ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)
FOR
ORANGE (SL) LTD'S MOBILE TELECOMMUNICATIONS OPERATIONS IN SIERRA LEONE

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
(ESMP)

Prepared by

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Freetown, Sierra Leone

On behalf of

ORANGE SL LTD

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ACRONYMS

0C Degrees Celsius

% Percentage

CBO community-based organisation

CDAP Community Development Action Plan

CEMMATS Construction Engineering Maintenance, Manufacturing and Technical Services

CI Corrugated Iron

dB decibels

EPA-SL Environment Protection Agency Sierra Leone

ESIA Environmental and Social Impact Assessment

ESMP Environmental and Social Management Plan

ERP Emergency Response Plan

GoSL Government of Sierra Leone

GPS Global Positioning System

IFC International Finance Corporation

MDA Ministries, Departments and Agencies

MLCPE Ministry of Lands, Country Planning and the Environment

MWHI The Ministry of works, Housing and Infrastructure

N North

NGO Non-Governmental Organization

PAC Project Affected Communities

PAPs Project Affected Persons

PCDP Public Consultation and Disclosure Plan

PRSP Poverty reduction Strategy Paper

PS Performance Standard

SLEPAA, 2008 Sierra Leone Environment Protection Agency Act, 2008

TOR Terms of Reference

TPL Traditional pit latrine

VPL Ventilated pit latrine

WHO World Health Organization

WMP Waste Management Plan

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Volume 1 of the Environmental and Social Impact Assessment (ESIA) contains the policy, legal and administrative framework under which the study was carried out and a description of the operations in its geographic, ecological, social and temporal context. Mitigation measures needed to control, avoid, prevent, reduce and repair impacts to acceptable levels are presented, as well as an analysis of the cumulative impacts and feasible alternatives.

The Environmental and Social Management Plan (ESMP) outlined in this volume (Volume 2) presents the environmental management, mitigation, monitoring and institutional measures to be taken in conducting the Company's operational activities, to reduce adverse environmental and social effects to acceptable levels and enhance positive effects. This plan provides a framework and requirements/guidance for preparation of a series of sub-plans to be prepared later. It does not present all of the actual individual plans to be implemented. It specifically defines what actions must be taken and who is responsible, to reduce adverse operational impacts.

This ESMP includes several component plans defining specific action programs for waste management, emergency response, closure and reclamation, community development, and public consultation. The ESMP highlights the issues and concerns that are presented in the ESIA and identifies reasonable and practical responses to address and mitigate potentially adverse effects. It defines the specific actions that will be required to effectively implement those responses in a timely manner and describes the methods by which management will demonstrate that those requirements have been met. It also establishes the course that Orange management will follow in complying with Government of Sierra Leone environmental laws and regulations as well as international policies and guidelines.

This volume is split into the following subsections:

List of Environmental and Social Management Plans

Plans
Environmental Health and Safety Plan
Waste Management Plan
Emergency Response Plan
Community Development Action Plan
Public Consultation and Disclosure Plan
Closure Plan
Management, Mitigation, Monitoring and Implementation Measures

Environmental Health and Safety Plan (EHSP)

The Environmental Health and Safety (EHS) Plan identifies the principles, approach, procedures and methods that will be used to control and minimize the environmental and social impacts of all the company's developmental and operational activities.

Waste Management Plan (WMP)

The Waste Management Plan describes the procedures, systems, equipment, and structures specific to waste management and disposal. Waste generation will be limited at all levels of the operation in order to decrease the volume of waste generated and make waste disposal more manageable. The plan also defines who is responsible for developing and implementing the plan, and what records and reporting will be required.

Emergency Response Plan (ERP)

The Emergency Response Plan (ERP) provides employees and managers with specific instructions that will allow them to respond quickly and efficiently to any foreseeable emergencies likely to occur during operations. It is developed using recognized and accepted methods and practices, and includes specific responses, protocols, and management contacts. The ERP essentially has the goal of protecting people, the environment, property and the operations.

Community Development Action Plan (CDAP)

The community development and social assistance programmes aimed at improving the living conditions of the local communities in a sustainable way are captured under the CDAP.

Public Consultation and Disclosure Plan (PCDP)

The PCDP is intended to define objectives and establish the framework necessary to provide understandable information to all parties involved. This plan will be implemented to ensure timely and effective multi-directional communication between Orange SL Ltd management and stakeholders.

Closure Plan (CP)

The Closure Plan documents plans required to restore the site to a pre operational activities state, ensuring that the land can be used in beneficial post-operation land use.

Management, Mitigation, Monitoring and Implementation Measures

Management, mitigation and monitoring measures are presented in this section, which also includes a comprehensive monitoring plan.

Management of Plans

The Management Plans document the systems and processes that will be implemented by Orange over time to ensure compliance with local and international standards.

Orange will attempt to manage risks in the workplace by applying accepted and systematic risk management principles combined with routine staff training.

1 ENVIRONMENTAL HEALTH AND SAFETY (EHS) PLAN

1.1 Introduction

The Environmental Health and Safety Plan identifies the principles, approach, procedures and methods that will be used to control and minimize all environmental health and safety impacts associated with company's operations. It is intended to complement the Environmental and Social Impact Assessment (ESIA) and is tailored to the hazards and risks established for telecommunications. It is developed on the basis of the results of the environmental assessment in which site-specific variables, such as host community, employees safety and other factors, are taken into account indicates a commitment to minimizing operations related adverse environmental and social impacts.

In development of an EHS plan, it is important to have a health and safety Policy, around which plans can be developed and systems put in place to ensure that the commitments made in the policy are kept.

1.2 Orange SL Ltd's Occupational Health, Safety & Security Policy

OSL affirms its commitment to provide a secure working environment to all its employees, strategic partners, employees, contractual staff and other stakeholders. It further commits to protect its property, infrastructure, information, integrity and reputation from potential threats.

1.2.1 Philosophy

The security and protection of own employees, strategic partners, employees and other stakeholders must be the overriding priority of our business. Personal and company asset security is a paramount responsibility for each employee.

1.2.2 Objective

Security comprises of information security (electronic, oral & documentary) and physical security (infrastructure and assets).

The company aspires to achieve its security objective in line with the business strategic pillars through the following means:

1. Proactively monitor, control and manage security challenges by reporting and recording all incidences including security breaches and irregularities. Corrective or mitigation action plans shall be taken and followed up through regular verification to improve the security standards.
2. All OSL employees staff working shall wear distinctive access ID cards with unique ID card number. The ID card shall not be transferable to a third party.

3. It is the responsibility of every OSL employee to deny, prevent and discourage tailgating at all entry and exit points
4. The Organization has a right to search all persons, luggage and vehicles entering or exiting the Company premises. Being in possession of offensive weapons by employees/visitors in OSL premises is prohibited.
5. Employees without the required training are not allowed to be in possession of Company property or be at designated security areas without authorization.
6. All visitors shall be escorted by OSL employees while they are within operational areas such as the data centre; the visitor's card shall be duly signed by the host OSL employee or strategic partner employee.
7. Prevention must be the first priority. Security threat analysis and risk evaluation should be done on a continuous basis on Organization premises and infrastructure.

1.2.3 Security Responsibility

While the security committee shall be responsible for the effective operation and enforcement of the security policy and procedures all OSL employees have a responsibility to ensure that security measures and procedures are observed at all times.

- Directors and HODs shall take a leading role in promoting and developing a security conscious culture.
- OSL reserves the right of admission to its installations and premises and has the right to prosecute and or take appropriate action against any person who contravenes any rule or regulation of the procedures.
- As far as possible, security procedures and guidelines reflect the seamless integration of security and business activities

1.3 Environmental, Health, and Safety Guidelines based on IFC's Guidelines for Telecommunications Projects

The following safety guidelines have been developed using the IFC's EHS guidelines for telecommunications projects, and tailored to fit the OSL operations based on what can feasibly implemented.

1.3.1 Environmental Issues

Environmental issues in this industry sector include the following:

- Terrestrial habitat alteration
- Aquatic habitat alteration
- Visual impacts
- Hazardous materials and waste

- Electric and magnetic fields
- Emissions to air
- Noise

1.3.1.1 Terrestrial Habitat Alteration

Terrestrial and aquatic habitats may be altered primarily during the construction of communications infrastructure depending on the type of infrastructure component and proposed location. Potential impacts to habitat may be more significant during construction and installation of linear infrastructure, such as long distance fixed line cables, as well as access roads to other types of infrastructure along previously undeveloped land.

Recommended measures to prevent and control impacts to terrestrial habitats during construction of the right-of-way include:

- Site fixed line infrastructure (e.g. fiber optic cable) and other types of linear infrastructure rights-of-way, access roads, lines, and towers to avoid critical habitat through use of existing utility and transport corridors, whenever possible;
- Management of construction site activities

<u>Avian Collisions</u>

The height of some television and radio transmission towers can pose a potentially fatal risk to birds mainly through collisions. The likelihood of avian collisions is thought to increase with the height of the communications tower, the presence of tower lighting (which attracts some species of birds at night or during low light conditions), and, most importantly, the tower location with regard to flyways or migration corridors.

