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**THEME:
OPERATIONALIZATION AND IMPLEMENTATION OF
NIGERIA EXTRACTIVE INDUSTRIES TRANSPRENCY
INITIATIVE (NEITI) ACT AND ITS IMPLICATIONS FOR CIVIL
SOCIETY, COMMUNITY GROUPS AND WIDER
STAKEHOLDERS**

PAPER

**NEITI, EXTRACTIVE SECTOR AND THE ENVIRONMENT
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NEITI, EXTRACTIVE SECTOR AND THE ENVIRONMENT

1.0 INTRODUCTION

The extractive sector as envisaged in this paper encompasses the mining industries extracting solid minerals (e.g. coal, cassiterite, limestone, gypsum, iron ore, kaolin, barites, bentonite, e.t.c.) and the oil and gas industries. By the nature of these industries, their activities and operations have great impact on the environment most of which is adverse. This is not localized to Nigeria but affects countries the world over where these industries exist. In Nigeria, the oil and gas sector has been better regulated when compared with the solid minerals mining sector.

Acquisition of blocks (licenses), payment of royalties and taxes and oil company operations (exploration and exploitation) have been regulated by the Department of Petroleum Resources (DPR) through sectoral legislations dating back to the Minerals Acts of 1956 through the Petroleum Act of 1969 and to the most recent NEITI Bill signed into law on 28th May, 2007. Contrarily, the acquisition of licenses in the solid mineral mining sector, payment of accruable taxes and royalties and regulation of their operations have remained poorly managed by government agencies whose responsibilities they are. The various acts passed recently as to how the operations affect the environment IN THE 1990S ARE CONFUSING AND CONTRADICTING (Nwafor 2006). However, the NEITI 2007 Bill if properly administered will make their operations more transparent and better environmental friendly.

1.1 NIGERIA GOVERNMENT AWARENESS OF ENVIRONMENTAL ISSUES

The environmental impact of the extractive industries and their operations need to be regulated in order to maintain a healthy environment. The first positive and serious reaction by the Nigeria Government to issues of the environment was demonstrated through the 1975 establishing of a Division of Urban Development and Environment within the Federal Ministry of Economic Development. The government has followed this up by participation in the United Nations Conference on Environment and Development (UNCED) South Africa 2002. The government has also participated in World Bank Initiatives of the 1990s as well as other multilateral institutions, most outstanding of which are the 1995 Durban, South Africa World Bank Environment Assessment (EA) in Africa and African Ministerial Conference on the Environment (AMCEN) of 1996.

The Nigerian Government consciousness of the impact of mineral extraction, oil and gas operations and gas flaring and other industrial projects on the environment established the Federal Environmental Protection Agency (FEPA) in 1995, which metamorphosed later into Federal Ministry of Environment. It issued the Agency's **National Guidelines for Environmental Audit (FEPA 1999)**. The Agency defined environmental auditing as an independent assessment of current status of a party's **compliance** with applicable environmental requirements, as well as an independent evaluation of the party's environmental **compliance**, policies, practices and control. The NEITI Bill is supposed to institutionalize the quest for increased transparency in management of Nigeria's oil, gas and mining sectors. The general public is stakeholders who should be sensitized on the revenue generation. Allocation and accounting in the extractive industries and also able to engage the government on environmental impact and degradation resulting from these activities.

2.0 ENVIRONMENTAL REGULATION OF THE EXTRACTIVE INDUSTRIES

The issues of the environment on any planned projects should be integrated from the onset on the planning and execution of the projects through Environmental Impact Assessment (EIA). As a matter of fact, the EIA report should determine whether the project can proceed or not. Such projects should have Environment Management Plan (EMP) and meet International Organization for Standardization (ISO) requirements. ISO14001 certification is a case in mind. ISO14000 international environment friendly best practice standards, which addresses seven areas (ISO14000, Tamura, 1999, 2000) should be followed and the comprise the following:

- a) Environmental Management Systems;
- b) Environmental Auditing;
- c) Environmental Performance Evaluation;
- d) Environmental Labeling;
- e) Life Cycle Assessments;
- f) Terms and Definition and
- g) Environmental Aspects of Products Standards and Forestry.

