TOWARDS THE STRICT LEGAL ENFORCEMENT OF BEST PRACTICE PRINCIPLES IN OIL AND GAS EXPLORATION AND PRODUCTION IN NIGERIA[1]

Abstract

The exploration and production of oil and gas remains a priority for the Federal Government of Nigeria, as the revenue that comes from it is a major source of foreign income, and offers the opportunity for the transfer of technology to the country. However, oil and gas exploration and production has the potential to cause severe environmental degradation, not only to the physical environment, but also to the health, culture, economic and social structure of the communities where it is produced. Environmental impacts of the extraction of oil and gas at different times and in various places have included air and water pollution, oil spills, sociocultural impacts, which disproportionately affect women and children, ecological damage and accidental fires that result in the destruction of lives and properties. The achievement of a synergy between environmental protection and the economic benefits afforded by oil and gas exploitation has posed a challenge in the past and continues to do so now and into the future. The aim of this article is to contribute to the growing literature on the need to integrate the protection of the environment into the regulatory regimes that control the exploration and production of oil and gas in Nigeria. The article provides an overview of the environmental issues and a little incursion into the disproportionate effect on women and children and the technical and management approaches to achieving high environmental performance in the activities of the oil and gas exploration and production. The article found that environmental regulations are often ineffective because they are substantively inadequate and/or inadequately enforced. This accounts for environmental pollution arising from oil and gas industry. The article highlighted some of the best approaches to achieving high environmental performance in the oil and gas sector and made some useful recommendations.

Key Words: *Best Practice, Oil and Gas, Exploration, Production, Legal Enforcement, Nigeria*

1. Introduction

Awareness of the importance of environmental issues has become more and more central to the oil and gas exploration and production the world over. By principle 4 of the Rio Declaration, "in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." Nigeria and indeed the global community will continue to rely heavily on oil and gas for the foreseeable future. The challenge is to meet the energy demands, while minimizing adverse impact on the environment by conforming to current good practice. The United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in June 1992 focused world attention on the close links that exist between the environment and socioeconomic development. The statement reviewed global environmental issues and formulated two conventions (i.e. the Framework Convention on Climate Change and the Convention on Biological Diversity), as well as the Rio Declaration and Agenda 21 plan of action. The central message of Agenda 21 is one of interdependence and cross sector partnership, and the plan of action provided a new approach to the wide ranging socioeconomic and environmental challenges facing the global community.

Oil production in Nigeria has had severe environmental and human consequences for the indigenous peoples who inhabit the areas surrounding oil extraction. Nigeria's export of 12 million barrels of oil a day comes from 12% of the country's land, and indigenous minority

[1]By **Felicia ANYOGU, PhD, BL,** Associate Professor of Law, Faculty of Law, Nnamdi Azikiwe University, Awka, Nigeria; and **U. D. IKONI, PhD, BL,** Associate Professor of Law, Faculty of Law, Benue State University, Makurdi, Nigeria.

communities in these areas receive no economic benefits. Indigenous groups are actually further impoverished due to environmental degradation from oil production and the lack of adequate regulations on multinational companies, as they become more vulnerable to food shortages, health hazards, and loss of land, pollution, forced migration and unemployment[2].

The social and environmental costs of oil production have been extensive. They include destruction of wildlife and biodiversity, loss of fertile soil, pollution of air and drinking water, degradation of farmland and damage to aquatic ecosystems, all of which have caused serious health problems for the inhabitants of areas surrounding oil production. Pollution is caused by gas flaring; ground pipeline leakage; oil waste dumping and oil spills, etc. Approximately 75% of gas produced is flared annually causing considerable ecological and physical damage to other resources such as land/soil, water and vegetation. Gas flares, which are often times situated close to villages, produce soot which is deposited on building roofs of neighbouring villages. Whenever it rains, the soot is washed off and the black ink-like water running from the roofs is believed to contain chemicals which adversely affect the fertility of the soil[3]. Gas pipelines have also caused irreparable damage to lands once used for agricultural purposes. These pipes are often laid above ground and run directly through villages, where oil leaks have rendered the land economically useless.

