CHAPTER ONE

BACKGROUND INFORMATION

1.0 INTRODUCTION

Indorama Eleme Fertilizer & Chemicals limited is a major producer of Urea fertilizer situated on a site of approximately 26 hectares within the Indorama manufacturing complex at Eleme. The manufacturing facility is located about 15 kilometers North East of the Port Harcourt, the capital of Rivers State. Indorama Eleme Fertilizer & Chemicals Limited (IEFCL) is the proponent of the proposed expansion of Fertilizer plant.

1.1 THE PROPONENT

The proposed expansion of Urea (Nitrogenous Fertilizer) Project is planned to be set up within the existing - Indorama manufacturing complex near by the existing Urea plant. The proposed expansion, termed IEFCL-Train2 will consist of Ammonia / Urea train with a total operating capacity of 2,300 metric tons per day (MTPD) of ammonia and 4,000 MTPD of urea. The associated off sites and utilities necessary to make the proposed plant self-supporting in terms of power, water, and other auxiliary systems are discussed under project description (Chapter 3).

The existing fertilizer manufacturing facility (The Train 1 facilities) also consist of 2300 MTPD of Ammonia & 4000 MTPD of Urea Plant, product warehouse, bulk loading and bagging, ammonia storage, associated utilities units such as are made up of DM plant, effluent treatment etc.

The units of the complex are illustrated in the attached plot plan (Appendix 1.1), which also clearly indicates the location of the proposed expansion of fertilizer plants.

The construction of the proposed plant termed IEFCL-Train2 is expected to commence its Engineering and Procurement by the end of year 2017 & Construction activities are expected to commence in 1st quarter of 2018.

The company IEFCL, was incorporated on 23rd of August 2010 with registered office in Indorama complex, Eleme, Rivers State, Nigeria. . The construction of Train1 plants were started in April' 2013 and were successfully commissioned in May' 2016. Since then the plants under Train 1 are operating successfully.

The company would rely on a mixture of professional expatriate staff and Nigerian staff from the rich human resource of Nigerian. Total direct employment for the operation of the new IEFCL-Train2 will be 200 employees of which about fifty (50) will be expatriates. During construction peak period, manpower needs will be about 4000 personnel from and within Eleme & Port Harcourt, while during the decommissioning phase of the project manpower utilization is estimated at 120. (Most of them will be Nigerian).

For the development of the project, the company will respect the IFC Performance Standard 2 concerning the Labor and Working Conditions (refer to the Environmental and Social Management System, Chapter 7 for more details).

1.2 NIGERIA

Nigeria is the largest and most populous country in sub-Saharan Africa. It lies between latitudes 4^{o} and 14^{o} North of the Equator and longitudes 3^{o} and 14^{o} East of the Greenwich Meridian. The current population of Nigeria is 192,222,138 as of Sunday, October 8, 2017, based on the latest United Nations estimates. Nigeria population is equivalent to 2.53% of the total world population, ranking number 7 in the list of countries (and dependencies) by population. The population density in Nigeria is 210 per Km^2 (543 people per mi^2), with a total land area of 910,770 Km2 (351,650 sq. miles), where **50.2 %** of the population is **urban** (95,764,092 people in 2017) Worldometer 2017. It is bordered by Chad and Niger Republics to the North, Cameroon to the East; Republics of Benin and Togo to the West and the Atlantic Ocean to the South. It is made up of several ethnic groups, the major ones being Hausa, Fulani, Igbo, Yoruba, Edo, Efik Ijaw and Kanuri.

For identifying the location of the initiative (Nigerian State and Local Government) see:

- Map of Nigeria showing Rivers State, among the thirty six states of Nigeria (Plate 1.1);

- Administrative map of Rivers State showing the position of Eleme Local Government Area (Plate 1.2)

