



CENTRE OF EXCELLENCE FOR PUBLIC HEALTH AND TOXICOLOGICAL RESEARCH (PUTOR)

ENVIRONMENTAL & SOCIAL SAFEGUARD MANAGEMENT POLICY (ESSMP)

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ABBREVIATIONS

ACE	Africa Centre of Excellence
EMP	Environment Management Plans
ERSU	Environment, Resettlement and Social Unit
EPA	Environmental Protection Agency
EER	Environmental Evaluation Report
ESMP	Environmental Safety Management Plan
EIA	Environmental Impact Assessment
ESSMP	Environmental and Social Safety Management Plan
GRM	Grievance Redress Mechanism
HSEU	Health Safety and Environmental Unit
JHA	Job Hazard Analysis
NESREA	National Environmental Standards and Regulatory Enforcement Agency
PRA	Preparatory Rural Assessment
PPD/E	Personal Protective Device/Equipment
PUTOR	Public Health and Toxicological Research
PMT	Project management Team
PMU	Project Management Unit
RCP	Regulatory Compliance Plan
WWI	Written work instruction
WB	World Bank
GM	General Manager
AGM	Assistant general Manager
PM	Project Manager
SM	Senior Manager
Mgr	Manager
AM	Assistant Manager

Environmental Safeguards plan for Nigeria ACE-PUTOR impact project

1.1 PROJECT BACKGROUND: This document presents the Environmental and Social Safeguard Management Plan (ESSMP) for the new ACE Centre project- ACE-PUTOR under the World Bank sponsored Nigeria Universities. This project is classified by World Bank as Category B for Environmental and Social Assessment meaning that an ESSMP will suffice as the instrument to meet the World Bank Safeguard Policy requirements.

The ESSMP provides the basis for managing the environmental and social issues involved with the implementation of the project activities at the ACE-PUTOR Centre. This ESSMP describes in specific terms how potential environmental, health, safety and socio-economic conditions likely to be encountered at the site would be handled.

The following are the arrangements for screening of projects during project implementation along with the responsible entities and individuals within the project team.

Environmental and Social internal monitoring is the responsibility of the Project's Safeguards Officer with the aim of ensuring that Environmental and Social Safeguards of the project are adhered to. This monitoring will include:

- Screening of sub-projects and identification of significant risk factors
- Ensuring the preparation of relevant safeguards instruments (ESIAs, ESMPs as may be required) based on the screening results (guidance in the ESMF)
- Inclusion of the mitigation measures recommended in the sub-project
- Monitoring of environmental and social management measures in the implementation of different activities.
- Reporting on safeguards performance of the project as required in the regular reporting cycles agreed by the project

1.2 PROJECT LOCATION

This new ACE-PUTOR project of the World Bank will be cited at University of Port Harcourt, Port Harcourt, Rivers state, Nigeria.