2. Conceptual Clarifications

Generally, the term environment is inherently technical in scope and application. The Black's Law Dictionary[4] defines "environment" as the totality of physical, economic, cultural and social circumstances and value of property which also affect the quality of peoples' lives. The above definition is in consonance with that offered by Wilkinson *et al*[5] who defined environment as all the interesting factor and circumstances that surround, influence and direct the growth and behaviour of individual's beings, group's species and communities. Also, the environment has been described as a physical matter, i.e., the air, the sea, the land, natural resources, flora and fauna and cultural heritage (being items of archaeological, historical, artistic and scientific interest)[6]. According to Akinbode[7], environment is the totality of the places and surroundings in which we live, work, and interact with other people in our cultural, religious, political and socioeconomic activities for self-fulfillment and advancement for our communities, societies or nations. It is within this environment that both natural and man-made things are found. A statutory definition is provided by the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 where environment is said to include water, air, land and all plants and human beings or animals living therein and the interrelationship that exist among these or any of them. Regulation 3(1) of the Oil and Oily Waste Management Regulations, 2011, makes provision for exploration, production and development activities in the Petroleum sector and the extent of the damage to land and navigable waters in Nigeria of oil spillage and discharge of oily waste.

[2] O. U. Ndukwe, *Elements of Nigerian Environmental Laws* (Calabar: University of Calabar Press, 2000)
[3] *Ibid.*
[4] BA Garner, *Black's Law Dictionary* (8th Edition USA West Publishing co.2004)
[5] Wilkinson and Wyman, *Environmental Challenge: Learning for Tomorrow's World* (London, Malthouse Press, 1986) p. 87.
[6] Martin Dixon and Robert Mc Croquodao, *Cases and Materials on International Law* 2nd ed (London; Blackstone Press Ltd 1995) p. 521.
[7] A Akinbode, *Introductory Environmental Resource Management* (Ibadan, Daybis Ltd, 2002) pp 1-2.

3. Legal Regimes for Regulations of Pollution in Oil and Gas Industry in Nigeria

The petroleum sector of the Nigerian economy consists of interdependent activities, which include exploration, production, and transportation, refining and marketing. Whereas the sector, no doubt, provides the engine for significant economic growth through contributions to national revenue, virtually all the activities in this sector are not only prone to pollution of the host environment, but have also readily provoked social discord. In the effort to curb pollution of land and water resources, governments all over the world have enacted national laws, regulations, guidelines and standards to control and manage the operations of the petroleum sector to achieve sustainable development.

Basically, the statutory framework for environmental resources management in Nigeria has been classified into three broad models. These are conservation legislation, oil and gas exploration and control legislation and environmental policy and protection legislation. Legal framework for the regulation of environmental protection in Nigeria is derived from National and international laws, conventions and protocols. These include: (a) Petroleum Act, 2004.[8] (b) The Oil Terminal Dues Act, 2004 (c) Oil in Navigable Waters Act, 2004[9] (d) Oil Pipeline Act, 2004 (e) Associated Gas Reinjection Act, 2004[10] (f) National Environment Standards and Regulations Enforcement Agency (Establishment) Act, 2007[11] (g) Environmental Impact Assessment Act, 2004[12] (h) Harmful wastes (Special Criminal Provisions, etc.) Act, 2004[13] (i) National Oil Spill Detection and Response Agency (Establishment) Act, 2006[14] (j) Convention on the Prevention of Marine Pollution by Dumping of wastes and other matters, 1976 (k) International Convention for the Prevention of Pollution of the sea by Oil, 1954 (l) International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), 1990, etc.

Most of these laws exist only in statute books. In other words, they lack any committed enforcement machinery and the penalties provided in some of them are grossly inadequate and can hardly deter any potential polluter.