Recommended prevention and control measures to minimize avian collisions include:

- Avoiding the cumulative impact of towers by collocating antennae on existing towers or other fixed structures (especially cellular telephone communication antennae), designing new towers structurally and electrically to accommodate future users, and removing towers no longer in use;
- To the extent feasible, limiting the tower height;
- If guy wired towers are located near critical bird habitats or migratory routes, installing visibility enhancement objects (e.g. marker balls, bird deterrents, or diverters) on the guyed wires;
- Limiting the placement and intensity of tower lighting systems to those required to address aviation safety. Possible alternatives include the use white and / or strobe lighting systems.

1.3.1.2 Aquatic Habitat Alteration

Depending on their location, the installation of fixed line components, including shore approaches for long distance fiber optic cables, and access roads to transmission towers and other fixed infrastructure, may require construction of corridors crossing aquatic habitats with the potential to disrupt watercourses, wetlands, coral reefs, and riparian vegetation.

Recommended measures to prevent and control impacts to aquatic habitats include:

- Site power transmission towers and substations to avoid critical aquatic habitat such as watercourses, wetlands, and riparian areas, as well as fish spawning habitat, and critical fish over-wintering habitat, whenever possible;
- Maintaining fish access when road crossings of watercourses are unavoidable by utilizing clearspan bridges, open-bottom culverts, or other approved methods;
- Minimizing clearing and disruption to riparian vegetation;
- Management of construction site activities

1.3.1.3 Visual impacts

The visual impacts from tower and antennae equipment may depend on the perception of the local community as well as the aesthetic value assigned to the scenery (e.g. scenic and tourism areas). Recommendations to prevent, minimize and control the visual impacts include:

- Minimizing construction of additional towers through colocation of proposed antennae in existing towers or existing structures such as buildings or power transmission towers;
- Taking into account public perception about aesthetic issues by consulting with the local community during the siting process of antenna towers.

1.3.1.4 Hazardous materials and waste

Telecommunications processes do not normally require the use of significant amounts of hazardous materials. However, the operation of certain types of switching and transmitting equipment may require the use backup power systems consisting of a combination of batteries (typically lead-acid batteries) and diesel-fueled backup generators for electricity.

Operations and maintenance activities may also result in the generation of electronic wastes (e.g. nickel-cadmium batteries and printed circuit boards from computer and other electronic equipment as well as backup power batteries). The operation of backup generators and service vehicles may also result in the generation of used tires, and waste oils and used filters.

Transformer equipment may potentially contain Polychlorinated Biphenyls (PCBs) while cooling equipment may contain refrigerants (potential Ozone Depleting Substances [ODSs]).

Recommended hazardous materials management actions include:

- Implementing fuel delivery procedures and spill prevention and control plans applicable to the delivery and storage of fuel for backup electric power systems, preferably providing secondary containment and overfill prevention for fuel storage tanks;
- Ensuring that new support equipment does not contain PCBs or ODSs. PCBs from old equipment should be managed as a hazardous waste;
- Purchasing electronic equipment that meets international phase out requirements for hazardous materials contents

1.3.1.5 Electric and magnetic fields

Electric and magnetic fields (EMF) are invisible lines of force emitted by and surrounding any electrical device, such as power lines and electrical equipment. Electric fields are produced by voltage and increase in strength as the voltage increases.

Magnetic fields result from the flow of electric current and increase in strength as the current increases. Radio waves and microwaves emitted by transmitting antennas are one form of electromagnetic energy. Radio wave strength is generally much greater from radio and television broadcast stations than from cellular phone communication base transceiver stations.

Microwave and satellite system antennas transmit and receive highly concentrated directional beams at even higher power levels.

Although there is public and scientific concern over the potential health effects associated with exposure to EMF (not only highvoltage power lines and substations or radio frequency transmissions systems, but also from everyday household uses of electricity), there is no empirical data demonstrating adverse health effects from exposure to typical EMF levels from power transmissions lines and equipment

However, while the evidence of adverse health risks is weak, it is still sufficient to warrant limited concern. Recommendations applicable to the management of EMF exposures include:

- Limiting public access to antennae tower locations
- Following good engineering practice in the siting and installation of directional links (e.g. microwave links);
- Taking into account public perception about EMF issues by consulting with the local community during the siting process of antenna towers.

1.3.1.6 Emissions to air

Emissions from telecommunications projects may be primarily associated with the operation of vehicle fleets, the use of backup power generators, and the use of cooling and fire suppression systems. Recommended management actions to minimize emissions include:

- Implementation of vehicle fleet and power generator emissions management strategies and avoiding the use of backup power generators as a permanent power source, if feasible;
- Substitution in use of chlorofluorocarbons (CFCs) in cooling and fire-suppression systems, using contractors who are properly trained or certified in the management of CFCs.

1.3.1.7 Noise

The principal source of noise in telecommunications facilities is associated with the operation of backup power generators.

Recommended noise management action includes the use of generator housing (closed building) as well as siting the generator as best as possible, away from residences.

1.3.2 Occupational Health and Safety Issues

Occupational health and safety issues in telecommunications projects primarily include the following:

- Electrical safety
- Electromagnetic fields (occupational)
- Optical fiber safety
- Elevated and overhead work
- Fall protection
- Confined space entry
- Motor vehicle safety

Occupational health and safety hazards may also arise during construction and are common to other types of construction sites and are described in detail, along with measures for their prevention and control. Excavation, construction, and repair of some components of a telecommunications system may result in workers' exposure to existing aboveground or underground utilities, including aerial electric transmission lines or buried water pipelines. Identification and location of all relevant existing underground utilities should be undertaken prior to any excavation and trenching activities.

1.3.2.1 Electrical safety

Telecommunications workers may be exposed to occupational hazards from contact with live power lines during construction, maintenance, and operation activities. Prevention and control measures associated with live power lines include:

- Only allowing trained and certified workers to install, maintain, or repair electrical equipment;

- Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity to, the lines;
- Ensuring that live-wire work is conducted by trained workers with strict adherence to specific safety and insulation standards. Qualified or trained employees working on electrical systems should be able to achieve the following:
  - Distinguish live parts from other parts of the electrical system
  - Determine the voltage of live parts
  - Understand the minimum approach distances outlined for specific live line voltages
  - Ensure proper use of special safety equipment and procedures when working near, or on, exposed energized parts of an electrical system
- Workers should not approach an exposed, energized or conductive part even if properly trained unless:
  - The worker is properly insulated from the energized part with gloves or other approved insulation; or
  - The energized part is properly insulated from the worker and any other conductive object; or
  - The worker is properly isolated and insulated from any other conductive object (live-line work)
- Where maintenance and operation is required within minimum setback distances, specific training, safety measures, personal safety devices, and other precautions should be defined in a health and safety plan.

Recommendations to prevent, minimize, and control injuries related to electric shock include:

- All electrical installations should be performed by certified personnel and supervised by an accredited person. Certification for such work should include theoretical as well as practical education and experience;
- Strict procedures for de-energizing and checking of electrical equipment should be in place before any maintenance work is conducted. If de-energizing is not possible, electrical installations should be moved or insulated to minimize the hazardous effects;
- Prior to excavation works, all existing underground cable installations should be identified and marked. Drawings and plans should indicate such installations;
- All electrical installations or steel structures, such as masts or towers, should be grounded to provide safety as the electrical current chooses the grounded path for electrical discharge. In cases where maintenance work has to be performed on energized

equipment, a strict safety procedure should be in place and work should be performed under constant supervision;

- Personnel training should be provided in revival techniques for victims of electric shock.

1.3.2.2 Optical fiber safety

Workers involved in fiber optic cable installation or repair may be at risk of permanent eye damage due to exposure to laser light during cable connection and inspection activities.

Workers may also be exposed to minute or microscopic glass fiber shards that can penetrate human tissue through skin or eyes, or by ingestion or inhalation. Optical fiber installation activities may also pose a risk of fire due to the presence of flammable materials in high-powered laser installation areas.

Recommendations to prevent, minimize, and control injuries related to fiber optic cables installation and maintenance include:

- Worker training on specific hazards associated with laser lights, including the various classes of low and high power laser lights, and fiber management;
- Preparation and implementation of laser light safety and fiber management procedures which include:
  - Switching off laser lights prior to work initiation, when feasible
  - Use of laser safety glasses during live optical fiber systems installation
  - Prohibition of intentionally looking into the laser of fiber end or pointing it at another person restricting access to the work area, placing warning signs and labelling of areas with potential for exposure to laser radiation, and providing adequate background lighting to account for loss of visibility with the use of protective eyewear
  - Inspecting the work area for the presence of flammable materials prior to the installation of highpowered laser lights
- Implementation of a medical surveillance program with initial and periodic eye examinations;
- Avoiding exposure to fibres through use of protective clothing and separation of work and eating areas.

1.3.2.3 Elevated and overhead work

The assembly of towers and installation of antennae can pose a physical hazard to workers using lifts and elevated platforms and those located below due to the potential for falling objects.

Recommended management strategies include:

- The area around which elevated work is taking place should be secured to prevent unauthorized access. Working under other personnel should be avoided;
- Hoisting and lifting equipment should be rated and maintained and operators trained in their use. Elevating platforms should be maintained and operated according to established safety procedures that include such aspects as equipment and use of fall protection measures (e.g. railings), movement of location only when the lift is in a retracted position, repair by qualified individuals, and the use of effective locks to avoid unauthorized use by untrained individuals;
- Ladders should be used according to pre-established safety procedures including proper placement, climbing, standing, and the use of extensions.