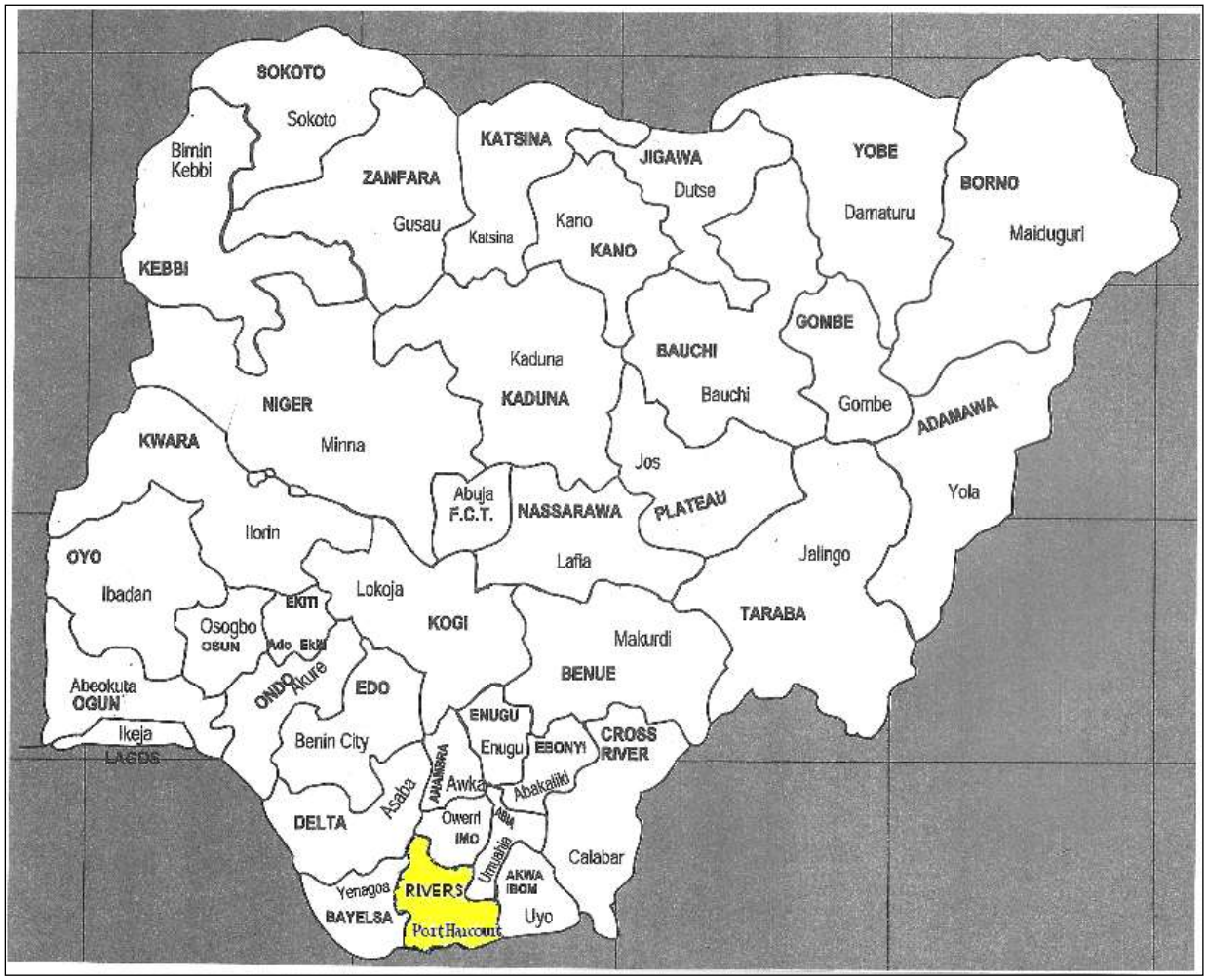

Plate 1.1: Map of Nigeria Showing Rivers State.

Plate 1.2: Administrative Map of Rivers State showing the Host LGA (Eleme) of the Project Site.

1.3 NEED FOR THE ENVIRONMENTAL IMAPCT ASSESSMENT

Since 1992, the Federal and State Governments through various enactments and regulations require an Assessment for any development project (private and public) that is likely to impact significantly on the Environment. New projects were to undergo an environmental impact assessment (EIA Act 86, 1992) prior to construction and/or operations commences on site.

The building of the new Nitrogenous Fertilizer (Ammonia and Urea) plant, IEFCL-Train2, within the existing Indorama complex has been categorized as 'category One' project by the Federal Ministry of Environment and thus required to conduct a full blown EIA procedure (Appendix 1.2 - FMEnv TOR Approval). It is in this context that IEFCL has conducted this Environmental Impact Assessment of these proposed new plants.

Dedicated scenarios considering the cumulative effects of both the Fertilizer Plants and existing operating plants into the complex are included in the EIA report.

1.4 TERMS OF REFERENCE [TOR] OF THIS EIA

The proponent carried out a scoping procedure to ensure that all significant impacts and reasonable alternatives would be addressed in the intended EIA. A systematic approach was adopted during scoping activity to verify that all the aspects have been considered. The proponent submitted a Terms of Reference (TOR) on 21st August' 2017 indicating the scope of the proposed EIA study. Discussions were held with the proponents and the various heads of the contributing consulting units and the EA department Regulatory Agency (Federal Ministry of Environment Abuja). This resulted in the above of the TOR/Scope of the EIA studies and Categorization of the project by the Federal Ministry of environment Abuja vide their letter of 18th September 2017 (Appendix 1.2)

The TOR of the proposed EIA study included:

- The plan of environmental investigations to be carried out to identify the baseline condition of the study area;
- The format and contents of the EIA report;

- The description of the team charged to prepare the present EIA report.

