. In addition, the MoTA will submit copies of the draft and final reports from the consultant to the World Bank for review/comments prior to acceptance of the report and making final payments to the consultant.

15.3. Annex 3: Environmental and Social Screening Checklist

**ENVIRONMENTAL PROTECTION AGENCY, SIERRA LEONE
(Completed in Duplicate)**

Sub-Project Name: _____

Region: _____ District: _____

Town _____

Address for correspondence _____

Contact Person _____ Position _____

Phone No. _____ Fax No. _____

E-mail Contact _____

Telephone: _____

Fax: _____

E-mail: _____

1.0. Description of Sub-project

1.1 Nature of Sub-project and Duration

.....
.....
.....
.....
.....

1.2 Scope of Sub-project [Size of labour force, area covered, type of raw materials (quantities and sources), types of equipment, implements, machinery, etc...]

.....
.....
.....
.....

1.3 Location [attach a site plan or a map (if available)]

i. Location or Area (and nearest Town(s)):

.....

ii. Land take (total area for sub-project and related activities):

.....

1.4 Site Description and Sensitivity [Attach photographs and sketches showing distances]

i. Distance from nearest water body or drainage channel (minimum distance measured from the edge of proposed site to the bank of the water body or drain).

More than 100 meters 100 meters Less than 100 meters

Number of water bodies and/or drainage channels/depressions close to site

.....

Distance to nearest community (house) and/or other existing structures from the proposed site:

.....

Number of affected properties within the designated project area:

.....

1.5 Land Cover and Topography

i. Land cover of the site consists (completely or partly or noticeably) of:

Vegetation	<input type="checkbox"/>	Sparse Vegetation	<input type="checkbox"/>	Physical Structure(s)	<input type="checkbox"/>
Flood Plane	<input type="checkbox"/>	Agriculture (Animals)	<input type="checkbox"/>	Cultural Resource	<input type="checkbox"/>
Water	<input type="checkbox"/>	Agriculture (Crops)	<input type="checkbox"/>	Other specify.....	

ii. Elevation and topography of the area for the Sub-project:

Flat	<input type="checkbox"/>	Valley	<input type="checkbox"/>	Slope	<input type="checkbox"/>	Undulating	<input type="checkbox"/>
Hill	<input type="checkbox"/>	Mountain	<input type="checkbox"/>	Depression	<input type="checkbox"/>		

iii. Elevation and topography of the adjoining areas (within 500 meters radius of the site):

Flat	<input type="checkbox"/>	Valley	<input type="checkbox"/>	Slope	<input type="checkbox"/>	Undulating	<input type="checkbox"/>
Hill	<input type="checkbox"/>	Mountain	<input type="checkbox"/>	Depression	<input type="checkbox"/>		

2.0 Infrastructure

i. The Sub-project would be developed in/on:

Undeveloped site <input type="checkbox"/>	Partly developed site <input type="checkbox"/>	Well developed	Other (specify)
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ii. The Sub-project would involve excavation Yes No

iii. Estimated number and depth of the excavations, etc.):

.....

vi. Are any of the following located on-site or within 50 metres from the edge of the proposed site?

Water supply source	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pipeline	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Power supply source (electric pylon)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Drainage	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other(s) specify:		

3.0 Environmental and Social Impacts

3.1 Land Use

i.	Complete change of existing land use	Yes	No
ii.	High population of land owners to be resettled	Yes	No

3.2 Air Quality – Is the proposed sub-project:

i. Expected to emit any of the following during construction and operation?

	Dust	<input type="checkbox"/>	Smoke	<input type="checkbox"/>	VOCs	<input type="checkbox"/>
ii.	Expose workers or the public to substantial emissions?				Yes <input type="checkbox"/>	No <input type="checkbox"/>
iii.	Result in cumulatively increased emissions in the area?				Yes <input type="checkbox"/>	No <input type="checkbox"/>
vi.	Create objectionable odour affecting people?				Yes <input type="checkbox"/>	No <input type="checkbox"/>

3.3 Flora and Fauna - Would the proposed Sub-project:

i.	Have adverse effect on any reserved area?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ii.	Have adverse effect on wetland areas through removal, filling, hydrological interruption or other means?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

iii. Interfere substantially with the movement of any wildlife species or organisms?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Vi. Be located within 100m from an Environmentally Sensitive Area?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