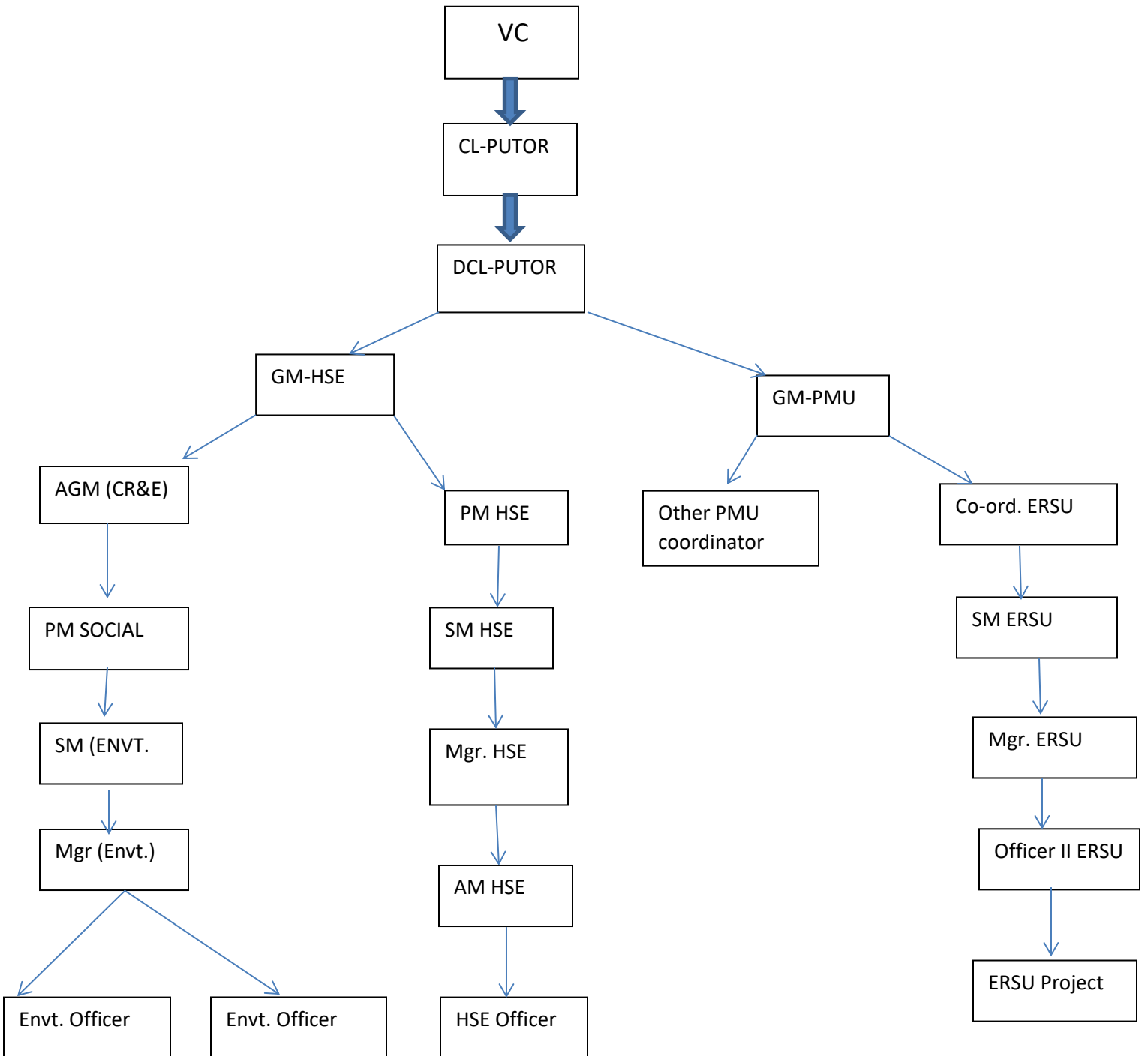
2.0 INSTITUTIONAL ARRANGEMENTS RESPONSIBILITIES

2.1 PUTOR/PMU: The PMU shall retain the primary responsibility of ensuring that the environmental and social commitments are met throughout the project lifespan.

The PUTOR shall take over at the end of the project and establish a schedule of responsibilities and improvement on Social and Environmental Management of the Centre. Environmental and Social issues should be seen as a line of responsibilities for which all levels of personnel beginning from the management to the cleaners are accountable.

The HSE unit should be established in the Centre and equipped with basic environmental management skills required to attend minor environmental issues while major cases will be referred to the Environmental Safeguards Officer domiciled at PUTOR-PMU. These various cadre of staff shall be trained on the job under the proposed capacity building programs of ERSU and also receive appropriate sites training required to meet their various responsibilities. The PUTOR-PMU and PUTOR-HSE are both under the PUTOR management. The project implementation organogram defining the line of communication in the proposed new World Bank project is as highlighted below

ORGANOGRAM



2.2 CONTRACTOR:

The contractor shall be responsible for carrying out the work at the new project site in full compliance with the ESSMP and applicable Nigerian laws and regulation governing environmental and social impact management, pollution control, waste management and occupational health and safety. However, in the event of any disparity between the World Bank Safeguards Policies and Nigeria's EIA Acts, the World Bank safeguards policies shall prevail.

The contractor shall appoint one or more HSE officers who will be continuously on the site to ensure compliance. The contractor will be responsible for obtaining Environmental permits and paying for waste disposal or other fees that are required for the works

The contractor shall be required to prepare detailed Environment Management Plans (EMP) for implementing all the aspects of projects and the following shall be included in the EMP: *Traffic Management Plan, Waste Management Plan and Health Safety and Environment Management Plan etc.* which shall be submitted to PMU-ERSU for approval prior to commencement of work. The details of these and the other required plans are presented in section (6.0 - 6.6) of this ESSMP.

2.3 FEDERAL MINISTRY OF ENVIRONMENT

The ministry in conjunction with its Parastatal NESREA shall enforce the compliance of the Waste Management up to the disposal level by giving approval to each step of the waste segregation

2.4 WORLD BANK

The World Bank shall review all the step by step progress report of the management plan on implementation of this ESSMP from the beginning of the project to commissioning.

2.5 COMMUNITY

Community is expected to own up to this project and reports any grievances or misconduct by the contractor or contractor personnel to the PMU through dialogue.

3.0 DETAILS OF THE CENTRE PROJECT

The Centre BUILDING PROJECT shall Involve the construction of:

- the Centre Building which will house offices, Library, laboratories and classrooms.