The Federal Ministry of Environment communicated to the Proponent on 18th September'2017 for approval of the TOR (Appendix 1.2).

1.5 EIA OBJECTIVES

The present EIA study analyses the social and environmental impacts expected by the realization and operation of the Fertilizer plant, including also the possible associated health and safety risks.

In view of the above, the objectives of the EIA are:

- To describe the physical, chemical, biological and socio-economic features of the environment potentially affected by the Project identifying the environmentally sensitive areas within the project area.
- Identifying in the design, construction, commissioning, operation and decommissioning phases of the new Fertilizers plant where environmental impacts (both positive and negative) may occur.
- To superimpose all aspects of the project on the environment and evaluate the impacts of the project on the environment.
- To highlight particularly and recommend any measures that could be used to avoid, if not avoidable, mitigate/ameliorate any negative hazardous impacts as well as promote beneficial effects of the project.
- To use results of the investigations to develop project specific ameliorating plans/measures during execution.
- To define an Action Plan, which foresees also the adoption of an Environmental and Social Management System (ESMS) for the project lifespan as defined by the Equator Principle No.4.
- To serve as an advance notification to the regulatory agencies especially the Federal Ministry of Environment.
- To provide necessary answers to questions from stakeholders, host communities, regulators and other interested parties.

1.6 SCOPE OF WORK OF THE EIA

The following activities have been carried out to achieve the EIA objectives, discussed in par. 1.4:

- Review of State, National, and International environmental regulations, standards, codes and conventions relevant to the proposed project activities.
- Review existing literature on the study area, including studies reports (EIA, EER, etc.) if any, in order to come out with a baseline profile.
- Field sampling/testing at the project site.
- Review methods used for field work and laboratory analysis.
- Developing a questionnaire to collect pertinent in-house and community based information and Health Impact assessment.
- Consultation with stakeholders and regulators. The evaluation, of their observation/ inputs/perceptions.
- Description of the Project.
- Analysis of the Health and Safety Risks.
- Assessment of associated and potential impacts of the fertilizer plant.
- Developing cost effective mitigation measures and monitoring plans.
- Preparing draft and Final EIA report that meet regulatory requirements.

1.7 EIA METHODOLOGY

The approach adopted for this study was multi-disciplinary covering the pure sciences and social sciences. Standard methods as approved by the Federal Ministry of Environment (FMENV Guidelines and Standards, 1991) and American Public Health Association (APHA standard methods) were adopted for sample collection and analysis. Field research, consultations, impact identification and evaluation (checklist, matrix, etc.) were other aspects of methods used in this study. The environmental surveys and sampling activities discussed in the present document were carried out under the supervision of FMENV (Appendix 1.3 - Letter of nomination of field work supervisor from FMENV). The spatial boundary of the study area covers five (5) Km radius from the project site, including all the areas likely to be potentially affected by the Project.

1.8 REGULATORY FRAMEWORK

1.8.1 Legal basis for Environmental Permitting

Environmental planning and permitting in Nigeria is carried out through the provisions of environmental legislation i.e., the Federal Environmental Protection Agency Act (FEPA) of 30th December, 1988. Besides, there are many laws aimed at protecting the environment and preserving natural resources, as highlighted below.

Part VII, Section 30-1, Miscellaneous provisions of NESREA Act 25, 2007 defines “Environment” as "including water, air, land, and all plants, animals, and human beings living therein and the inter-relationships which exist among these or any of them". All that places the onus of protection of the components of environment defined above.

This EIA study was thus carried out within the frame work of both Local, National, and International environmental guidelines and regulations, and also taking into account national and international documents concerning health, safety and social issues. The following documents were assumed as reference for the present study:

- Guidance on EIA, EIS review, June 2001, European Commission;
- Equator Principles, June 2013, Equator Principles Association;
- International Finance Corporation (IFC) Sustainability Framework, 2012 Edition, Performance Standards;
- Environmental, Health and Safety Guidelines, April 30 2007, World Bank and IFC;
- Environmental, Health and Safety Guidelines for Nitrogenous Fertilizer production, April 30 2007, World Bank and IFC;
- EIA Act 86 of 1992, Federal Environmental Protection Agency of Nigeria;
- EIA Procedural Guidelines, 1995, Federal Environmental Protection Agency of Nigeria;
- EIA Sectoral Guidelines, Oil and Gas Industry Projects, Sub-sectoral Guidelines for Petrochemicals, 1995, Federal Environmental Protection Agency of Nigeria;
- EIA Sectoral Guideline, Manufacturing Industry, 1995.