1.3.2.4 Fall protection

Workers may be exposed to occupational hazards when working at elevation during construction, maintenance, and operation activities. Prevention and control measures for working at height include:

- Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others;
- Establishment of criteria for use of 100 percent fall protection (typically when working over 2 meters (m) above the working surface, but sometimes extended to 7m, depending on the activity). The fall protection system should be appropriate for the tower structure and necessary movements, including ascent, descent, and moving from point to point;
- Installation of fixtures on tower components to facilitate the use of fall protection systems;
- Provision of an adequate work-positioning device system for workers. Connectors on positioning systems should be compatible with the tower components to which they are attached;
- Safety belts should be of not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts should be replaced before signs of aging or fraying of fibers become evident;
- When operating power tools at height, workers should use a second (backup) safety strap.

1.3.2.5 Confined space entry

The type of confined spaces encountered in telecommunications projects varies, but may include underground fixed line infrastructure co-located with other underground infrastructure in urban areas. Telecommunications facility operators should develop and implement confined space entry procedures.

1.3.2.6 Motor vehicle safety

The geographically dispersed nature of the infrastructure of some telecommunications operators may require the frequent use of ground transportation for maintenance activities. Under these circumstances, companies should prepare and implement motor vehicle safety programs to protect the safety of its workers and the communities in which they operate.

1.4 Community Health and Safety Issues

Examples of community health and safety issues identified during the construction phase include exposure to construction vehicles and transports, and exposure to dust, noise and vibrations caused by constructions works.

Operational phase occupational hazards associated with telecommunications projects include:

- Structural and site access issues
- Driver safety and cellular phones

1.4.1 Structural and site access issues

Communities may be exposed to structural safety issues in the event of structural failure of masts or towers. These same sites may also attract unauthorized persons interested in climbing these structures, also representing a risk to their safety.

Recommendations to manage site safety issues include:

- Design and installation of tower structures and components according to good international industry practice, taking into account the potential frequency and magnitude of natural hazards;
- Erection of fences in combination with other institutional controls and management approaches, such as the posting of signs forbidding entry and placement of guards to protect the premises surrounding the site;
- Prevent unauthorised access and climbing of towers through the presence of security guards at network sites, and/or equipping masts or towers with anti-climbing devices.

1.4.2 Driver safety and cellular phones

Telecommunications companies who provide cellular phone service have little or no influence over the safe use of these devises by their clients. However, to the extent feasible, companies should promote the safe use of cellular telephones through such methods as customer information campaigns which may include distribution of information at the time of customer service sign-up or by mail with billing information, or through public advertising campaigns.

1.5 Effective Organisation and Management Responsibilities

It is important to delegate Environmental Health and Safety issues to qualified personnel who will be responsible for ensuring not only adherence, but motivating the workers to actively engage in their work in a safe manner. Assigning a member of staff or committee of workers to EHS issues, marks the first step to managing risks inherent with the operations and creates a mechanism by which management can monitor improvements.

1.5.1 Orange SL Ltd Management

Management of Orange has the overall responsibility for ensuring the effective implementation of the ESMP. Responsibilities include the following:

- Ensuring that this ESMP is implemented in all operational areas.
- Ensuring that key Company personnel are made fully aware of their environmental responsibilities and that they are familiar with the contents of this Plan.
- Ensuring that sufficient resources are made available for the effective implementation of the requirements contained in this ESMP.
- Planning, forecasting and coordinating resources to maximise the effective utilisation of resources and to deliver against service targets in consultation with relevant parties.
- Communicating effectively with all levels within the organisation to obtain insights into ongoing environmental performance, to influence operations for constant environmental performance improvements and to improve awareness.
- Ensuring that recovery measures are identified and implemented to reduce the potential for incidents to escalate in severity.
- Ensuring that all incidents and non-conformances are reported and closed out as required, as timeously as possible.

1.5.2 Environmental Health and Safety Manager

The EHS Manager is the appointed personnel responsible for ensuring the on-going improvement of health and safety in the work place. He ensures that all reasonable measures

are taken to make provision for equipment and resources to be at the disposal of workers at all operational sites. Where resources are inadequate, he will be responsible for ensuring that senior management is made aware of this.

Responsibilities include but are not limited to the following:

- Ensuring that the ESMP and its contents remain valid to the operations through regular review and updating, as required.
- Managing documentation required for the effective implementation of this ESMP, as detailed in the ESMP.
- Preparation of environmental training material.
- Conducting environmental training
- Ensuring that all required licences and permits are in place and valid.
- Ensuring that required documents are in compliance with the Environmental Permits and Licenses.
- Ensuring that activities undertaken in operational areas are in line with the requirements of the applicable codes and standards.
- Ensuring, in cooperation with other departments and Managers, that all visitors, subcontractors and site employees receive induction training.
- Ensuring preparation and distribution of environmental notices, bulletin boards and communications.
- Identifying areas of environmental risk and developing controls accordingly in conjunction with Management and Operations.
- Establishing a programme for environmental auditing.
- Conducting environmental compliance / implementation audits as scheduled, or as required.
- Ensuring that corrective and preventative actions are effectively and timeously implemented where required.
- Periodically conducting environmental emergency drills, and reporting observations as required.
- Attending EHS meetings, and reporting on environmental issues and concerns in operational areas.
- Compiling environmental reports as required. Managing environmental communications as required.
- Managing environmental records as required.
- Assisting Client in responding to environmental enquiries / complaints from public.

1.5.3 Employees

All employees are obliged and empowered to identify, report and where appropriate, manage potential hazards. Also, employees are responsible for ensuring they do not adversely affect their own health or the health and safety of others through any act or omission. They are obliged to:

- Report all incidents and hazards;
- Wear and maintain provided PPE;
- Operate & maintain machinery in a safe and practical manner;
- Follow all reasonable work instructions and procedures; and
- Comply with company policies & procedures

2 WASTE MANAGEMENT PLAN (WMP)

2.1 Introduction

The Waste Management Plan (WMP) describes Orange's commitment to taking all necessary steps to ensure that the generation, collection, storage, transportation and disposal of all wastes generated during all phases of operations will be conducted in a safe, efficient and environmentally responsible manner.

The WMP describes the proposed measures to be used to protect environmental and social receptors from adverse impacts associated with the generation of waste. The WMP considers:

- Proposed handling, storage and disposal methods, and
- Equipment and staff.

2.2 Objectives of the Waste Management Plan

The objectives of the WMP are to:

- Identify all potential sources of waste;
- Generate the least possible amount of waste through reduction, reuse and recycling practices, and review / approve all orders for materials, chemicals, and supplies to limit the environmental impact thereof;
- Protect the health and safety of workers and communities;
- Avoid or mitigate any potential negative impacts on all elements of the environment – including, but not limited to, people, flora, fauna, air, soils, surface and groundwater resources;
- Monitor waste generation, handling and disposal to assess whether waste management is being carried out as per the WMP and its associated directives;
- Avoid costly clean-up through prevention, and
- Ensure a logical and efficient plan for waste collection, sorting and disposal that reduces the number of times the waste is handled.

2.3 Waste Identification and Management

Waste streams likely to be generated during the day to day operational activities include the following:

- Domestic wastes
- Electrical and electronics wastes

- Hazardous wastes
- Used /Waste Oils and Oil Filters
- Construction wastes (during construction of new sites)
- Wastewater

Management of each waste stream is discussed in the following sections of this plan.

2.3.1 Domestic wastes

A variety of domestic waste materials will be generated on a daily basis which may include, but not be limited to the following:

- Aluminium, glass, plastic, paper, cardboard etc;
- Food and food packaging;
- Old tyres, hoses and rubber,
- Fabrics and other domestic type wastes.

Workers will be required to consider re-use of materials where possible e.g. re-use of plastics, fabrics, packaging, etc.

Labelled waste bins will be installed in all operational areas (offices, shops and network sites). Arrangements for waste disposal include contracting a Waste Management Company with the capacity to collect and dispose of wastes in an environmentally sustainable manner.

2.3.2 Electrical and electronics wastes

Electrical and electronics wastes (e-waste) may be generated during the construction and installation of new offices, shops and network sites, as well as during routine repairs and maintenance. E-wastes will be disposed of in an assigned storage area in each facility.

Depending on the nature of the waste, whole equipment or equipment components will be assessed for the possibility of re-use. Where components can be harvested for re-use, the remaining non-electrical parts of the equipment (e.g. its carcass) can be disposed of in the domestic waste bins.

2.3.3 Used /Waste Oils and Oil Filters

Used oils, oil and fuel filters from vehicles and machinery will be generated during servicing and maintenance. The dealers, from whom the vehicles and machinery were sourced, are also in charge of servicing and maintenance. On completion of any servicing or repair work, used oils, oil and fuel filters, and other related wastes are removed from the site by the dealer, for disposal.

2.3.4 Hazardous wastes

Hazardous wastes are materials considered reactive, flammable, radioactive, corrosive and/or toxic. The use of these materials will be limited to the extent possible. If use of these materials is unavoidable, procedures will be established for documentation and labelling as well as the safe storage, handling, and disposal of these materials.

Hazardous wastes that may be generated include the following:

- Batteries;
- Aerosol cans;
- Excess paints, thinners, solvents;
- Medical wastes (first aid).

Hazardous wastes will be disposed of in assigned hazardous waste bins / drums and disposed of preferably by controlled incineration.

2.3.5 Construction wastes (during construction of new sites)

Construction wastes include unwanted materials produced as a result of construction activities. This category of waste could include materials such as:

- Concrete;
- Wood;
- Packaging (cement bags, plastic, cardboard);
- Waste steel;
- Electrical wiring, and
- Nails.