3.1 The Constitution of the Federal Republic of Nigeria 1999

The Constitution of the Federal Republic of Nigeria 1999 does not seem to deal specifically with the environment even though there are provisions which are relevant to environmental issues. The Constitution vests the power to make laws for the Federation in the National Assembly.[15] Under the Constitution, the Federal Government has powers to legislate on matters in both Exclusive and Concurrent Legislative Lists. However, powers which are not expressly granted in those lists and which would not be reasonably implied or presumed cannot be exercised by the Federal Government.[16] Part 1 of the second schedule to the Constitution which contains items on the Exclusive Legislative List meant to be acted upon by the Federal Government alone and which are of relevance to environmental issues include: i. Aviation;[17]

[8] Cap P16 LFN 2004.
[9] Cap 012 LFN, 2004.
[10] Cap A25 LFN, 2004.
[11] No 25 of 2007.
[12] Cap E12 LFN 2004.
[13] Cap HI LFN 2004.
[14] No 15 of 2005.
[15] Section 20 (4) CFRN 1999.
[16] See Justice Sutherland in *United State v. Curtis Wright Corporation*. 209 US 304 (1936)
[17] Item 3 of Part I, Schedule II, of the CFRN, 1999 (as amended)

ii. Drugs and poisons;[18] iii. Fishing and Fisheries;[19] iv. Maritime, shipping and navigation;[20] vi. Mines and minerals including oil fields, oil mining, geological survey and natural gas;[21] vii. National Parks;[22] viii. Nuclear Energy.[23] Also part 2, containing terms on the Concurrent Legislative List on which both the Federal and State Governments could act include the following items which are relevant to environmental management: i. Antiquities, monuments and achieves;[24] ii. Electric power;[25] iii. Industrial, commercial and agricultural development;[26] and iv. Scientific and technology research.[27] Above all, section 20 of the Constitution provides for the environmental objectives of the country.

3.2 Petroleum Act 2004

The Petroleum Act empowers the minister in S. 9 (1) (b) (iii) to make regulations for the prevention of pollution of watercourses and the atmosphere. Accordingly, Regulation 25 provides thus: The licensee or lessee shall adopt all practicable precautions including the provision of up to date equipment approved by the Director of Petroleum Resources to prevent pollution of inland waters, River courses, the territorial waters of Nigeria or the high seas by oil, mud or other fluid or substances which might contaminate the water, bank or shore line which might cause harm or destruction to fresh water or marine life and where any such pollution occurs or has occurred, shall take prompt steps to control and if possible, end it.

3.3 The Environmental Impact Assessment Act 2004

This is the core legislation that governs environmental impact assessment in respect of proposed projects in Nigeria and flows directly from the provision of Principle 17 of Rio Declaration which is to the effect that "environmental impact assessment as a national instrument shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority."[28]

3.4 Associated Gas Reinjection Act 2004

This Act which is the only legislation so far on gas, makes it obligatory for every company producing oil in Nigeria to submit detailed plans for gas utilization. The Act also stipulates that no company engaging in the production of oil shall flare gas produced in association with oil without permission in writing from the minister

3.5 Oil in Navigable Waters Act 2004

This Act came into existence as a result of the coming into effect of the International Convention for the Prevention of Pollution of the Sea, 1954. It is one of the premier pollution prevention legislation in the country. The Act prohibits the discharge of certain type of oil into certain prohibited sea areas.[29] By the provision of Section 6, the discharge of oil or oily mixture

[18] *Ibid*, item 21
[19] *Ibid*, item 36
[20] *Ibid*
[21] *Ibid*, item 39
[22] *Ibid*, item 40
[23] *Ibid*, item 41
[24] *Ibid*, Paragraphs B & C
[25] *Ibid*, Paragraph F
[26] *Ibid*, Paragraph H
[27] . *Ibid*, Paragraph I
[28] Adoption of Agreement on Environment and Development; The Rio Declaration on Environment and Development (2001)
[29] Section 3 Oil in Navigable Waters Act, 2004

into Nigerian water from any vessel or any apparatus used in transferring oil from or to any vessel is an offence. This provision is akin to the provisions in the Oil Terminal Dues Act, 2004 which makes the discharge of oil into water and the terminal an offence. Persons found guilty under this Act will be liable to the defences and penalties in the Oil in Navigable Waters Act 2004.