1.8.2 Applicable Legislative/Administrative Framework of the Project

1.8.2.1 International Legislations

Nigeria is signatory to several laws, treaties and regulations that govern the environment. Among those applicable to the proposed project are:

Convention on Biological Diversity (1992)

The objectives of the convention include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

Basel Convention on the control of Trans-boundary Movements of Hazardous Wastes and Their Disposal (1987)

The convention focuses attention on the hazards of the generation and disposal of hazardous wastes. The convention defines the wastes to be regulated and control their trans-boundary movement to protect human and environmental health against their adverse effects.

Convention on the Conservation of Nature and Natural Resources, 1968.

This convention came into force in Nigeria on 7th May, 1974. The objectives of the convention is to encourage individual and joint action for the conservation, utilization and development of soil, water, flora and fauna for the present and future welfare of mankind, from an economic, nutritional, scientific, educational, cultural and aesthetic point of view.

Convention on Wetland of International Importance, Especially as Water Flow Habitat (1971).

This provision came into force in Nigeria on 2nd February, 2001 with the objectives to stem the progressive encroachment and loss of wetlands now and in the future, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value.

Montreal Protocol on Substances that Deplete the Ozone Layer, 1987 (As Amended)

The objective of the convention is to protect the ozone layer by taking precautionary measure to control global emissions of substances that deplete it.

Convention on the Protection of Workers against Occupational Hazards in the Working Environment Due to Air Pollution, Noise and Vibration, Geneva, 1977.

This convention is aimed at protecting workers against occupational hazards in the working environment.

Convention on Occupational Safety and Health and the Working Environment, Geneva, 1981.

The objective of the convention is to prevent accidents and injury to health by minimizing the causes of hazards inherent in the working environment.

Convention on Safety in the Use of Chemical at Works, Geneva, 1990.

The convention has the objective of enhancement of the existing legal framework for occupational safety regulating the management of chemicals at the work place with the broad purpose of protecting the environment and the public, and with the specific objective of protecting workers from harmful effects of chemicals.

International Finance Corporation (IFC) Performance Standards

IFC's Sustainability Framework (International Finance Corporation, World Bank Group) articulates the Corporation's strategic commitment to sustainable development, and is an integral part of IFC's approach to risk management. The Sustainability Framework comprises IFC's Policy and Performance Standards on Environmental and Social Sustainability, and IFC's Access to Information Policy.

The Policy on Environmental and Social Sustainability describes IFC's commitments, roles, and responsibilities related to environmental and social sustainability. IFC's Access to Information Policy reflects IFC's commitment to transparency and good governance on its operations, and outlines the Corporation's institutional disclosure obligations regarding its investment and advisory services.

The Performance Standards are directed towards clients, providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the client in relation to project-level activities.

IFC requires its clients to apply the Performance Standards to manage environmental and social risks and impacts so that development opportunities are enhanced.

Together, the eight Performance Standards establishes that the client is to meet throughout the life of an investment by IFC. These are:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks & Impacts
- Performance Standard 2: Labour and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety, and Security
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

Full notice of the requirements of these standards were taken during preparation of the ESIA.

The IFC Environmental, Health and Safety (EHS) Guidelines

The EHS guidelines (1991 and updated in 2007) are a set of technical reference materials that provide pollution related limits and standards that are acceptable to the IFC. In general, the guidelines seek to avoid, minimize and control environmental, health and safety (EHS) impacts during the construction, operation and decommissioning phase of a project or facility and are applicable to this project.

Equator Principles (June, 2013)

The objective of the Equator Principles (EP) is to provide a financial industry benchmark for determining, assessing and managing environmental and social risk in project financing. The conditions under which The Equator Principles Financial Institutions (EPFIs) will provide loans to projects are summarized in Principles 1-10 below.

Principle 1: Review and categorization: As part of the EPFI's internal social and environmental review and due diligence, the EPFI will categories each project based on the magnitude of its potential impacts and risks, in accordance with the environmental and social screening criteria of the International Finance Corporation (IFC) (Exhibit I of EP).

Based on these criteria (Exhibit I of the EP), the proposed project is considered a category B, as there are '*potential limited adverse social or environmental impacts that are few in number, generally site- specific, largely reversible and readily addressed through mitigation measures'*.