Handling these wastes will start at the pre-construction stage where bills of materials quantities will be calculated. Calculations will be done in such a way as to limit the generation of scrap or unwanted materials.

Material re-use will also be enforced where possible to ensure that maximum use of available materials is made and limit as best as possible the materials which would have to be disposed of.

Segregation of wastes at source will be enforced through the provision of labelled waste bins, which will be stationed around active construction areas. These waste bins will be specifically for the disposal of solid, non-hazardous construction wastes.

2.3.6 Wastewater

Wastewater will be produced through construction activities such as concrete wastewater (slurry). The construction contractor will be responsible for treating concrete wastewater if needed (i.e. settling of solids, neutralising high pH), before releasing the clean water into the environment.

Sewage will be directed into underground septic tanks which will be emptied periodically as requires.

2.4 Waste Transportation and Disposal

The following handling procedures, developed based on IFC EHS Guidelines for Waste Management Facilities (2007), will be adopted as part of Orange's waste management program. Waste collection, handling, and transport guidelines include, but are not necessarily limited to, the following:

- A routine schedule will be established for domestic waste collection and disposal;
- Waste generators will be provided with appropriate waste disposal containers;
- Enclosed refuse vehicles or vehicles equipped with tarps will be used for the domestic waste collection;
- Waste handling will be minimized in as far practicable, and
- Waste containment will be maximized.

Odours and the loss of wastes will be monitored, evaluated, and reduced at all waste storage areas. Litter (for example, plastic bags and paper) will be picked up, disposed of in the waste storage facility.

2.5 Management Responsibility

The EHS Officer have the overall responsibility for ensuring the implementation of the WMP contained in this report.

Provision will be made for waste disposal receptacles which will be labelled and/or colour coded to enable waste segregation at source. Waste collection for disposal will be organised or overseen by the EHS Officer.

Orange Management will also ensure regular monitoring of the contractor's compliance (during construction or repair works) with the waste management system established including, compliance with waste segregation, housekeeping and waste storage areas, etc.

2.5.1 Contractor Responsibility

Construction contractors (during construction and development of new operational areas) is responsible for ensuring that all construction workers are aware of the waste management procedures contained in the WMP. The contractor will liaise with Orange's EHS Officer if there are any issues or challenges possibly preventing compliance with the plan e.g. unavailability of facilities (waste bins), irregular collection and disposal schedules, etc.

The construction contractor is responsible for providing training for workers in relation to waste management issues. Training will include but not be limited to:

- Waste segregation and its importance;
- Differences between wastes streams and an overview of incompatible wastes;
- Good housekeeping practices;
- Safe waste handling practices, and
- How to read and understand Material Safety Data Sheets (MSDS).

3 EMERGENCY RESPONSE PLAN (ERP)

Emergency situations may arise from various activities and conditions during the course of operations, including plant equipment or process failures, fire/explosions, vehicle accidents, natural disaster, civil unrest, etc. These could have potentially severe consequences for the Company if no emergency response plans have been put in place.

3.1 Introduction

The ERP is an essential component of this ESMP.

Procedures outlined for incident response, emergency and crisis management, are designed to enable all relevant parties associated with Orange to act quickly, decisively and cooperatively in any crisis or emergency situation. This ensures an appropriately measured level of response and recovery actions, depending on the nature, location and potential gravity of any given incident.

This document includes emergency plans, organizational responsibilities and reporting procedures.

To be effective, the ERP will be clearly communicated to all Orange personnel and contractors. The following processes will be applied to ensure its effectiveness:

- Review the ERP with the construction contractor and their employees, to ensure that it adequately covers their activities;
- Review the plan on a regular basis to address new hazards or significant changes in operational area conditions, and incorporate lessons learned from previous incidents and exercises;
- Post the procedure in conspicuous locations, easily accessible to workers;
- Conduct drills and exercises on a quarterly basis to assess and improve upon emergency response, and
- Ensure personnel are competent and understand their roles and responsibilities during an emergency response situation.

3.2 Hazard Identification

The ability to identify hazards will go a long way towards preventing the occurrence of emergency situations. Orange will ensure that all staff are trained in hazard identification and that any construction contractors' workers are similarly trained.

To identify and assess hazards, workers should be able to:

- Collect and review information about the hazards present or likely to be present in the workplace;
- Conduct initial and periodic workplace inspections to identify new or recurring hazards;

- Investigate injuries, illnesses, incidents, and close calls / near misses to determine the underlying hazards, their causes, and EHS program shortcomings;
- Group similar incidents and identify trends in injuries, illnesses, incidents and hazards reported;
- Consider hazards associated with emergency or non-routine situations, and
- Determine the severity and likelihood of incidents that could result for each hazard identified, and use this information to prioritize corrective actions.

3.3 Incident Classification

Orange shall maintain and document operational and tactical procedures for site specific identified risks. Typical emergency types, severity and responses that characterize industrial operations such as telecommunicates include:

Level I - Minor Incident

Level II- Moderate Incident

Level III- Major Incident

Incident	Severity
Fire/Explosion	
Electrocution	
Fuel/Oil Spills	
Fall from Height	
Structural Collapse	
Minor accidents (Scrapes, Cuts, abrasions etc.)	
Road Accidents	
Medical Health Cases	
Civil unrest and disturbance	
Natural Disaster	

3.4 Emergency Response Procedures

The following steps apply to almost any emergency and should generally be followed in addressing an emergency:

- Stay calm - Your example can influence others, prevent panic and thereby aid the emergency response;
- Assess the situation - Determine what happened and what the immediate emergency is. Assess what has happened to whom and what will continue to happen if no action is taken. Identify the cause that must be controlled in order to eliminate immediate, ongoing, or further danger;
- Take command – Using the established emergency communication protocol, contact the required person(s), internal or external depending on the crisis and protocol and explain the situation. Take any action that can be safely taken to eliminate or reduce the potential severity of the incident until professional help arrives;
- Provide protection - Protect victims, equipment, materials, environment, and accident scene from continuing damage or further hazards. Divert traffic, suppress fire, prevent objects from falling, shut down equipment or utilities, and take other necessary measures. Preserve the accident scene; only disturb what is essential to maintain life or relieve human suffering and prevent immediate or further losses;
- Aid and manage – Provide or arrange for the provision of first aid. Organize the workforce for both a headcount and emergency assignments. Direct all workers to a safe location or command post. This makes it easier to identify the missing, control panic, and assign people to emergency duties;
- Maintain contacts – Keep emergency services, Orange management and community authorities (if required) informed on the situation, and
- Guide emergency services – Meet emergency service providers on site. Lead them to emergency scene. Explain ongoing and potential hazards and cause(s), if known.

3.4.1 Fire/Explosion

Orange has a Fire Safety Policy which applies to all premises and activities falling, to any extent, under the Company's control. The policy sets down the framework by which Orange management and employees are expected to undertake their relevant duties in the event of a fire emergency. The main responsibility for statutory compliance is held by the Company with the management and supervision of the regulations devolved via the CEO/MD to the relevant Heads/ Directors and especially the Head of SCM. The following Fire Safety Management diagram details the managerial delivery process to ensure all fire safety provisions are maintained. This reflects the normal line management arrangement within the Company.

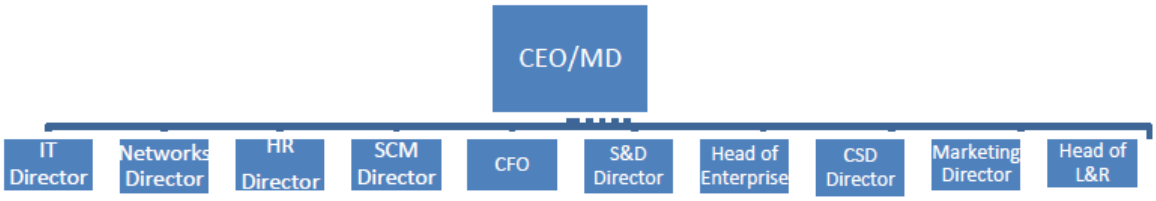

Figure 3.4-1: Fire Safety Management Diagram

To allow this statutory provision to be undertaken, the relevant Heads/Directors especially the Head of HR together with the facilities and Real Estate Coordinator will be responsible for:

1. Ensuring arrangements are made in respect of the maintenance of fire safety provision for the relevant premises; this will include:
    - Fire warning and detection systems are maintained in accordance with the relevant standard.
    - Fixed installations and specialist systems are subjected to a maintenance programme in accordance with the manufacturer's guideline.
    - Means of escape are maintained as required.
    - Emergency lighting, escape lighting and signage are maintained and tested in accordance with the relevant standard.
    - Electrical installation tests are undertaken as required.
2. Ensuring that any recommendations from risk assessment reviews, relevant to areas of responsibility, are responded to diligently.

3.4.1.1 Duties of the Fire Warden

In some of the larger or more complex buildings, fire evacuation can be achieved more easily with the support of a team of staff who are routinely familiar with the building. In such premises Fire warden teams chosen from staff who occupy the building will be best utilized to support safe and efficient evacuation procedures. As such, Fire Warden Trainings are conducted for these individuals.

3.4.1.2 Duties of Employees

Employees have a responsibility to comply with the Fire Safety Policy. This will include but not be limited to:

- Observing all instructions, information and training intended to secure fire safety.
- Co-operating with the Company on all matters relevant to Fire Safety.