- Standard Animal House.

In view of these activities, a proper management of the Social, Environment, and Health & Safety issues has to be taken into account for this project to be sustainable as is required by the World Bank Safeguard policy standard. Thus, this ESSMP becomes very necessary as a manual to the Contractor for a sustainable project implementation and completion.

This ESSMP is therefore designed to address the environmental and social impacts that may arise from transport, storage, handling, and storage activities at the new Centre. It will also proffer solutions to the lingering environmental issues like poor house-keeping, oil leakages/spillages, lack of or poor drainage systems, storage or disposal of scraps and other waste materials. It will also put in place the frame work for setting up a well-trained health, safety and environment unit (HSE) that will ensure strict compliance with World Bank, Nigerian and other international environmental standards in the day to day running of the PUTOR owed Centre after the project completion.

4.0 CENTRE PROJECT RISK ASSESSMENT AND MANAGEMENT

For any Projects of this nature, Risk management is an integral part of the project execution. The risk related to these projects execution and operations were identified by structured approach during the project planning stage. Risk assessment visits by PMU Safeguards team will be conducted in advance of implementation activities to allow for risk resolution without work interruption during implementation. Result of the risk assessments and associated risks reduction measures will be evaluated and documented by the PMU-ERSU and appropriate levels of the ACE-PUTOR site management staff in the Centre. This document therefore is to be for reducing project risks to an acceptable level at a reasonable cost to PUTOR. Upon project completion, all other unforeseen risks and their associated resolutions shall be documented for handover to the site operations personnel who will take over the Project and continue the operations of the completed facilities.

The responsibility of the risk management for these projects during implementation rests primarily on the building Contractor. The project Management Team (PMT) consisting of PUTOR site management and specifically the HSE Officer will have day to day oversight responsibility.

Periodic environmental and social monitoring and audits by the PMU-ERSU will reveal if the Contractor's project implementation processes are satisfactory.

ERSU monitoring will be conducted bi-annually with spot checks based on the field reports during implementation. An audit will be conducted yearly, counting from the date of hand-over of the project and throughout the life span of the Centre. The findings from these audits will be reported to the site HSE Manager and corrective action plans will be developed and followed up for improved performance.

Majority of workers that will be involved in the installation phases of the project will be the Contractor's personnel, therefore the Contractor will pay particular attention to applying appropriately controlled HSE mitigation measures for its work. The Contractor shall prepare an Environmental Management Plan (EMP) which shall include HSE Management plan that is in line with this ESSMP (see Section 6.1 of this ESMP). The HSE Management Plan will be reviewed by the PMU-ERSU and the contractor may not begin work until it has been approved.

The project will generate significant volume of wastes of various types including: abandoned equipment and scrap materials located on the site, equipment that are being removed from service, empty/full transformer oil containers, general construction waste and debris (packing materials, etc.)

The Contractor shall prepare a Waste Management Plan which shall be included in the EMP for review and approval by PMU-ERSU early in its engagement, before any waste is removed from the site.

The Contractor's EMP will take into account applicable Nigerian Environmental laws and Regulations and World Bank's Safeguards Policies, ensuring that generally accepted Industry standards shall be used for instance in the events of dissension between the world bank safeguards policies and the existing Nigerian laws, the most stringent shall be considered.

The Contractor will include HSE provisions in the operating manuals and other documentation regarding the proper operation and maintenance of the facility, for approval by PMU-ERSU. This data will be provided to the PMU in a timely manner so that facility-specific training can be given to the concerned personnel prior to start-up.

5.0 PROJECT POTENTIAL IMPACTS.

The summary of the potential impacts of the ACE-PUTOR project will be based on the observed issues that will emanate during the risk assessment visits to the Centre Project site.

1. Waste generation (i.e. from laboratories, animal house)
2. Obstruction of traffic and destruction of existing roads during transportation of construction materials and heavy-duty equipment.
3. Health hazards due to non-provision / non-usage of Personal Protective Device (PPD)
4. Poor house-keeping and proper maintenance of equipment and facilities
5. Agitation due to communication gaps between the Centre and host communities
6. Destruction of routine Centre activities
7. Environmental pollution (noise, water and air).