Principle 2: Social and Environmental Assessment: For a project classified as category A or B, the borrower should carry out a Social and Environmental Assessment ("Assessment") which addresses all relevant social and environmental risks of the project. The Assessment may address, if relevant, the illustrative list of issues described in Exhibit II, which includes the following items:

a) Assessment of baseline environmental and social conditions;
b) Consideration of feasible environmentally and socially preferable alternatives;
c) Requirements under host country laws and regulations, applicable international treaties and agreements;
d) Protection and conservation of biodiversity (including endangered species and sensitive ecosystems in modified, natural and critical habitats) and identification of legally protected areas;
e) Sustainable management and use of renewable natural resources (including sustainable resource management through appropriate independent certification systems);
f) Use and management of dangerous substances;

g) Major hazards assessment and management;
h) Efficient production, delivery and use of energy;
i) Pollution prevention and waste minimization, pollution control (liquid effluents and air emissions), and solid and chemical waste management;
j) Viability of Project operations in view of reasonably foreseeable changing weather patterns/climatic conditions, together with adaptation opportunities;
k) Cumulative impacts of existing projects, the proposed project, and anticipated future projects;
l) Respect of human rights by acting with due diligence to prevent, mitigate and manage adverse human rights impacts;
m) Labour issues (including the four core labour standards), and occupational health and safety
n) Consultation and participation of affected parties in the design, review and implementation of the project.
o) Socio-economic impacts
p) Impacts on affected communities and disadvantaged or vulnerable groups
q) Gender and disproportionate gender impacts
r) Land acquisition and involuntary resettlement
s) Impacts on indigenous peoples and their unique cultural systems and values
t) Protection of cultural property and heritage
u) Protection of community health, safety and security (including risks, impacts and management of Project's use of security personnel)
v) Fire prevention and life safety

Note: As mentioned in Exhibit II of the Equator Principles, the above list of issues is for illustrative purposes only. The Assessment process of each project "may or may not identify all issues noted above, or be relevant to every project" (Equator Principles, July 2013). The Assessment should also propose mitigation and management measures appropriate to the nature and scale of each specific project.

Principle 3: Applicable Environmental and Social Standards: For projects located in non-Organization for Economic Co-operation and Development (OECD) countries (including

Egypt), and those located in OECD countries not designated as High-Income, as defined by the World Bank Development Indicators Database, the Assessment should also refer to the then applicable IFC Performance Standards (Exhibit III of the EP) and the then applicable Industry Specific Environmental Health and Safety Guidelines ("EHS guidelines") (Exhibit III of the EP). For all projects, the assessment process should address compliance with relevant requirements of host country laws, regulations, and permits pertaining to social and environmental matters.

Principle 4: Environmental AND Social Management system and Equator Principles Action Plan: For all Category A and Category B projects located in non- OECD countries, and those located in OECD countries not designated as High-Income, as defined by the World Bank Development Indicators Database, the borrower should develop or maintain an Environmental and Social Management Plan (ESMP), which addresses the relevant findings and draws on the conclusions of the Assessment. The ESMP should describe and prioritize the actions needed to implement mitigation measures or corrective actions, and monitoring measures necessary to manage the impacts and risks identified in the Assessment. Borrowers will build on, maintain or establish a Social and Environmental Management System (ESMS) that addresses the management of impacts, risks, and corrective actions.

Principle 5: Stakeholder Engagement: For category A and, as appropriate, category B projects located in non-OECD countries, and those located in OECD countries not designated as High-Income, as defined by the World Bank Development Indicators Database, the government, borrower or third party expert should consult with project affected communities and where relevant, Other Stakeholders, in a structured and culturally appropriate manner. The Assessment documentation and ESMP or a non-technical summary thereof, should be made available to the public by the borrower for a reasonable minimum period in the local language and in a culturally appropriate manner. The borrower should take account of and document the process and results of the consultation, including any actions agreed resulting from the consultation.

Principle 6: Grievance Mechanism: For category A and, as appropriate, category B projects located in non-OECD countries, and those located in OECD countries not designated as High-Income, as defined by the World Bank Development Indicators Database, to ensure that consultation, disclosure and community engagement continues through construction and operation of the project, the borrower will establish appropriate procedures in order to receive and address concerns or grievances about the project's social and environmental performance.

Principle 7: Independent Review: For all Category A and, as appropriate for Category B projects, an independent social or environmental expert not directly associated with the borrower should review the Assessment Documentation including the ESMPs, the ESMS and the Stakeholder Engagement process documentation in order to assist EPFI's due diligence, and assess Equator Principles compliance.