- Not interfering with any building fabric or equipment provided in connection with assuring fire safety.
- Reporting any obvious defects or short-comings in the Company's Fire safety provision, arrangements or procedures.
- Complying with the conditions of any lease agreement for rented buildings and even the ones owned.
- Failure to comply with the requirements of this policy could result in disciplinary action being taken.

3.4.1.3 Visitors

Members of the public or other visitors require to be advised of the evacuation plans for any operational area they access. To ensure this is accomplished, adequate "Fire Action Notices" are required to be displayed at prominent locations. Where possible, all buildings which the public have access to, will be managed in such a way as to ensure that staff can account for all visitors within the premises at any given time to ensure safe evacuation

3.4.1.4 Calling the Fire Force

Where a fire is detected by automatic fire detection, the alarm will be raised automatically via an integrated fire safety system. However, in the unlikely event that this does not occur, assistance can be sought by calling the National Fire Force on the following numbers:

- Headquarter/Central – 300 (from any mobile Operator)
- Freetown Aberdeen Road Branch – 302 (from any mobile Operator)
- Kissy Branch – 301 (from any mobile Operator)
- Makeni Branch – 304 (from any mobile Operator)
- Bo – 303 (from any mobile Operator)
- Rokel – 309 (from any mobile Operator)

3.4.1.5 Personal Emergency Evacuation Plan (PEEPS)

Where there is a requirement for assistance by any person to evacuate any operational area during an emergency, a PEEPS application will be required. Employees who may require assistance to evacuate, should discuss this concern and needs with their Fire Warden, Line Manager or Supervisor as applicable so that any necessary individual arrangements can be made.

3.4.1.6 Staff Fire Safety Training

All new employees will be informed of the Fire Safety provisions that are relevant to the workplace. The Line Manager together with HR and SCM are responsible for ensuring that arrangements are made to ensure new employees are advised on the following:

- Fire action arrangements, including the fire safety policy
- Means of escape
- Location of fire exits
- Location of fire fighting equipment
- Details in relation to relevant findings of the fire risk assessments and dangerous substances
- Annual Fire training.

All employees are required to attend the annual Fire Training organized by the Company. Topics to be discussed during this training includes but not limited to:

- General Safety awareness
- Means of escape
- Fire extinguisher awareness
- Relevant fire safety risk assessments
- Raising the alarm and personal safety

3.4.1.7 Fire Wardens

Fire Warden training will be provided as and when deemed necessary. Notwithstanding the requirement as dictated by demand, the maximum period for refresher training does not exceed 1 year. The wardens training will include safe evacuation and Zone clearance procedures as well as detailed fire safety guidance.

3.4.1.8 Fire Safety Risk Assessment

The main purpose of the fire safety risk assessment process is to ensure that a methodical and structured approach is applied to assessing the suitability and effectiveness of the fire safety provisions applicable to a relevant premise and the fire hazards within. A statutory duty has been placed on each employer to carry out an assessment of the workplace for the purpose of identifying any risks to the safety of the employees and visitors in respect of harm caused by fire.

3.4.1.9 Exit Routes

All exit routes are indicated by signage.

Figure 3.4-2: Exit Route Signage

To ensure exit routes are not compromised, no equipment or materials may be accommodated or stored at any protected exit route or protected stair enclosure. All exits must be maintained clear, free from any obstruction and all final exit doors require to be easily and immediately openable from the direction of travel. Additionally the surface furnish to wall linings within stair enclosures and protected routes should be maintained free from any form of combustible wall decorations. Notice boards will be accepted in such areas as long as they are enclosed and effectively managed.

Corridors and stairways that form part of escape routes should be kept clear and hazard free at all times. Items that may be source of fuel or ignition should not be located within escape routes, such items include but not limited to: portable heaters, cooking appliances, upholstered furniture, coat racks, vending machines, gas pipes and meters, photocopiers, cupboards and other electrical equipment, seasonal decorations and display or exhibition material.

3.4.1.10 Fire Warning System

A fire warning system is a system designed to provide an audible alarm and may include activation by means of detecting the elements of combustion.

In all cases the alarm can be activated by means of manual alarm call point. Manual alarm call points are normally situated in exit routes and its final exits. Where fire is known or suspected, the alarm should be raised immediately utilizing a manual alarm call point (just break glass point). On hearing an alarm all employees of the premise including visitors must evacuate the building by the nearest available exit and assemble at the prescribed assembly point.

3.4.1.11 Fire Fighting Equipment

Fire Extinguishers are first aid and fire fighting equipment mechanically designed for the purpose of extinguishing small fires. Fire extinguishers are classified according to the class of fires they extinguish. The different types of fire extinguishers are:

BRITISH COLOR CODE	
Water	Red
Dry Powder	Blue
Carbondioxide	Black
Foam	Cream/butter
Hallom Gas	Green

Fire fighting equipment is provided with fire exit routes and may be placed adjacent to some specific risks, such as computer servers, electrical transformers etc. The extinguishers are provided for use by trained competent persons but should only be used when it is safe to do so and the escape route from the seat of fire is not compromised. Under no circumstances should a fire be confronted without first raising the alarm. All employees are required to familiarize themselves with the extinguishers provided within the relevant premise and the fire classification that may influence their limitations of use.

3.4.1.12 Emergency Numbers

- Ambulance Service – 117 (from any mobile Operator)
- Sierra Leone Red Cross – 300 (Airtel)
- Arm Attack – 112 (from any mobile Operator)
- Health Cases – 117
- Road Accident – 2244 (from any mobile Operator)
- National Security threat, call ONS – 119 (from any mobile Operator)
- EDSA/NPA – 672(from any mobile Operator)

3.4.2 Electrocution

The installation and repair of electrical equipment involves possible contact with potentially lethal electrical voltages and currents. No attempt to install or service electrical systems will be made by anyone who is not a qualified, trained technician familiar with electrical infrastructure and installations.

Precautions while in an active electrical work area:

- All workers shall wear suitable insulating PPE when handling or working with electrical equipment;
- At least two persons will always be present when work is being carried out on electrical equipment. No attempt will be made to service or adjust unless another person capable of rendering first aid and CPR is also present;
- Any accidents will be immediately reported to the EHS Manager.

In the event of an electrocution emergency:

- Assess the situation and ensure safety of yourself, the casualty and others;
- Turn off the power;
- If the power cannot be turned off, stand on a dry insulated surface (rubber mat, etc.) and use a non-metal object to move the casualty away from danger, and
- Once the casualty has been moved out of harm's way, immediate medical response will be administered.

3.4.3 Fuel/Oil Spills

In the event that a leak, spill, tank rupture, or other release occurs, the following procedures would be followed:

- Avoid danger to yourself and others (i.e. stop working, shut off power sources and any moving machinery and equipment as before, alert others in the area of danger);
- Stay upwind of the emergency scene;
- Identify the product that has been spilled, as well as immediate potential hazards (such as possible contact of the spilled material with equipment or other chemicals, or entry into a waterway);
- If the identification of the substance cannot be determined, assistance should be requested, and the identification of the substance should be determined by qualified personnel;
- If possible to do safely, prevent spill from entering waterways / spread into the environment;
- Assess spill quantity and characteristics;
- Notify the EHS Officer with as much information as possible, and
- Arrange for a timely clean-up of spilled material by contacting the EHS Officer

3.4.4 Falling from Heights

Falls from heights may occur where workers are involved in work on network towers, construction of multiple storey buildings, etc. This scenario, while having been mitigated through the provision of appropriate working at heights procedures, including the use of safety harnesses and OHS training, could still potentially occur. Where necessary, rescue from heights procedures will be followed to retrieve the person. Fall victims will be treated with first aid in the location of their fall until possible injuries are identified, and he/she can be safely moved to the closest medical facility for further treatment.

3.4.5 Structural Collapse

Collapse of structures may occur such as scaffolding, network towers/poles etc. This could result in destruction of equipment, personal injury and even death. In an emergency of this nature, trained first responders will immediately be notified.

Untrained personnel will be prohibited from entering the affected area to prevent any further injury.

The trained responders will be responsible for determining the structural safety of the rescue area and the appropriate rescue techniques to apply. If the situation is perceived to be too dangerous, external assistance will be requested (e.g. SL Police, SL Army).

The following steps will be taken in handling the situation:

- Rescued personnel will be given first aid and taken to the nearest medical facility to receive immediate medical attention;
- A headcount of workers in the area of the emergency will be done to ensure that everyone is accounted for;
- An investigation will be conducted into the cause of the collapse, and
- An audit of equipment, machinery, construction materials lost to the incident will be conducted.

3.4.6 Minor accidents (scrapes, cuts, abrasions etc.)

Minor accidents will be treated through first aid. If an employee / worker realises that he/she has been injured, no matter how insignificant they may perceive it to be, he/she should stop the job being carried out to seek first aid treatment.

Seemingly small injuries like cuts and abrasions may become worse if they are exposed to external elements such as dust, oils, fuel, etc. and may become infected leading to bigger health problems.

First aid boxes will be provided in all operational areas.

3.4.7 Medical Health Cases

First response medical attention to accidents or emergency health cases will be provided through first aid. Where advanced medical attention is required, the closest Government Hospital or medical centre will be contacted for transfer of the victim.