Complimenting ISO14000 are three Cardinal Environmental Management Standards defined by:

- Environmental Management Systems (EMS) ISO14001
- Environmental Auditing ISO14011 and 14012
- Environmental Performance Evaluation (EPE) ISO14031

These are guidelines of best practice standards required for the protection of the environment; the later one (ISO14031), which is the most comprehensive and restrictive is applied in the industrialized countries of the world (USA, EU Countries and Japan) and probably beyond the developing countries (China, India, Malaysia, Nigeria, e.t.c.) ability to maintain. Some of the oil companies (Shell, Exxon-Mobil) operating in Nigeria have met the (ISO14001) certification standards in their new flow stations and storage systems. As a minimum, the extractive industries in Nigeria should be required to meet the (ISO14001) certification standards.

3.0 MINIG INDUSTRY AND THE ENVIRONMENT

In the mining industry, techniques used involve opencast or surface mining, which devastates the landscape; underground (subsurface) mining involves trenching and tunneling and the use of ventilation shafts. These subsurface structures require the diversion of water table, putting in place infrastructure to avert mine flooding, gas explosions, degasification of harmful trapped gases (H₂S, CO₂ and CH₄). Proper records and maps of subsurface mining infrastructure should be kept and emergency rescue systems put in place in case of mine collapse. Since mining activities affect the environment the need to regulate operations is paramount.

Case history of cassiterite opencast mining in Jos Plateau and Kano (Ririwai) is discussed. The mining devastated the environment leaving heaps of mine tailings and artificial lakes and ponds. The mine tailings have zircon and monazite, which are radioactive and have caused tremendous damage to environment and people living in the neighbourhood. The water resources are polluted through infiltrations to the water table. In Jos where house for miners were built with silicon sands from the mine waste the radiation levels from the walls are higher than tolerable levels and injurious to health (causing cancer). This housing estate at

Doruwa has been abandoned because of the toxic radiations from zircon and monazite present in the sand.

Topical at the moment is the local collapse in the USA, which has trapped eight miners underground; equally worrisome is the increasingly incessant mine collapses and flooding in China where mine deaths run in hundreds per year. In Nigeria mining techniques are primitive, crude and dangerous; being prone to slurry sliding, collapse of tunnel walls and roofs.

Remediation of the landscape at the end of mining activities is necessary. The mine heaps should be leveled and blended into the landscape and returned to agricultural use; the artificial lakes and ponds converted to recreational facilities and fish farming ponds.

4.0 OIL AND GAS INDUSTRY AND THE ENVIRONMENT

Oil and gas industry as treated here is the upstream sector, which deals with the exploration and exploitation of petroleum. The Niger Delta region bears the brunt of oil industry activity in Nigeria as it affects the environment: air, water, land and people. Development projects in the industry have led to acceleration in the loss of top soil and deforestation, loss of habitat, loss of species and loss of biodiversity and degradation of wetlands.

Oil companies' activities in the Niger Delta region have accelerated deforestation giving rise to perennial rivers turning into seasonal or ephemeral streams, due to:

- Limited rainwater infiltration and recharge of groundwater resources;
- Pollution of streams by oil discharge, seepage and spills due to blowouts, poor equipment/infrastructure maintenance, sabotages;
- Habitat destruction, wetlands drainage and loss of biodiversity.

4.1 OIL AND GAS POLLUTION

Oil and gas pollution results from the following (Nwafor 2006):

- Exploration and production of oil and gas, its transportation, hydrocarbon process;
- Niger Delta highly sensitive ecological and aquatic environment and other parts of coastal zone and offshore.
- Environmental impacts that are visible, intense and cumulative;
- Land disturbance, removal of vegetation and environmental degradation on massive scale;
- Physical impacts such as river siltation and water contamination;
- Seismic data acquisition stage to drilling and development through production (onshore and offshore) and flaring of associated gas;
- Others include transportation by tankers and pipelines, terminal operations.