3.4 Cultural Resources - Would the proposed sub-project:

i. Disturb any burial grounds or cemeteries?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ii. Cause substantial adverse effect on any archaeological or historic site?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
iii. Alter the existing visual character of the area and surroundings, including trees and rock outcrops?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

3.5 Water Quality and Hydrology - Would the proposed sub-project:

i. Generate and discharge during construction:

Liquid waste	<input type="checkbox"/>	Liquid with oily substance	<input type="checkbox"/>
Liquid with human or animal waste	<input type="checkbox"/>	Liquid with chemical substance	<input type="checkbox"/>
Liquid with pH outside 6-9 range	<input type="checkbox"/>	Liquid with odour/smell	<input type="checkbox"/>
ii. Lead to changes in the drainage pattern of the area, resulting in erosion or siltation?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
iii. Lead to increase in surface run-off, which could result in flooding on or off-site?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
iv. Increase runoff, which could exceed the capacity of existing storm water drainage?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
v. Lead to multiple water users, which could affect water quality and quantity?	Yes	No	

3.6 Noise Nuisance - Would the proposed Undertaking:

i. Generate noise in excess of established permissible noise level?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ii. Expose persons to excessive vibration and noise?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

3.7 Waste Generation

- i. Types: Solid Liquid Gaseous Other
- ii. Quantity:
- iii. Means/Place of Disposal:
.....

3.8 Occupational Health and Safety – Would the proposed sub-project:

i.	Expose workers to emissions?	Yes	No
ii.	Involve using machinery that generate excessive noise (above 70dB) and vibration?	Yes	No
iii.	Expose workers to working at height?	Yes	No
iv.	Expose workers to heavy lifting?	Yes	No

3.9 Socio-economic. – Would the proposed sub-project:

i.	Lead to loss of livelihoods	Yes	No
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ii.	Influx of people from other communities?	Yes	No
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3.10 Other Environmental and Social Impacts

.....

4.0 Management of (Environmental and Social) Impacts

4.1 Air Quality

.....

4.2 Flora and Fauna

.....

4.3 Cultural Resources

.....

4.4 Coastal and Water Resources

.....

4.5 Noise

.....

4.6 Occupational Health and Safety

.....

4.7 Waste Generation

.....

4.8 Socio-economic

.....

4.9 Other Measures

.....

DECLARATION

I, hereby declare that the information provided on this form is true to the best of my knowledge and shall provide any additional information that shall come to my notice in the course of processing this application.

.....

Signature

.....

Date

Official use

Recommendations:

- Requires and EIA and/ or RAP
- Requires a PEA
- Does not require further environmental study

Use extra sheets where space provided is inadequate

15.4. ANNEX 4: EPA – SL Environmental Impact Assessment Licensing Procedure

Checklist for the issuance of environmental impact assessment (EIA) license for projects under the first schedule of the Environment Protection Agency Act, 2010

The developer/proponent is the applicant who is required to under the following stages/

Stage One – Registration

1. The applicant is required to register the project proposal/undertaking through an application process. The latter is addressed to the Executive Chairperson and copied to the Director. This is to expedite the processing of the EIA application.
2. The Agency shall issue application and screening forms to the applicant after a payment of two hundred thousand Leones at an account designated for EIA's application fees.
3. The applicant is required to return duly completed forms together with the project proposal of the undertaking to the Environment Protection Agency Sierra Leone (EPA-SL) within fourteen days.
4. The agency shall acknowledge receipt of the filled application and screening forms within seven days.

Stage Two – Screening

1. Project proposal, application and screening forms are screened to determine whether or not the development proposal should be subject to an EIA and, if so, the level of detail required.
2. After the screening, the report shall be communicated to the applicant within twenty one days from the date of receipt of the application and screening forms

Stage three – scoping

1. After the project has be classified and a determination is made that the activity requires an environmental impact assessment license the proponent will be required to submit a scoping report on the project.
2. The scoping report shall set the scope of extent of the environmental impact assessment to be carried out by the applicant and shall include a draft terms of reference which shall indicate the essential issues to be addressed in the environmental impact statement on the proposed/current undertaking .
3. The Agency shall upon receipt of a scoping report examine it and inform the applicant within twenty one days of the receipt of the report whether it is acceptable or not acceptable.
4. Staff of the Agency will visit the location of the project before the scoping report is accepted or not accepted by the Agency.