In the event of a medical emergency or fatality, the following procedures will be followed:

- First aid treatment will be administered immediately;
- Management will be informed of the incident resulting in the medical emergency;
- The location and severity of the situation will be assessed;
- Further health or safety risks like entering a dangerous or unstable area will be prevented;
- Should an employee require emergency off-site medical transportation, they will be accompanied by a staff member of the closest medical facility to give pertinent information about the incident, and
- In the event of death, only a professional medical practitioner can confirm the death. Immediate notification of management is required after the death of any employee from a work-related incident.

3.4.8 Civil Unrest and Disturbance

A PCDP has been developed that includes procedures for dissemination of information to the public, stakeholders, and non-government organizations.

Despite this proactive approach, social unrest could occur for a number of reasons outside of the Orange management's control. Subversive activities by workers or non-workers could develop and may result in violent or non-violent protests, attacks on Company personnel, property damage, or even hostage taking.

Orange management is to be notified immediately by employees / contractors of any social unrest that may present a threat to themselves and/or the facility. Response protocols based on pre-determined plans will be implemented.

3.4.9 Road Accidents

In the event of a road accident involving Orange employees or contractors, the following procedures will be applied:

- The EHS Manager will be contacted immediately with details of the location and nature of the incident;
- SL Police will be contacted immediately with details of the location and nature of the incident;

- The accident site will be cordoned off to keep the public at a safe distance from the scene and to allow easy access for first responders and emergency services;
- If it is safe to do so, first responders under the guidance of the EHS Manager will remove victims of the crash, and place them in an area where they can receive first aid treatment and assessment. Victims should be moved as little as possible until the extent of their injuries is determined;
- Vehicles involved in the crash are not to be moved until the police arrive;
- Victims will be moved to a hospital or medical centre if required;
- If members of the public are involved in an accident which has occurred as a result of an Orange employee or contractor, the injured persons will either be given first aid and/or taken to the nearest hospital for treatment, depending on their injuries;
- Details of the accident including how it was caused, number of persons involved, police reports, etc. will be recorded by the EHS Manager.

3.4.10 Natural Disaster (Land Slide, Flooding)

During a regional / national level natural disaster, information on the nature, scale, location or direction of the emergency will be obtained from national disaster management services either through public media or direct communication between Orange and the related organization.

Information will be disseminated to employees and contractors on whether they should stay indoors or gather at evacuation points for headcounts and safe evacuation.

Emergency response teams under the supervision of the EHS Manager will organise headcounts and evacuation as may be necessary.

3.5 Communication Systems

An important key to effective emergency response is a communications system that can relay accurate information quickly. To do this, reliable communications equipment must be used, appropriate procedures developed, and personnel trained and responsibilities properly defined.

3.5.1 Internal Communications

The internal communication system is used to convey safety information to employees in danger using mobile phones and intercom systems. Training on the internal communication systems is provided to all employees and contractors as part of their orientation program.

3.5.2 Communications during an Emergency

In case of an emergency, immediate notification of appropriate individuals will be actioned. In the event that there is a need for the timely and rapid notification of local communities, the first-responder will immediately contact the EHS Manager who will immediately contact key members of management teams. This will trigger the appropriate emergency notification system that will be developed.

The EHS Manager will prepare a list of emergency contact numbers within the company, locally (within the community) and nationally as may be appropriate. Training will be provided to workers and contractors on the communication protocol in an emergency.

3.5.3 Communications with the Public

The EHS Manager, in collaboration with the Community Relations Manager (CRM), will be responsible for all site and local communications with the public. As required, meetings will be held to disseminate information on operations-related emergencies.

The EHS Manager will coordinate with the CRM on the incident and advise on what information should be released to the public, government officials and other interested parties.

In providing information to the public, the EHS Officer and CRM will provide information on the following:

- Description of the event;
- Identification of the population that might be affected;
- Description of any injuries and disposition of those involved in the accident;
- Identification of any existing hazards;
- Description of precautions taken to limit future risks;
- Identification of water source contaminated (if any);
- Description of mitigation measures that are proposed or have been taken to correct the problem, and
- Contact information.

Waiting and briefing areas for family / relatives of those involved in serious accidents will be established. Food as well as a sitting / sleeping area will also be provided to members of the family and relatives as appropriate.

3.6 Emergency Drills

Periodic testing of emergency procedures will be performed to ensure that the Company and external emergency services can appropriately respond to emergency situations.

Testing of emergency procedures will involve external emergency services providers, where appropriate, to develop an effective working relationship. This can improve communication and cooperation during an emergency.

Emergency drills can be used to evaluate the company's emergency procedures, equipment and training, as well as increase overall awareness of emergency response protocols. Internal parties (e.g. workers) and where possible, external parties (e.g. SL Police), will be included in the drills to increase awareness and understanding of emergency response procedures.

Records of emergency drills will be kept including information on the scope of the drill, a timeline of events and actions and observations of any significant achievements or problems. This information will be reviewed for improvement.

3.7 Organization and Management Responsibilities

The EHS Manager will coordinate emergency response training of employees and contractors. This will include the setting up of Emergency Response Teams who will be trained in emergency equipment use and emergency response methods.

On site emergency personnel, who have roles in addition to their ordinary duties, will have a thorough understanding of emergency response procedures. Training will be directly related to their specific emergency response roles, and will include:

- Emergency chain-of-command;
- Communication methods and signals;
- How to call for help;
- Emergency equipment and its use;
- Emergency evacuation;
- Removing injured personnel from enclosed spaces / from height, and

Emergency personnel will receive training in first aid and CPR and will practise hands-on rescue techniques on at least an annual basis. Training will also include recognizing and treating chemical and physical injuries, as well as heat stress.

4 COMMUNITY DEVELOPMENT ACTION PLAN

4.1 Introduction

This Community Development Action Plan (CDAP) has been developed with the aim of addressing the requirements of office/shop/network sites host community requirements.

The CDAP sets out to ensure that programs are established to enhance socio-economic development, and in the process mitigate impacts identified in the ESIA Report. Key objectives of the CDAP include:

- Identifying appropriate mitigation measures to address socio-economic issues and impacts identified in the ESIA;
- Promoting the establishment of sustainable community and economic development programmes.

4.2 Purpose and Objectives

The management measures in this report will attempt to mitigate any negative impacts that may result from operations and enhance any positive consequences that may occur.

The key objectives of the CDAP are:

i. To provide opportunities for long-term community and economic development programmes for the affected communities;

ii. To identify appropriate mitigation measures to address socio-economic issues and impacts identified in the ESIA;

iii. To identify appropriate mitigation measures to address induced population growth resulting from a possible influx of newcomers into operational areas, attracted by the opportunity for jobs;

iv. To develop initiatives in host communities of Company infrastructure.

4.3 Socio-Economic Survey

4.3.1 Findings from Social Assessment Survey

Discussions were held with community members around Orange's shops, offices and selected network sites in Freetown and the Provinces.

Complaints were few and far between; complaints that were made had to do with noise from company generators and land lease issues. However there are a few other community health and safety hazards posed by operations of this nature as described in the impact assessment section of the ESIA. These include:

- Noise
- Hazards related to accessing company property/restricted areas
- Fire and explosion hazards
- Land and/or water contamination hazards from fuel/oil spills
- Security Issues

In order to compensate for potential impacts, some of which cannot entirely be avoided, as well as for the use of land and other community utilities, it is required that a Community Development Action Plan is developed.

During the community consultations, several issues were brought to light by communities, as possible areas in which community development assistance could be given. Areas of assistance recommended by communities and projects which could be realistically and effectively undertaken by the company are presented in the following sections.

4.3.2 Views from Company Facility Host Communities

From the findings of the socio-economic survey, including interviews with households, focus group discussions and one-on-one interviews, the following potential areas in which assistance could be given were recommended by respondents:

- Provision of water and sanitation facilities;
- Provision of scholarships for deserving school -going children;
- Provision of employment opportunities for inhabitants of host communities;
- Assistance with the construction of health and community centres
- Construction of a market structure
- Provision of waste management facilities

4.3.3 Community Development Activities Implemented under Orange's Corporate Social Responsibility (CSR) Programme 2017

During the year 2017, Orange implemented a number of community assistance projects in various areas of the country, under their CSR programme as highlighted in the following table.