5.1 IMPACT CHARACTERIZATION

In order to further describe the nature and duration of the various project activities on the biophysical and socio-economic environment, the identified impacts were further characterized as follows

- **Beneficial impacts:** impacts that would produce positive effect on the biophysical or socio-economic environment
- **Adverse impacts:** impact that may result in:
 - Irreversible and undesirable change(s) in the social and/or biophysical environment
 - Decrease in quality of the biophysical or social environment
 - Limitation, restriction or denial of access to or use of any component of the environment to others including future generation and
 - Sacrifice of long-term environmental viability or integrity for short-term economic goals.
- **Direct impacts:** impacts resulting directly (direct cause-effect consequence) from a project activity
- **Indirect impacts:** impacts that are at least one step removed from a project activity. They do not follow directly from a project activity
- **Short term impacts:** impacts that will last only within the period of a specific project activity.

- **Long-term impacts:** impacts whose effects remain even after a specific project activity
- **Irreversible impacts:** impacts whose effects are such that the subject (impacted component) cannot be returned to its original state even after adequate mitigation measures are applied
- **Cumulative impacts:** impacts resulting from interaction between ongoing project activities with other activities, taking place simultaneously.
- **Incremental impacts:** impacts that progress with time or as the project activity proceeds
- **Residual impacts:** impacts that would still remain after mitigation measures have been applied.

Table 5.1: Characterized Potential and Associated Impacts of the Proposed ACE-PUTOR Project

Project activities & Environmental Aspects	Potential and associated impacts	Character of impact
Mobilization of personnel, materials and equipment to project site	Risk of road accidents from increased vehicular movement on local roads and damage to the road by heavy vehicles to be used	Adverse, direct, short-term
	Socio-cultural conflicts due to differences in customs of migrant worker and local residents	Adverse, direct, short-term
	Changes in demographic pattern/disruption of socio-cultural pattern	Adverse, direct, short-term
	Introduction of communicable diseases (STDs, HIV, hepatitis b &c, TB gastrointestinal) into the project communities	Adverse, direct, short-term
	Air/noise pollution from increased vehicular movement	Adverse, direct, short-term
Preparation of Equipment bases clearing at construction site, within the Location and necessary point along the access roads	Damage to lawns within the building site and also alteration in the stone chipping layers covering the University switch yards	Adverse, direct, short-term
	Loss of business hours and disturbances of residents and staff along the access routes during mobilization	Air/noise pollution from increased vehicular movement
	Employment of unskilled labour	Beneficial, some long term, mostly short term
	De-vegetation/loss of vegetation at construction points	Adverse, direct, short-term

Project activities & Environmental Aspects	Potential and associated impacts	Character of impact
	Generation of various waste materials, vegetation, scrap materials on site etc.	Adverse, direct, short-term
Foundation for the Centre Building	Soil erosion, dust and accident due to falls and damage to vegetation/alteration in the gravelled site switch yards	Adverse, direct, short-term
	Noise and vibration from construction equipment	Adverse, direct, short-term
	Respiratory tract infections due to inhalation of dust and toxic fumes during construction activities	Adverse, direct, short-term
	Induced secondary development in the substations (work camps/stores) surrounding by Contractor during construction activities	Adverse, direct, short-term
	Engagement of indigenous unskilled labour and supplies and stimulation of local economies	Adverse, direct, short-term
	Youths/community restiveness especially during recruitment of unskilled labour	Adverse, direct, abnormal, short-term, reversible
	Community restiveness during heavy vehicular movement due to road congestion and damages	Adverse, direct, short-term

Table 5.2: Environmental Impact Mitigation Measures for the PUTOR Centre Project

Below is the table showing the intended mitigation measures for the key environmental and social impacts of the new ACE (PUTOR) Centre project in University of Port Harcourt.

Project phase/Environmental aspects	Critical control point	Mitigation measures	Action party
Site 1 preparation Mobilization of personnel, materials and equipment to project area	Transportation, vehicles & route	Contractor trucks shall be properly serviced /maintained before mobilization Contractor shall mobilize heavy duty trucks carrying equipment in the night to avoid traffic delays/accidents Outriders shall be engaged when possible and used during mobilization of heavy-duty trucks and equipment. Radio/TV announcements shall be made to inform the general public of activities/movements Contractor shall engage and use traffic control wardens at strategic points on local roads Strategic road signs/warnings shall be placed on local roads. Traffic regulators shall enforce approved speed limits on local roads among its drivers and Contractor	Contractor/PMT (project Engineer) to accompany the equipment to the Centre. ERSU/HSE officer to monitor compliance of the appropriate mitigation measures PM Contractor Transporter Road Safety, Police
	Local roads Work site Recreational facilities Markets	Contractor shall survey and make use of best road access to site and repair damaged road points/areas damaged as a result of the movement of their equipment to site Contractor shall educate its workers on the socio-cultural norms of the host communities so as to conform to laid down customs and norms of the local community. Recreation areas should be avoided by vehicles carrying equipment as those areas are always busy and they may cause traffic jam The above situation applies to market places	Contractor Contractor Contractor/ERSU/PMT Contractor/ERSU/PMT
Site preparation: mobilization of personnel, material and equipment to project area	Base campsite Communities	Prior to mobilization, contractor shall screen all personnel for communicable and other diseases Contractor shall conduct a health and safety awareness for staff and host communities	Contractor to implement, Centre HSE Officer to monitor compliance PMT to coordinate