4. Challenges of Oil and Gas Industry to Environmental Protection in Nigeria

Although Nigeria depends legally on the production or the trade of oil to fuel its economies, these activities can cause severe damage to the environment, either knowingly or unknowingly. Oil production and/or transportation can disrupt the human population and the animal and fish life of the region. Oil waste dumping produces pollution, and oil spills wreak havoc on the surrounding wildlife and habitat. It threatens the extinction of several plants, and has already harmed many land, air, and sea animal and plant species.

Seismic activities: Activities in the exploration and development subsector of the petroleum industry include seismic survey, drilling and well completion, which may be carried out on dry land, swamp, shallow coastal waters and estuaries, including shallow offshore and deep or ultra-deep offshore waters. Oil spill and oily wastes discharges could occur from refueling and maintenance of engines of seismic survey trucks on land or seismic survey vessels on water.[30]

Exploration and Development Operations: Exploration, production and development operations are prone to oil spills and oily wastes discharges. These could result from a well blowout, discharge of drilling mud or fluids, drill cuttings, deck drainage and well treatment fluids.[31]

Production Operations: After a well is drilled and established to be productive, the mobile unit is then replaced by a fixed installation. Produced gas and oil can be fed into gas pipeline or used as crude oil for export and refinery or petrochemical inputs respectively. The discharges from production operations include oily effluents and accidental oil spills. Liquid or aqueous wastes may occur from leakage at producing and abandoned well manifolds SPMS/SBN, rupture, piping or storage facilities (tank overflow), corrosion, accidental spills, produced formation water, deek drainage, etc. Oily wastes can be generated during routine maintenance, third party interference, equipment malfunction and from workmen or clearing of facilities or accommodation drainage, which are primarily polluted with oil and grease.[32]

Terminal Operations: Terminal activities involve the storage, dehydration, fiscalisation and dispensing of crude oil for export or local use in refineries and petrochemical industries. Oil pollution from terminal operations may arise due to oil spill or leakages from pipe, hose burst, malfunction or faulty equipment, corrosion, maintenance operation, or discharge of refined products from service vessel, etc.[33]

Refining Operations: The petroleum refining processes consist of separation of crude oil molecular constituents, molecular cracking and rebuilding, including solvent finishing and in

[30] Appendix 1.2 of the Oil Spill and Oily Waste Management Regulations, 2011 made pursuant to section 26 of the National Oil Spill Detection and Response Agency Act, No. 15 of 2006.
[31] *Ibid.*
[32] Appendix 1.3
[33] *Ibid*, Appendix 1.4

the refining processes of crude oil, gaseous, liquid and solid effluents are discharged into the environment.[34]

Blending Plant Operations: Blending plants are where petroleum products such as petrol engine oil, diesel engine oil, hydraulic oil, grease, etc are produced with attendant environmental pollution, which should be managed and controlled. Sources of pollution here include leaks and spillages due to equipment failures or corrosion, etc.[35]

Oil and Gas Transportation: The transportation of oil and gas is achieved through pipelines, ships, coastal barges, road tankers, railwagons, etc. Pollution arising from this source is due mainly to accident involving tankers, pipe burst etc. The potential and associated adverse effect of pollution from oil and gas transportation operations on the environment, no doubt have had their economic and social implications.[36]

Retail Outlets: Retail outlets are facilities for dispensing petroleum products to end users. Servicing of automobile engine could impact on the environment with oil spills or oily wastes due to drained engine oil and at a retail outlet. Also, leakages, seepages and spills occur due to corrosion of underground storage tanks as a result of age of materials.[37]

Oil Spills: One industrial activity can give rise to several type of pollution, amongst them is oil spillage.[38] Spillages can occur at any stage in oil industry operations. Crude and refined oil are both pollutants that have lasting and deleterious effects on the environment.[39] Oil spillage in Nigeria occurs due to a number of causes, including corrosion of pipeline and tankers (accounting for 50% of all spills), sabotage (28%), and oil production operation (21%), with 1% of the spills being accounted for by inadequate or nonfunctional production equipment. The largest contributor to the oil spill is total corrosion of pipes and tanks, which leads to the rupturing or leaking of production infrastructure that are described as "very bad and lack regular inspection and maintenance."[40]