Action/Project	CSR Focus Area	What was done	Timing
Ebola Orphans – Kids Adoption at SOS in Freetown, Makeni and Bo	Education	MOU Signed with SOS Village & MSWGCA for the adoption of 50 Ebola Kids in the three villages – Involves Schooling, Feeding, Clothing and accommodation.	**Sept. 2016 – Dec. 2017**
Books Purchase for Orange Board of Directors	Education	To buy books and distribute to Orange Board of Directors	**Jan. 2017**
Emergency Relief Donation to Susan's Bay – Mabala Wharf Fire Incident	Community Relief	50 Bundle Zinc for Roofing – Bundle of 25pcs each. 500 Bundle Purified Drinking Water. 100 Bags of Rice – 25 kg	**April 2017**
Funeral Contribution of the former Chairman of Natcom	Community Relief	Funeral Contribution for the late former Natcom Chairman and Ambassador Sieray Timbo.	**April 2017**
Ramadan Iftar Promotion	Community	Nationwide Ramadan Iftar donation to Muslims, Mosques and deprived individuals.	**June 2017**
Bright Light Youth Empowerment Organisation	Education	Bright Light Youth Empowerment – Raise the English Language Standards Campaign – Inter Schools Reading and Comprehensive Competition	**July 2017**
Supporting Landslide Victims from different affected Areas in Freetown on Emergency Relief	Community Relief	Prepared/Wet food packs for distribution- Bundle Water – Liquid dettol & powder detergent & face mask – used clothing distribution to victims – Financial contribution to the mudslide victims donation relief fund account	**Aug. 2017**

Action/Project	CSR Focus Area	What was done	Timing
Thinking Pink Breast Cancer Foundation	Health	Breast Cancer Awareness and Fundraising Half Marathon	**Nov. 2017**
SOS 50 Ebola Orphans –Kids Christmas Party	Education	Organised Christmas party at Victoria Amusement Park (Victoria Park) – it was a family day out with the Kids, Teachers, Institution Head and Care givers.	**Dec. 2017**
Future of Children – Street Kids Christmas Party	Education	Organised Christmas Party for street kids with Future of Children at St. Edwards Primary School Compound.	**Dec. 2017**
Christmas Hamper to Stakeholders and Partners	Community	Christmas Hamper – packages of provisions were prepared and distributed to Stakeholders – Media: Reporters – Proprietors, CSR Partners as gifts for the festive season	**Dec. 2017**
TOTAL			

4.3.4 Projects Recommended for CDAP

Projects to be implemented under Orange's CDAP have been selected based on Orange's preferred areas of community assistance as seen highlighted in their 2017 CSR activities. These include:

- Education
- Health
- Community Relief (Under the CDAP this can take the form of water and sanitation facilities in various communities).

4.3.4.1 Education

Assistance in this area will be in the form of scholarships to deserving pupils within the various operational areas. Assistance could also be given in the form of school furniture and materials, and contribution to construction project.

4.3.4.2 Health

Health assistance will be given in the form of financial donations or supplies to community health centres/clinics. Where there are no health centres within the community and it is seen to be a valid requirement within a particular community, partnerships will be sought with government or non-governmental organizations for the construction of a centre.

4.3.4.3 Water Provision

The availability of potable water supply within communities will be enhanced through the installation of public standpipes or sinking of boreholes as applies.

4.3.4.4 Sanitation

Waste skips/bins will be donated to communities for the disposal of waste, where there is no, or inadequate waste disposal facilities. Partnerships will also be sought with local government and/or non-governmental organizations within communities for the construction of public toilets where the need is identified.

4.3.5 Implementation of CDAP Projects

Development Projects will be implemented in all the districts countrywide as Orange infrastructure can be found in each:

Western Area	Northern Province	Eastern Province	Southern Province
Freetown	Tonkolili	Kenema	Bo
	Magburaka	Kono	Bonthe
	Port Loko	Kailahun	Moyamba
	Kambia		Pujehun
	Koinadugu		

Specific development projects under the broad headings of Education, Health and Community Relief, will go through the various stages of project cycle-planning, resources mobilization,

implementation and monitoring, and evaluation. Local community residents and organizations will be actively involved in all stages of implementation.

Orange's Community Relations Officer (CRO) will be in charge of developing and implementing this CDAP in liaison with related Stakeholders. Other Specialists and interest groups such as line ministries, NGOs and Community Based Organizations (CBOs) may be called upon to provide expert advice and assistance.

4.3.6 Steering Committees

To implement projects from the selected areas of assistance, steering committees will be put together to make decisions, guide the implementation of the projects and assure of transparency. The proposed membership of the committees include:

- Leaders of the youth groups;
- Women's leaders;
- Ward Councilors;
- Orange's Community Relations Officer (CRO);
- Orange's EHS Manager
- The Member of Parliament in operational area;
- Representative of an NGO active in the communities;
- Religious Leaders.

4.3.7 Responsibilities

Orange's CRO will be responsible for finalising guidelines included in this CDAP document and coordinating its implementation. Meetings with the Steering Committee will be held at least once every two months in order to discuss relevant community development related matters and monitor the progress of the CDAP relative to targets.

4.3.8 Budget

A grand total of **500,000,000 (*five hundred million Leones*)** has been budgeted for the implementation of development programmes countrywide annually.

The following table details how the budget will be split up among the various projects and locations over a 5 year period.

The implementation of the first year development projects is expected to commence in 2018.

Table 4.2-1: Estimated 5-Year Budget for the CDAP

PROJECT	RESOURCES	BUDGET (Million Leones)					
		Yr 1 - 2018	**Yr 2 - 2019**	**Yr 3- 2020**	**Yr 4 - 2021**	**Yr 5 – 2022**	**Total**
Education	Scholarships/ school furniture, materials, etc	125	125	125	125	125	**625**
Health	Funding to community health centres	125	125	125	125	125	**625**
Water	Funding/Construction of standpipes and boreholes	125	125	125	125	125	**625**
Sanitation	Funding/Construction of toilet facilities	125	125	125	125	125	**625**
TOTAL		**500**	**500**	**500**	**500**	**500**	**2,500**

4.4 Monitoring and Evaluation

Orange Management has the overall responsibility for monitoring and evaluating the progress of the CDAP. Quarterly and annual reports on the CDAP will be submitted to the EPA-SL as part of Environmental and Social monitoring and reporting.

5 PUBLIC CONSULTATION AND DISCLOSURE PLAN (PCDP)

A PCDP is designed to provide stakeholders in Orange's operations including local residents, local authorities, government and other interested parties with operations-related information, and to allow those stakeholders to participate and contribute to new developments in the company's operations. Stakeholder participation encourages sustainable growth by ensuring that local requirements, both government and community, are observed.

A PCDP incorporates public meetings for stakeholders to air concerns with the company's activities and also provides a platform for stakeholders to voice their opinions and make suggestions.

5.1 Objectives of the PCDP

The main objective of the PCDP is to establish a program for multi-directional communication between Orang SL Ltd and stakeholders.

Other objectives of a PCDP are:

- To disseminate relevant company information to stakeholders/host communities and to document any concerns/issues from such stakeholders;
- To improve communication between company management and host communities;
- To document public consultation meetings and events; and
- To disclose selected company documents relevant to host communities and stakeholders.

5.2 Resources and Responsibilities

The CRM reports directly to Orange Management and is responsible for the public consultation and disclosure program. He/She will also be responsible for coordinating with the EHS Manager on all community relations, public consultation programs and dispute resolutions.

Other responsibilities and duties of the CRM may include the following:

- Identifying when meetings are necessary and scheduling them;
- Circulating or publicizing agendas and local advertising;
- Inviting specific individuals to meetings;
- Attending and documenting meetings;
- Directing any required follow up; and

- Planning and implementing sustainable development projects as shown in the CDAP.

Follow-up work on the above may include additional meetings, arranging for specialized consultants, or bringing specific issues to Management and ensuring that appropriate actions are taken.

5.2.1 Stakeholders

Public consultation and disclosure initiatives need to target all stakeholders to keep them informed of the Company's plans and of any substantial changes that may be made to the their design or operations. Institutional stakeholders for a telecommunications project include but are not limited to:

- The Environment Protection Agency Sierra Leone
- The Ministry of Information and Communication
- The National Telecommunications Commission (NATCOM)
- Sierra Leone Cable Ltd (SALCAB)
- The Ministry of Trade and Industry
- The Ministry of Lands Country Planning and the Environment
- Members of Parliament (for the constituencies in which there are company facilities)
- Local Government (ward councilors, community heads, etc)
- SL Police
- The National Fire Force
- Host/Neighbouring community residents

5.3 Consultation and Disclosure Program

The consultation and disclosure program is aimed at informing stakeholders of the Company's plans and activities in a manner that promotes open dialogue among all interested parties, but particularly those that are or may be affected by the telecommunications operations. The program allows directly affected parties to have meaningful input in the decision-making process regarding operations, and the mitigation of impacts that will affect them. Meetings will be scheduled and informational materials disseminated as needed to keep people informed and to maintain transparency in the public eye. It is the responsibility of the CRM along with the EHS Manager, to ensure that Company objectives are accomplished.

5.3.1 Notification for Meetings

Stakeholders will be informed about Company updates through some or all of the following methods:

- Mass media (newspapers, newsletters, posters, radio, television);
- Direct communication in local languages;
- Illustrated pamphlets;

- Public meetings;
- Informing appropriate community leaders.

A two-week notice, followed by a three-day reminder notice will be provided for such meetings.

Minutes of consultation meetings will be made available to the meeting participants and other identified interested parties within two weeks from the meeting date. Minutes will be written in an understandable manner and can be obtained from project area offices/shops.

5.3.2 Grievance Mechanisms

Despite the best public consultation and community relations efforts, inevitably there will be circumstances that arise where the company and stakeholders disagree. The following mechanisms will ensure that grievances can be properly filed, and that fair and appropriate consideration will be given to those issues.

- The EHS Manager, with the CRM will be responsible for building relationships with populations and communities around company facilities, and collecting and disseminating information.
- Public meetings will be held on a regular basis to provide a forum for open communications.
- Relationships will be built with government offices, community authorities, etc. and their participation in consultation meetings will be encouraged to facilitate communications.
- A formal process or plan for receiving and responding to grievances will address the following requirements:
  - All grievances will be documented into a central registry or filing system
  - Receipt of all grievances will be acknowledged, by letter or other means, as soon as possible, and no later than 7 days after receipt.
  - The grievance will be reviewed by Management and appropriate action taken or implemented.
  - Multiple grievances by the same person, or different persons which address the same or similar issue, will be considered together and will warrant additional attention.
  - The CRO will generate a report for submission to the EHS Manager on a bi-monthly basis summarizing grievances received, actions taken, and any outstanding issues to be addressed.
  - Relevant (non-confidential) information will be disclosed to the public.
  - If necessary, the relevant Government authorities will be notified to share information and address Sierra Leone policy or regulation issues.