Project phase/Environmental aspects	Critical control point	Mitigation measures	Action party
		Contractor shall carry out periodic health screening for staff while on site and identified cases shall be promptly isolated for proper medical attention Contractor will establish and publicize a stakeholder Engagement Plan that includes a Grievance Redress mechanism for addressing community concerns and complaints	PMT to coordinate PMT to coordinate
	Operational Vehicles	Contractor shall ensure that its operational vehicles are at optimal operating conditions	Contractor to implement, Centre HSE Officer and PMT to Monitor
Site preparation: vegetation clearing at construction sites	Construction areas to be cleared	Contractor shall limit vegetation clearing to minimum area required for the campsite, construction site and access roads Disturbed and unwanted areas at campsite and access roads shall be revegetated with appropriate local species Waste from site clearing shall be managed in accordance with the Contractor's approved Waste Management plan	ERSU/Site HSE (monitor)
Site preparation/ construction: building foundation and other related structures	Within the Centre Construction Points Health and safety at excavation points Waste management Point of mobilization	Contractor shall employ best engineering practice in the excavation of the pits and for ancillary facilities in order to avoid adverse alteration of the hydrological pattern of flow Dug up areas shall be promptly and properly restored Contractor shall maintain all construction equipment at optimal operating conditions in order to reduce noise and vibration Contractor shall design and enforce workplace safety procedures at sites based on this hazard to prevent accidents Construction and packaging, waste, scrap from yards, clean up and replaced equipment shall be managed and disposed of in accordance with contractor's Waste Management Plan Prior to mobilization, contractor shall screen all personnel for communicable and other diseases Contractor shall conduct a health and safety awareness for staff and host communities	Contractor (implement), site civil engineers and HSE Officer (monitor) Contractor (implement), ERSU/Centre HSE Officer (monitor) ERSU (enforce compliance) Contractor (implement). Site HSE Officer (monitor) Contractor (implement), ERSU/community relation Officer
Maintenance of the Centre	Centre safety/security	Contractor shall install automated monitoring system (CCTV) to check unauthorized entry	Contractor to implement, site Engineer/ site HSE Officer (monitor)

Project phase/Environmental aspects	Critical control point	Mitigation measures	Action party
	Centre Building Maintenance	<p>Emergency response plan shall be put in place for such developments as sabotage/vandalism</p> <p>Contractor shall use only trained and competent personnel for all maintenance works. Maintenance personnel shall be provided with appropriate PPEs. Personnel shall be trained on handling of emergencies Centre environment shall be properly maintained and kept in good health Lawns must be planted with indigenous flower species and grassed accordingly Management shall maintain naturally low growing vegetation with the centre Management shall explore the option of always using mechanical maintenance techniques For chemical maintenance option, management shall employ selective herbicide application Site management shall maintain appropriate gravelling level of the switch yards Equipment must be in sound working condition and cleaned as at and when due Solid waste must be disposed of by using appropriate waste disposal companies and in line with laid down rules</p>	<p>Contractor, and site operating staff and site HSE Officer (implement)</p> <p>Site operating staff to implement, site HSE Officer to monitor, ERSU (audit)</p>

6.0 DETAILED GUIDELINES FOR PUTOR CENTRE BUILDING/PROJECT

The contractors shall develop the following Safeguards Management Plans to ensure strict compliance with this ESSMP in the cause of implementing the various sub-projects.

6.1 Workplace Health & Safety and Environment Plan

Operations within the work site shall be subject to Government, Industry and World Bank Policies guidelines as well as the requirements of this ESSMP. All PUTOR and contractor staff shall be well informed and trained on the HSE policies and guidelines. All facilities shall also be designed

to enhance Safety Planning and activities shall be executed within the confines of relevant legislation and stakeholders' interests. Contractor shall provide adequate health service as well as site first aid services for its workforce. The first aid services shall be extended to visiting personnel and casual workers.

The main priority to the Centre (ACE-PUTOR) shall be to prevent accidents during mobilization, construction and operational stages of the proposed projects. Prevention of workplace accidents during the proposed projects shall be achieved using the JHA tool and approved work plan/instructions by supervisors.