Principle 8: Covenants: An important strength of the Principles is the incorporation of covenants linked to compliance. For all Category A and Category B Projects, the borrower will covenant to:

a) Comply with all relevant host country social and environmental laws, regulations and permits;
b) Comply with the ESMPs and Equator Principles AP (where applicable) during the construction and operation of the Project in all material respects;
c) Provide regular reports in a format agreed with EPFIs on compliance with the ESMPs and Equator Principle AP (where applicable), and on compliance with the relevant local, state and host country social and environmental laws, regulations and permits; and
d) Decommission the facilities in accordance with an agreed Decommissioning Plan (where applicable). The level of detail contained in a decommissioning plan (where necessary) will depend on the identified impacts and risks of the project (please refer to quote below):

"The Action Plan may range from a brief description of routine mitigation measures to a series of documents (e.g., resettlement action plan, indigenous peoples plan, emergency

preparedness and response plan, decommissioning plan, etc). The level of detail and complexity of the Action Plan and the priority of the identified measures and actions will be commensurate with the project's potential impacts and risks" (Equator Principles, 2013)

Where a borrower is not in compliance with its social and environmental covenants, EPFIs will work with the borrower to bring it back into compliance to the extent feasible, and if the borrower fails to re-establish compliance within an agreed grace period, EPFIs reserve the right to exercise remedies, as considered appropriate.

Principle 9: Independent Monitoring and Reporting: To ensure ongoing monitoring and reporting to EPFIs over the life of the loan, EPFIs will, for all Category A projects, and as appropriate, for Category B projects, require appointment of an independent environmental and/or social expert or require the borrower to retain qualified external experts to verify its monitoring information.

Principle 10: Reporting and Transparency (EPFI reporting): Each EPFI adopting the Equator Principles commits to report publicly at least annually about its Equator Principles implementation processes and experience, taking into account appropriate confidentiality considerations.

1.8.2.2 National Laws / Programme

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
1.	Environmental Impact Assessment Act, 86 of 1992	To ensure that before any decision is taken to undertake or authorize the commencement of any activity likely to impact on the environment by any person, authority, corporate body or unincorporated body including the Government, Federal, State or Local, that the environmental effects of such activity shall first be taken into account.	• The public or private sector of the economy is forbidden from undertaking, embarking or authorizing projects or activities without prior consideration, at an early stage, of their environmental effects. • Where the extent, nature or location of a proposed project or activity is such that it is likely to cause significant effect on the environment, its Environmental Impact Assessment shall be undertaken in accordance with the provision of the Act. • Non-compliance with the Act will attract a fine of One Hundred Thousand Naira (N100,000.00) or five years imprisonment in the case of an individual and in the case of a corporation a fine of not less than fifty thousand Naira (N50,000.00) and not more than one hundred thousand Naira (N100,000.00).	FMENV
2.	S. I. 8 National Environmental Protection (Effluent Limitation) Regulations 1991.	Regulation of effluents discharged into the environment by Industries in Nigeria.	• Every industry is to install anti-pollution equipment for the detoxification of effluent and chemical discharges emanating from industries. • The anti-Pollution equipment should be based on the Best Available Technology (BAT), the Best Practicable/technology (BPT) or the Uniform Effluent Standards (UES).	FMENV

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
			• Waste Water parameters to be monitored are as follows: – Ammonia, Chloride, Chromium, Nitrate, Sulphate, Suspended Solids, Urea, , Zinc, Calcium, COD, BOD, Iron, Copper, Oil & Grease, pH, Phosphate, , Temperature and Total Dissolved Solids.	
3.	S. I. 9 National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations 1991.	Prohibition of industry or facility from the release of hazardous or toxic substances into the air, water or land of Nigeria's ecosystem beyond limits approved by FMENV.	• An industry or facility shall; (a) have a pollution-monitoring unit within its premises; (b) have on site a pollution control; or (c) assign the responsibility for pollution control to a person or body corporate accredited by FMENV. • A discharge, including solid, gaseous and liquid waste from any industry or facility shall be analyzed and reported to the nearest office of FMENV every month, through a discharge Monitoring Report. • An industry or a facility shall setup machinery for combating pollution hazard and maintain equipment in the event of an emergency. • Engaging in the storage, treatment and transportation of harmful toxic wastes within Nigeria without a permit issued by FMENV prohibited. • An industry or a facility which is likely to release gaseous, particulate, liquid or solid untreated discharge shall install, into its system, appropriate abatement equipment in such manner as may be determined by FMENV.	FMENV