Table 1 is a summary of the activities and associated impacts of the oil and gas industry upstream sector. (Adapted from Adegoke and Ojesina 1999 and Nwafor 2006).

A. ACTIVITES	IMPACT
<p>Seismic Acquisition Mobilization and development of highly skilled personnel; surveying of seismic routes, road construction, drilling of holes; detonation of explosives.</p>	<p>Cutting of trees, loss of local species/diversity and disturbance of the ecosystem, noise and air pollution from solid waste.</p>
<p>Site Selections, Well Drilling and Completion Site preparation involving civil engineering works, road construction and drilling of water boreholes, oil well drilling involving erection of drilling rigs and pumping of drilling mud.</p>	<p>Destruction of soil and vegetation, soil erosion, increased turbidity of water; pollution of marine environment and ground water, oil well blowout.</p>
<p>Crude Oil Production Transmission of oil through pipelines and flow lines to the flow stations and terminals; handling of the associated gas and flaring, management of produced water and oil spills. Construction of pipelines, flow lines and flow stations and tank farms; heavy construction; mobilization and installation of heavy machinery and equipment.</p>	<p>Large scale destruction of forests and farmlands; flooding; destruction of portable water and fisheries leading to adverse socio-economic impacts on the livelihood of communities.</p>
<p>Gas Gathering and Flaring Flaring and venting of gas.</p>	<p>Irreplaceable loss of vital resources, contributes to local and global concentration of greenhouse gases, global warming and climate change; air pollution health hazards; fire disasters.</p>
<p>Produced Water Management Separation of water at the flow stations and re-injection into the reservoir.</p>	<p>Water pollution.</p>
<p>Oil Spills Caused by production human error, production equipment failure, corrosion, sabotage/theft among others.</p>	<p>Surface water pollution, toxic to aquatic animals pollution of atmosphere; fire outbreak.</p>

5.0 NEITI, THE CATALYST TO RIGHT THE WRONGS IN THE NIGER DELTA

The NEITI Bill of 28th May, 2007 should be the catalyst to right the wrongs in the Niger Delta and other areas of Nigeria where there are active mining of solid minerals. It should act as a basis of regulating mining activities as they affect the environment - including environmental protection and management; empower the general public to play an important role in enforcing environmental laws, make the law courts more amenable and sensitive to the yearnings of the public with regards to having a safe environmental economic life free from industry and government encroachment.

The crisis in the Niger Delta can be abated by implementing environment friendly regulations and laws by:

- Protecting the economic life of the inhabitants by enforcing environmental best practice standards;
- Restoration of the environment by remediation of the land (soil and water resources), air (stopping gas flaring and its attendant discharge of reactive substances, CO₂, CO, SO₂ into the atmosphere).

- Adequate compensation for losses due to degraded and agriculturally unproductive soils; polluted streams that can no longer yield fresh water fish, mainstay of the livelihood of the inhabitants, curtailing of acid rains due to gas flaring, which degrades the soil and affects the aquatic life both fauna and flora;
- Destruction of social infrastructures should be stopped and social activities like fiestas and regattas encouraged and revived;
- Strategic Environmental Assessment (SEA) put in place to regulate upstream oil and gas activities in deciding choice and use of materials for pipelines, tank farms and flow stations; and in the offshore platforms and facilities in the deep offshore Floating Production Storage and Offloading systems (FPSOs).

6.0 CONCLUSION

The NEITI 2007 Bill is a new beginning for the extractive industries. It offers a transparent initiative to ameliorate the degradation of the Nigerian environment where active mining, oil and gas exploration and exploitation is going on. It offers the opportunity for the general public to participate meaningfully in the future development of these industries. It gives the companies and the government the opportunity to make amends for previous inaction and insensitivity on issues of the environment. It provides the opportunity to carry along the general public in the development of our mineral resources - as effected by the mining, oil and gas industries.

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