Consequently, the technical team must conduct JHA for all HSE critical activities and develop written and explicit work plans/instructions for such operations. The work instruction shall integrate the recommendations of the JHA. It is only upon submission of the written work instructions and the supporting JHA document that the site HSE Coordinator may consider the project activity for approval. Project activities may only be approved if the HSE Coordinator is objectively convinced that the written work instruction (WWI) are practicable, safe and in accordance with regulatory requirements.

Accident shall be reported to and investigated by the ERSU in line with World Bank accident reporting procedure. All personnel shall be encouraged to report all accidents/incidents and to cooperate in the investigation of such occurrence. Staff shall be made to know that accidents/incident investigation are "fact finding" and not "fault finding" exercises and are particularly useful lessons in preventing re-occurrence.

All construction activities shall be properly managed through careful planning and the applicable and relevant HSE policies and include the following:

- Use of Permit-to-Work
- Job Hazard Analysis and toolbox meetings
- Use of appropriate PPE in designated area
- Prohibition to drinking alcohol during work hours and at work sites and facilities
- Prohibition of night trips
- Regular emergency drills
- Prohibition of smoking in fire hazards area

The Contractor's HSE plan must be approved by the PMU-ERSU prior to mobilization to site.

6.2 TRAFFIC MANAGEMENT:

PMT and Contractors shall follow its journey management procedure strictly. Trips shall be planned and combined to reduce driving exposures, mandatory use of seat belts by drivers and passengers in company and Contractors vehicles shall be enforced. All drivers shall attend defensive driving course while night driving (out of town limits) shall be discouraged

Each trip/journey to be undertaken during the proposed project shall be managed in such a manner that will not result to harm to life or property. A journey management plan specific to each trip shall be produced and submitted to the Site HSE Coordinators for approval. The details of the journey management plan shall include proposed mobilization date, mode of transportation, routes, type of cargo as well the details of the JHA conducted for the trip. The Site HSE Coordinator may only approve the trip if he can confirm that all necessary precautions have been taken to forestall transport accidents/incidents.

6.3 WASTE MANAGEMENT PLAN:

Since the project will generate significant volume of wastes of various types, the Coordinator will prepare a Waste Management Plan for review and approval by PMU-ERSU.

The following objectives form the basis for the Waste Management Plan of the project

- Progressive reduction of wastes with the target to minimize over all emissions/discharges, which have adverse impact on the environment
- Establishment, implementation and maintenance of waste segregation aimed at enhancing recycling
- Ensure PUTOR and Contractors are responsible for effective waste handling and disposal process, which shall be monitored by relevant waste disposal authorities.

6.3.1 Waste Handling Guidelines

For proper handling and disposal, wastes shall be well defined at source and definition transmitted along with the wastes generated in the course of work in a monthly waste stream report, which shall be used to track/monitor as a minimum for adequate definition of wastes include:

6.3.2 Waste Type Identification:

The major categories of waste envisaged from the PUTOR Centre project are outlined as follow:

Solid Waste: -these include felled vegetation/trunks, wood from crates, metals, papers, other office equipment scraped which are due to be removed during site clean-up, domestic waste (waste generated from camp kitchen, packing materials, boxes and plastics)

Liquid Wastes: - these include non-hazardous operational waste generated from work construction sites e.g. lubes, lubricants, sanitary water, paints etc.

Gaseous Waste: these include combustion products from construction engines, welding pas, natural gas leaks etc.

Hazardous Waste: - any gaseous, liquid or solid, which due to quantity, physical, chemical or infectious characteristics have the potential to harm human health environment when improperly handled stored, disposal, transported or treated e.g. acids, lead phenols.

6.3.4 Waste Minimization/ Reduction

Waste minimization implies reduction to the greatest extent possible of the volume or toxicity of waste materials. The four principles of waste minimization-reduce, reuse, recycle and recover- shall be adopted as applicable. The key elements of the four-waste minimization/management principle practices are outlined.

Minimization: Definition reduce process modification/design change Material elimination Inventory control and management material improved housekeeping.

Reuse-: chemical/Oil containers

Recycle/recover-recycle scrap material, waste lubricating oil for energy recovery.

6.3.5 Waste segregation: Waste segregation and characterization shall be carried out on wastes that are similar and may be combined to simplify storage, treatment, recycling and effective implementation of appropriate waste disposal methods. Waste shall be segregated, preferably at source into clearly designated bins at strategic locations. Particular attention shall be given to the work area where a variety of waste including fast food packaging shall be

generated. The site HSE Coordinator shall be responsible for maintenance of the waste segregation scheme at the site.