Stage four – Environmental, Social and Health Impact Studies and Preparation of the Report

1. Upon approval of the scoping report and terms of reference the applicant undertakes the impact studies.
2. Before undertaking the environmental impact assessment, the applicant shall have the responsibility to:
 - a. Give notice of the proposal undertaking to the relevant ministries, government departments and organizations and the relevant local council;
 - b. Advertise in at least two national newspapers and a newspaper, of any circulating in the locality where the proposed undertaking is to be situated; and
 - c. Make available for inspection by the general public in the locality of the proposed undertaking, copies of the scoping report.
3. Upon completion of the impact studies, the applicant should submit eighteen hard and soft copies of the ESHIA report to the Agency for circulation to Board Members, professional bodies and the public for comments.

Stage five – Public Hearing and Review of the ESHIA Report

1. The applicant shall hold two or more public hearing meetings in respect of the environmental impact statement (environmental impact assessment document) for public participation in the decision-making process
2. The applicant should choose the date(s) and venue(s) of the public hearings.

15.5. ANNEX 5: SAMPLE TERMS OF REFERENCE FOR EIA

In case an EIA has to be undertaken for any specific FIUT subprojects, the MoTA will procure the services of a certified EPA-SL EIA Practitioner to undertake the EIA study. The following will be the content of the ToR's for this study.

Introduction and Context

This part will be completed at a time and will include necessary information related to the context and methodology to carry out the study. It will briefly describe the purpose and objectives of FIUT, and the specific FIUT project for which the EIA is undertaken.

Objectives of EIA study

- To identify all likely positive and negative environmental impacts due to the specific FIUT Project component;
- To identify and evaluate all significant negative environmental impacts, and propose appropriate mitigation measures for the attention of the developer, for incorporation into the final construction and operational phases;
- To propose an environmental management plan for all aspects of the specific project.

EIA study tasks

The consultant should realize the following:

- Describe the project characteristics, including extent, land requirement, material requirements, construction works, and the beneficiary community;
- Describe the biophysical characteristics of the environment where the project activities will be realized; and underline the main constraints that need to be taken into account at the field preparation, construction works and future project operations;
- Assess the potential environmental and social impacts related to project activities and recommend adequate mitigation measures, including costs estimation.
- Review alternative more cost-effective and environmentally and socially friendlier options for achieving the same objectives,
- Review policy, legal and institutional framework, at national and international level, related to the environment and identify the constraints for best practices in management with appropriate recommendations for improvements,
- Identify responsibilities and actors for the implementation of proposed mitigation measures,
- Assess the capacity available to implement the proposed mitigation measures, and suggest recommendations in terms of training and capacity building and estimate their costs,
- Develop an Environmental Management Plan (EMP) for the project. The EMP should underline (i) the potential environmental and social impacts resulting from project activities (ii) the proposed mitigation measures; (iii) the institutional responsibilities for implementation; (iv) the monitoring indicators; (v) the institutional responsibilities for monitoring and implementation of mitigation measures; (vi) the costs of activities; and (vii) the implementation schedule,
- Public consultations: The EIA results and the proposed mitigation measures will be discussed with populations, NGOs, local councils and other stakeholders impacted by

the project activities. Recommendations from this public consultation will be included in the final EIA report.

Structure of the EIA Report

- Cover page
- Table of contents
- List of acronyms
- Executive summary
- Introduction
- Description of project activities
- Description of environment in the project area
- Description of policy, legal and institutional framework
- Presentation of results of public consultations and disclosure, and proposed social action by the developer;
- Description of methodology and techniques used in the assessment and analyses of project impacts,
- Description of environmental and social impacts of project activities,
- Environmental Management Plan (EMP) for the project including the proposed mitigation measures; the institutional responsibilities for implementation; the monitoring indicators; the institutional responsibilities for monitoring and implementation of mitigation; Summary table for EMP
- Recommendations
- References
- List of persons / institutions met

Consultant team

The Consultants will be SL-EPA - Certified EIA Practitioners or others agreed by EPA.