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
			• No effluent with constituents beyond permissible limits shall be discharged into public drains, rivers, lakes, sea or underground injection without permit issued by FMENV. • Industry forbidden from exposing an employee to any hazardous condition in his workplace. • FMENV shall demand environmental audits from existing industries and Environmental Impact Assessment from new industries and major development projects	
4.	S. I. 15 National Environmental Protection Management of Solid and Hazardous Wastes Regulations 1991.	Management of solid and Hazardous Wastes in Nigeria.	• All industries or facility to inform the FMENV of all toxic, hazardous and radioactive substances, which they discharge during their production processes.	FMENV
5.	Harmful Waste (Special Criminal Provisions, etc.) Act 1988. L.F.N. 1990.	Prohibition of the carrying, depositing and dumping of harmful waste on any land or territorial waters.	• All activities relating to the purchase, sale, importation, transportation, deposit, storage of harmful waste prohibited and declared unlawful. • The carrying on of the above activity without lawful authority is criminal and shall attract an imprisonment for life and forfeiture of carrier object etc.	FMENV

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
			• Harmful Waste means any injurious, poisonous, toxic or noxious substance and, particular, includes nuclear waste emitting any radioactive substance if the waste is in such quantity, whether with any other consignment or the same or different substances, as to subject any person to the risk of death, fatal injury or incurable impairment of physical and mental health; and the fact that the harmful waste is placed in a container shall not by itself be taken to exclude any risk which might be expected to arise from the harmful waste.	
6.	Factories Act, 1990.	To provide for the registration of factories. To make adequate provisions regarding the safety of workers.	• Factory to provide healthy facilities for workers and ensure the health of workers. • Workers welfare should be priority of factory. • Director of Factories to be informed of accidents and industrial diseases.	Director of factories of the Federation, Inspectors of Factories.
7.	Criminal Code, 1990	Prevention of environmental crime	• Contamination of water, Stream, spring, Well, Tank, Reservoir prohibited and punishable with an imprisonment for six (6) months. • Vitiation of atmosphere and spread of infectious disease prohibited and punishable	Nigeria Police Force.

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
8.	Land use Act Cap 202, 1978.	Land administered for the use and common benefit of all Nigerians.	• All land in urban areas shall be under the control and management of the Governor of each State.	Relevant Agency in State
9.	Constitution of the Federal Republic of Nigeria (CFRN, 1999).	Provides, inter alia, the "Fundamental Objectives and Directive Principles of State Policy" (CHAP. II – CFRN, 1999).	• The State shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria. (CHAP. II, Section 20 – CFRN, 1999).	[1]
10.	Federal government green revolution programme, 1980	To provide enabling environment for improved agriculture. To provide necessary chemical inputs & mechanical equipment to farmers.	• Create agricultural extension services in all state ministries of agricultural. • Establish a division in the ministry to support state agricultural development program. • Establish a division of ministry to coordinate funding from donor agencies.	Ministry of Agriculture
11.	Federal gas revolution programme, 2011	To optimize the advantage of the abundance of natural gas to positively impact on the lives of present and future generations of the Nigerian citizens	• To provide the necessary infrastructures development for capitalizing the nation's gas resources • To ensure sustainable electricity delivery for domestic and industrial uses. • Accelerate industrialization by providing cheaper, safer, cleaner and environmentally friendly fuel to industries in the region. • By 2014 to position Nigeria firmly as the undisputed regional	Minister of Petroleum

[1] General Abdusalami promulgated the Constitution in early May 1999

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
			hub for natural gas-based industries as fertilizer, and petrochemicals.	
12.	National Environmental Standards And Regulation Enforcement Agency (NESREA) Act And Regulations: 2009 -2011	Regulations focused on the protection and sustainable development of the environment and its natural resources.	• Section 7 provides authority to ensure compliance with environmental laws, local and international, on environment sanitation and pollution prevention and control through monitory and regulatory measures; • Section 8(1) (k) empowers the agency to make and review regulations on air and water quality, effluent limitations, control of harmful substances and other forms of environmental pollution and sanitation; • Section 27 prohibits, without lawful authority, the discharge of hazardous substance into the environment. This offence is punishable under this section, with a fine not exceeding One Million Naira (1,000,000) and an imprisonments term of five (5) years. In the case of a company, there is an additional N 50,000 for every day the offence persists.	NESREA

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
13.	National Environmental Standards And Regulation Enforcement Agency (NESREA) Act And Regulations: 2009 -2011	**Regulations**		NESREA
		• National Environmental (Construction Sector Regulations), 2011	To ensure construction activities conducted in an environmental friendly manner	
		• National Environmental (Control of Vehicular Emissions from petrol and Diesel Engines) Regulations, 2011	To ensure prevention and control of vehicular emission.	
		• National Environmental (Surface and Ground Water Quality Control) Regulations, 2011	To ensure protection and pollution of surface and ground water quality.	
		• National Environmental (Sanitation and Waste Control) regulation 2009	To ensure protection of the environment against house-keeping, waste generation and disposal.	
		• National Environmental (Ozone Layer Protection) Regulations 2009	To protect the environment against Ozone depleting substances. To prevent the production, use, importation or sale of Ozone depleting substances.	