6.3.6 Waste disposal:

All debris, spoilt materials and other wastes shall be cleared regularly from the site and disposed at approved dump sites operated by designated waste disposal authorities. Instructions on material safety handling sheet shall form the basis for the disposal of wastes related to such products. Wastes in transits, shall be accompanied and tracked by waste disposal notes. The note shall contain such information as date of dispatch, description of wastes, waste quantity, container type, designated disposal site and method, consignee name, means of transport and confirmation actual disposal time and date.

Waste management audit of facilities shall be carried out in consultation with the PMU_ERSU and findings shall be properly documented and followed up. Accommodation, catering services areas and work shall maintain acceptable standard of hygiene and good housekeeping.

6.3.7 General Security Plan:

The project team led by an ERSU Manager shall ensure that adequate security arrangements are made to handle security related incidents effectively. The project team will identify, evaluate and manage risks to personnel and property arising from theft, malicious practices, crime, civil disorder or armed conflict.

In addition, each Contractor will be required to prepare a project security plan and submit to ECA_PUTOR for review and approval before mobilization to site. The project will also organize a security workshop to identify evaluate and recommend contingency plans for all security risks.

6.4 Emergency response plan

PMT and Contractor will demonstrate that all potential significant hazards and potential impacts of the project activities have been identified, the associated risks evaluated and understood, and that control and recovery measures to effectively manage these risks and impacts are in place before mobilization to site. ACE-PUTOR will assist Contractors where

necessary, with the provision of a generic hazard list for guidance. In case of an emergency, Contractor emergency response procedures will be activated the objectives are.

- To ensure no loss of life
- To ensure that the environment is protected
- To ensure that manpower, equipment and funds are available to effectively contain the emergency (fire, explosion, electrocution, shocks, accident Spill clean-up for oil/chemicals)

The PMT and Contractors will identify all potential emergency situations and develop procedures to use in such scenarios as explosion or fires, hydrocarbon/chemical spills, weather related disasters, hostage taking, community disturbance, kidnapping etc. emergency drills will be conducted to demonstrate preparedness for response and schedule of drills and testing of emergency instruments will be prepared by PUTOR/Contractors on the proposed projects.

Every technical Contractor on the proposed projects will prepare and submit for approval contingency plan for emergency situations and possible incidents beyond the capability of site facilities.

There will also be a community emergency response plan that will be adapted to community's needs and cover eventualities such as oil spillage.

6.5 Stakeholder Engagement Plan (SEP).

This involves soliciting people's views on proposed actions and engaging them in dialogue. It is characterized by two-way information flow, from project authorities to people and from people to project authorities. The overall aim of the consultation plan for the project therefore is addressing the concerns and opinions of the stakeholders with the ultimate view to assuring a smooth project implementation.

Consultation about these PUTOR project will be initiated by the PMU-ERSU to Federal Ministry of Environment, the World Bank Safeguard team, surrounding communities and shall remain a continuous process during implementation. The program for the project construction and operations stages include

- Visits and courtesy call on community leaders and other stakeholders to discuss the effectiveness of the addressed social issues on the lives of the host communities. Direct visit to the affected populations to consider (through questionnaires, interviews and Visual observations).
- Organizing large public meetings to discuss public welfare, clarify misconceptions and address new issues regards the project.
- Holding workshops and extension courses on resource management (using simply written materials visual representation, videos and scale models to decode technical languages) and sensitizing local people on the latest impact mitigation techniques.
- Organizing public seminars aimed at identifying new ways of rendering socio-economic assistance for the locals. Establishing a voluntary participatory programme in the local media, television and radio) through which NGOs and CBO and other key Stakeholder's concerned and the general public can comment on various aspects of the project and to ensure that all socio-economic and environmental issues are adequately addressed.

The contractor (during installation) and the Centre Leader (during operation) shall put in place and publicize a Grievance Redress Mechanism (GRM) that provides for an accessible local contact point (Telephone number, address, email address, name and title) to which stakeholders can direct questions, concerns, complaints and claims. The mechanism will include: service standards (how quickly the complaint may expect a response), a log to record the grievance, the steps taken to investigate, the conclusion, and the response to the compliant. It should also have an appeals procedure in case the complaint is unsatisfied with the response. Grievances will be part of monitoring reports.

6.6 Communication Plan:

Effective two-way communication between PUTOR and contractor staff on HSE and security issues will include awareness programmes to motivate staff and contractors. HSE and security information experiences will be shared between PUTOR and contractors to facilitate improvement in HSE and security performance.

Contractors shall ensure its staff involved at all levels in the proposed projects become familiar with the importance of compliance with the adopted HSE policy, regulatory compliance plan, security plan and their individual roles and responsibilities in achieving their compliance.