5.3.3 Reporting

Orange Management, through the EHS Manager and CRM, has the primary responsibility for all public consultation and disclosure monitoring and reporting. The CRM will report on Community Development Projects implementation as listed in the CDAP. This will be reported periodically as part of the regular environmental and social monitoring program.

Additional reports may be developed and provided to the local communities and identified stakeholders on a case-by-case basis. This will primarily be through the feedback at regularly scheduled meetings. Copies of these reports will also be provided to the relevant government agencies of Sierra Leone such as the EPA-SL.

Information sheets and posters may be appropriate for reporting on some items and issues. Radio broadcasting and/or direct communication may also be used.

5.4 Public Consultation during ESIA Study

Some amount of Public Consultation has already started during the execution of the Social Impact Assessment aspect of the ESIA. CEMMATS undertook a socio-economic survey of operational areas in the form of direct communication with host community individuals and holding of focus group discussions.

To commence the Focus Group Discussions, the Social Assessment team leader informed participants about the Company's activities, explaining the role of CEMMATS in carrying out the Environmental and Social Impact Assessment Study.

During these interactions, participants were asked about their perceptions of the company's operations in their vicinities; responses were generally positive, with most responding that they were not in any way affected by Orange's operations. Some expressed optimism about the Company's operation in their community naming potential benefits such as jobs.

6 CLOSURE PLAN (CONCEPTUAL)

The primary objective of a closure plan is to ensure that the environmental and community health and safety of operational areas once operations have ceased. This closure plan is however conceptual as it is highly unlikely that Orange SL Ltd would have to dismantle their facilities if their operations cease in Sierra Leone. The history of this telecommunications operations includes transfer of ownership between several companies (Celtel, Zain and Airtel), before being transferred to Orange. If Orange's operations in Sierra Leone come to an end, the operations will be transferred to a new telecommunications company.

Conceptual Closure of the company facilities would include converting the various operational areas to as close to their natural/original environmental states as possible. Telecommunications infrastructure, including network sites, data centre facilities, generators and all related equipment would need to be removed and repurposed or disposed of; structures (offices and shops) would need to be demolished or converted for alternative use. Disturbed areas are required to be stabilized and reclaimed to an alternative land use that will provide income opportunities for local communities within the operational area.

6.1 Objectives of Closure

The objective of the closure program is to convert operational areas at the end of operational activities to an income generating end use. Local communities will be consulted to determine post-operation land uses, and training required to manage reclaimed areas over both the short- and long-term. Stakeholders' input will be used to determine final deposition sites of facilities for future developmental purposes.

6.2 Closure and Reclamation Methods

6.2.1 Dismantling Network Sites and Data Centres

This will include the following broad phases:

- Site assessment / Asset valuation – determination of the various equipment at the site being decommissioned including a cost assessment
- Inventory sorting and categorisation – sorting through the various equipment and parts in bid to determine which ones could possibly be re-used, re-purposed, sold or would need to be disposed of.
- Dismantling and packaging – dismantling of the facility will then be done systematically ensuring the protection of re-usable parts from damage.

- Transportation - all parts (re-usable and disposable) would then be transported away from the site to predetermined end users or disposal sites.

6.2.2 Electrical Installations

Where the site is totally decommissioned and is to be demolished the electricity company (EDSA) should be requested to disconnect the supply prior to the commencement of the decommissioning work. In other cases such as partial decommissioning of an area within the facility, a competent electrical contractor should apply the appropriate degree of disconnection and isolation.

6.2.3 Buildings and other Ancillary Facilities

Buildings and infrastructure will also be managed for closure. The final use of the site will be determined prior to decommissioning and may require that buildings are left intact for the agreed post-closure use. If buildings are not to be left in place, re-usable materials will be salvaged, the remaining structures demolished and waste material (construction- type debris) disposed of. Compacted surfaces will be ripped to relieve compaction and reduce surface run-off and sediment transport. Following these activities, the area will be graded to create a natural final topographic relief. Inert material such as concrete, stone, and brick used for foundations will be crushed and blended in during grading. Other materials will be collected for disposal in accordance with the Waste Management Plan.

6.2.4 Disposal of Equipment Components

Dismantled telecommunications equipment can be disposed of through re-use or recycling. Parts may be sold to scrap metal dealers once they have gone through a screening process and are verified to be safely used by second parties.

Another alternative is disposal in a licenced landfill.

6.2.5 Hazardous Materials/Waste

During facility closure, confirmation sampling and testing of the soils will be completed as needed to verify that areas have not been impacted by hydrocarbons or other potentially hazardous substances. In the case where hazardous substances are identified, the contaminated areas will be remediated accordingly.

6.3 Monitoring

Closure and post-closure monitoring will document the progress of the closure effort. Closure monitoring will be implemented at the start of the closure process and will continue as post closure monitoring for up to 6 months following completion of the decommissioning and closure process.

The elements of the closure and post-closure monitoring programs will include the following:

- Environmental measurements involving in situ and laboratory tests (air, water, soil, etc) to ensure that no contamination from the previous operations remains at the site.
- Observational assessment of occupational health and safety during the closure exercise.
- Ensure that erosion prevention measures are put in place during site grading and remain effective post closure.
- Ensure effective community consultations are being carried out throughout the process.

6.4 Stakeholder Consultation

The consultation process will involve discussions with host/neighbouring communities on closure options and will provide them with an opportunity to become involved in the various aspects of this phase. Perceptions will be obtained on post closure usage of the land; communities will also be involved in waste management at the site through the company making available materials/equipment that can be safely re-used or recycled.

7 MANAGEMENT, MITIGATION, MONITORING AND IMPLEMENTATION MEASURES

7.1 Objectives of a Monitoring Plan

Environmental and social monitoring is an essential tool in relation to environmental management as it provides the basis for rational management decisions regarding impact control. The monitoring program will be undertaken to meet the following objectives:

- To check on whether mitigation and benefit enhancement measures have actually been adopted, and are proving effective in practice;
- To provide a means whereby any impacts which were subject to uncertainty at the time of preparation of the ESIA, or which were unforeseen, can be identified, and to provide a basis for formulating appropriate additional impact control measures;
- To provide information on the actual nature and extent of key impacts and the effectiveness of mitigation and benefit enhancement measures which, through a feedback mechanism, can improve the planning and execution of future, similar projects.

Overall accountability for implementation of this plan lies with Company Management, though various parties will remain responsible for certain activities. Management will remain accountable for ensuring that the mitigation measures, monitoring and corrective actions are implemented.

7.2 Components of the Monitoring Plan

The monitoring programme and covers the following:

7.2.1 Noise Monitoring

Noise levels will be recorded in and around operational facilities. Noise levels for equivalent continuous sound level L_{eq} and peak noise levels will be recorded in dB(A). During noise measurements, observations will be made on noise sources, and noise generation sources responsible for exceedances will be identified.

7.2.2 Air Quality and Dust

Air quality measurements will be taken to record exhaust gas levels and particulate matter (PM10 and PM2.5) within operational areas. Results will be compared to internationally approved thresholds for the analytes and any exceedances noted. Problematic sources will be identified and mitigation measures effected to reduce or eliminate emissions from these sources.

7.2.3 Water Quality

Observational assessments will be carried out in operational areas to identify potential sources of water contamination such as oil/fuel spills. Where a suspected water polluting accident/incident has occurred, samples of water will be collected from the water body suspected of being affected and sent for laboratory testing for the pollutant of concern.

7.2.4 Soil Quality

Observational assessments will be carried out in operational areas to observe for any signs of soil pollution. Soil samples will be collected in any area where contamination is identified and sent for laboratory testing for signs of the contaminant.

7.2.5 Waste Management

Monitoring during construction (new facilities) and operations will be conducted to ensure environmental and community health and safety in respect of waste storage, handling and transportation related impacts.

7.2.6 Occupational Health and Safety/Emergency Response and Preparedness

Observational assessment of the implementation OHS measures instituted by management. Ensuring that regular and relevant OHS training is organised for employees and assessing the adequacy of the emergency response procedures and preparedness.

The frequency of incidents/accidents occurring will be monitored.

7.2.7 Consumption of Energy, Water and Hazardous Materials

Records of consumption figures will be monitored against company-set consumption targets.

7.2.8 Social Impact Monitoring

Community health and safety will be monitored throughout in all operational areas as part of the integrated ESMP. This will involve monitoring progress with CDAP implementation, regularity of community consultations and awareness programmes, and the effectiveness of the grievance mechanism. This will be done through consultations with communities to get their feedback on the implemented activities, as well as a review of company expenditure in relation to budgeted plans

7.2.9 Internal Performance Audit and Revision

Site auditing is the best way to measure environmental performance, ensure operating effectiveness of environmental protection measures. Planned and documented audits aimed at evaluating the conformance and implementation of the ESMP will be supervised by EHS Manager.

7.3 Summary of Monitoring Costs

Costs related to environmental and social benefit enhancement and mitigation measures, etc. include costs for environmental and social management, monitoring, training and capacity building. Costs of certain items associated with environmental / social management and monitoring are already an integral part of specific items incorporated in overall Company budgets, and no separate budget is necessary to cover these aspects.

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