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
		• National Environmental (Wetlands, River Banks and Lake Shores Protection) Regulations, 2009	To provide for the wise use of wetlands and their resources;	
		• National Environmental (Noise Standards and Control) Regulations, 2009	Prescribe maximum permissible noise levels. Provide for the control of noise and mitigation measures for the reduction of noise. Ensure maintenance of healthy environment and psychological well-being of the people.	
		• National Environmental (Permitting and Licensing Systems) Regulations, 2009	Issuance of permits and licenses to protect the environment from degradation and pollution	
		• National Environmental (Air Quality Control) regulations, 2014	The regulation provides control and mitigation measure with respect to company's operational influence to ambient air quality of their immediate through setting up of regulatory limit and criteria to check their activity influence to ambient air.	

1.8.2.3 State Laws

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
1.	Rivers State Environmental Protection Agency Edict Number 2 1994	• Environmental Protection, biodiversity conservation and sustainable development of Rivers State's Natural Resources. • Establishment of standards and guidelines. • Technology Development. • Monitor and Control Industrial and hazardous Wastes. • Collect effluent discharge fee. • Enforcement of Industrial and domestic sewage treatment.	• Power to establish specific environmental standards and guidelines. • Power to inspect Industries. • 'Polluter pays' principles. • Any actor that pollutes must report within 48 hours to the Ministry.	Rivers State Ministry of Environment
2.	Noise Control Edict, 1985	• Control of Noise Pollution in the Port Harcourt Metropolis, and elsewhere in the State.	• Power to set noise standards for residential and industrial areas. • Power to prosecute violators of noise limits.	Rivers State Ministry of Environment
3.	Rivers State Environmental Sanitation Authority Edict, 1986	• Regulation of Polices and strategies aimed at promoting environmental hygiene sanitation and facilitating the disposal of refuse and other waste product.	• Power to inspect homes, commercial and industrial outfits. • Power to enforce sanitation policies. • Power to seal outfit for violating sanitation and hygiene rules.	Rivers State Environmental Sanitation Authority

Sr. No.	Regulatory Instrument	Objective	Relevant Provision	Regulator
4.	Pollution Compensation Tax Edict, 1994	• The Edict required persons who are paid compensation as a result of damage to their land and properties to pay a percentage of it to the Government coffers.	• Power to assess degraded /polluted sites. • Power to set fees and payment rates for items destroyed by pollution events.	Director of Internal Revenue
5	Rivers State Waste Management Agency 2014	• The Agency mandate is to develop a waste management system for the state, generate implementable regulation to enforce sanity within the system.	• To control waste generation, segregation/storage, disposal and treatment using environmentally friendly and state-of-the art technology	RIWAMA
6	Rivers State Interim Guidelines and Standards on Environmental Pollution Control and management, 2010	• Regulate the generation, handling, storage, disposal and management of all wastes of whatever origin in Rivers State. • Regulate physical development (infrastructural, industrial, etc.) in compliance with the principle of sustainable development	• The interim guidelines and standards on environmental pollution control and management in Rivers State was established to protect, restore and preserve the ecosystems of the State. • "These guidelines and standards are set to ensure that industrial activities and waste management practices are compatible with our overall goal of bequeathing a cleaner, safer and therefore more prosperous environment to the present generations of Rivers men, women, children and those yet unborn."	Rivers State Ministry of Environment

1.9 STRUCTURE OF THE REPORT

The report shall conform to International standard and Federal Ministry of Environment reporting format which is summarized as follows:

- Title Page
- Table of Contents
- List of Tables
- List of Figures
- List of Maps
- List of Plates
- List of Acronyms and Abbreviations
- List of Preparers
- Acknowledgement
- Executive Summary

Chapter One : Introduction; Background information, Administrative and Legal framework,

Chapter Two : Project Justification,

Chapter Three : Project Description,

Chapter Four : Description of the biophysical, socio-economic and health Environment,

Chapter Five : Associated and Potential Environmental Impacts,

Chapter Six : Mitigation Measures,

Chapter Seven : Environmental Management Plans,

Chapter Eight : Conclusions and Recommendations

References

Appendices

1.10 Declaration

IEFCL has proposed to embark on a fertilizer train 2 project adjacent to fertilizer train 1 plant. In the planning, construction, operational and decommissioning stages of this project IEFCL shall:

- Comply with environmental regulations, laws, statues and edicts.
- Adopt appropriate measures to mitigate, identified and predicted adverse environmental impacts arising from or associated with the project.