Each staff shall be aware of his respective work activities, inherent job risks and hazard and their controls, mitigation measures and emergency and response procedures that have been established. They also need to be aware of potential consequences of departure from agreed operating procedure. Consequently, each Contractor will have a project communications focal point to enhance communications with the contractor project team at various locations. Contractors will set up appropriate procedures and lines of communication to handle HSE and security issues (e.g. direct access to the nearest clinic, direct access to emergency services etc.)

Contractors should be able to communicate easily with base offices, work site and local ACE in an emergency situation. Appropriate safety programme and promotions need to be employed in order to effectively promote HSE and create awareness e.g. minutes of meetings, plans and performance targets, HSE performance on new board, posters bullets, video, new flash, email. etc.

6.6 Commissioning and Hand Over Plan

The risks associated with the commissioning and handover phase of the projects will be adequately evaluated and will be covered by detailed commissioning procedures and guidelines. The Engineering, Procurement, Installation and Commissioning (EPIC) contract strategy will allow time for familiarity of the commission/operation team. This will allow for effective supervision and carryover of priority items into the operation phase. A pre-commissioning audit will be carried out by the PMT for the proposed projects.

Specific commissioning plans covering all significant contractor commissioning activities, particularly control of potentially dangerous operations during the commissioning will be developed. The proposed facility will not be put into operation unless commissioning approval is received from PMU and World Bank.

7.0 ENVIRONMENTAL AND SOCIAL MONITORING PLAN.

Contractor and PMT shall strictly comply with the provision of this ESMP and operate a monitoring programme that would lead to sustainable project-environment relationship. This will

be strengthened with the occasional monitoring visits of the ERSU-PMU. The monitoring programme shall commence from site preparation through implementation to operation stages in order to keep track of the entire project activities and performance. The programme will provide information on impacts compared with prediction and by doing so provide advance warning of any adverse changes in both the environmental and socio-economic development.

The main objectives of the monitoring programme include to:

- -Ensure compliance with regulatory emission and discharge limits
- Monitor changes in existing physio-chemical, social characteristics of the environment, compared to both the environmental baseline and predicted conditions
- Ensure continual interactions and flow of information between contractor and stakeholders
- Determine whether any significance changes in socio-economic and environmental components are caused by the project or other forces
- Determine the effectiveness of the control and mitigation/enhancement measures and provide basis for recommending additional measures
- Ensure that the established transparent procedures for carrying out the proposed project are sustained
- Ensure sustenance of accountability and a sense of local ownership throughout the project lifecycle

The programme is for the initial stages of the project. The monitoring frequency is subject to review after the first year to determine its effectiveness and possibly include other identified areas of concern. The ERSU-PMU shall ensure that the monitoring programme is fully implemented by regional ERSU and designated State /Federal Agents.

7.1 Environmental and social screening: By Project effectiveness, each Nigerian participating university must have prepared the description of its subproject (facilities to be built or rehabilitated). This will enable the Project's safeguards expert, in collaboration with EPA, to move quickly to the next steps on environmental and social safeguards. This process will be updated each year as the annual work plan is prepared

7.2 Qualified personnel: Each selected University will use the services of a qualified person (appointed or recruited), who will oversee implementing the safeguarding measures, including

monitoring, surveillance, control and evaluation of risk mitigation measures, and keep the partnership links with EPA throughout the project.

7.3 *Operational Manual:* The Project's *Operational Manual* will include a section on the basic principles and regulatory measures of the ESMF, indicating in particular:

- ▶ Subprojects' screening procedures: for any operation carried out under the Project;
- ▶ The respective responsibilities of different stakeholders (acquisition of required authorizations by the promoters or preparation of complete ESMP-Worksites, including a Safety and Hygiene Plan, by the contractors).
- ▶ Mechanisms for the control and monitoring of the environmental and social indicators.
- ▶ Costs of environmental and social safeguards.

7.4 *Information, sensitization and training on environmental and social management (ESM)*

issues: Information and sensitization sessions on ESM will be provided to the representatives of the institutional actors involved in implementation of the Project, including the companies in charge of the works. These initiatives (to be coordinated by the Project safeguards specialist, in collaboration with EPA, and the assistance of external resource persons) will take place immediately after Project effectiveness, during the first six months of implementation. Costs related to these trainings will be included in the overall project management costs of outreach / training / capacity building. Particularly important is the information sessions of entrepreneurs on the preparation of their various comprehensive ESMP-Building sites.

- Within the context of the *Impact boot camp* that the AAU will organize (with the support of WB) prior to Project effectiveness, for all University teams, special sessions will focus on environmental and social safeguards issues and the key elements of the ESMF.

7.5 *Grievance redress mechanism:* Under the regional e-system for grievances management, which will be created within each participating University/centre, a special section will concern all environmental and social safeguards-related grievances.