Gas Flaring: Gas flaring and venting is the burning of associated gas that accompanies the extraction of crude oil from oil wells during oil exploration. The associated gas is considered uneconomical to recover by the oil companies and as such it is either flared or vented in the atmosphere.[41] Gas flaring is environmentally unethical and has contributed significantly to the degradation of the environment in the Niger Delta region. Acid rain is caused by gas flaring. The concentration of acid in rainwater appears to be higher in the Niger Delta region and decreases further away from the region. These practices have altered the vegetation of the area, replacing local vegetation with stubborn grasses, grasses that can grow in very harsh environment. The soil where it grows is no longer fertile for cultivation.[42] Also, gas flaring poses another problem, the release of large amounts of methane which has very high global warming potential. The Methane is accompanied by the other major greenhouse gas, carbon dioxide, of which Nigeria was estimated to have emitted more than 3,438 metric tons in 2002,

[34] *Ibid*, Appendix 1.5.
[35] *Ibid*, Appendix 1.6.
[36] *Ibid*, Appendix 1.7.
[37] *Ibid*, Appendix 1.8.
[38] Y.Omorogbe, *Oil and Gas Law in Nigeria Simplified* (Lagos: Malthouse Press Ltd, 2001) p.133
[39] *Ibid*.
[40] Impact of Oil Spills along the Nigerian Coast (The Association for Environmental Health and Science).
[41] B Manby "The Price of Oil: Corporate Responsibility and Human Right Violation in Nigerian's Oil Producing Communities" New York, *Human Right Watch*, 1999.
[42] L.F, Awosika, Impact of Global Climate Changes, 1995.

accounting for about 30% of the total CO_2 emissions. As gas flaring in the west has minimized, in Nigeria it has grown proportionally with oil production.[43] In *Gbemire v Shell Petroleum Development Company of Nigeria*,[44] the Federal High Court of Nigeria in a judgment on 14th November, 2005 ordered that gas flaring be stopped in a Niger Delta community as it violates guaranteed constitutional rights to life and dignity. This order marked an important watershed in the struggle by local communities of Niger Delta of Nigeria to protect their health, environment and their farmlands, and to bring an end to gas flaring.

Waste Oil Disposal: In Nigeria the activities involved in petroleum exploration and production produce waste of varying chemical compositions, which are generated at each phase of operation. The disposal of these wastes in the Niger Delta has polluted land and water, damaging fisheries and agriculture, undermining the human right to an adequate standard of living.

Activities of Saboteurs: Sabotage is defined as a willful attempt to disrupt or interrupt the production or distribution of oil by third parties. Sabotage is a result of poverty and often members of the community where oil is being produced tamper with oil installations so that their property will be damaged and compensation will be paid to them.[45] In Nigeria, oil pipeline sabotage is prohibited.[46] The Act defines a saboteur as "any person who does, aids another person or incites or procures any other person to do anything with intent to obstruct or prevent the production or distribution of petroleum products in any part of Nigeria, or prevent the procurement of petroleum products for distribution in any part of Nigeria, or willfully does anything in respect of any vehicle or any public highway with intent to obstruct or prevent the use of that vehicle or that public highway for the distribution of petroleum products"

Oil pipeline sabotage, as referred to here, concerns the illegal or unauthorized act of destroying or puncturing of oil pipelines so as to disrupt supply or to siphon crude oil or its refined products for purpose of appropriating it for personal use or for sale on the black market or any other outlet. It includes such acts as oil bunkering, pipeline vandalization/fuel scooping and oil terrorism. The return to democracy in 1999 witnessed an unprecedented increase in the rate of oil pipeline vandalization. From 497 cases reported in 1999, it increases to 909 cases in 2002. From 2001 to 2003 the number declined considerably, but it started rising again in 2004 (to 971 cases) and increased sharply to 2258 cases of pipeline vandalization in 2005.[47]

5. Trends in Environmental Management Practice in the Oil and Gas Industry

The voluntary codes and guidelines of the international oil industry generally contain one or more of three broad types of standards or guidelines that assist in protecting the environment. The first of these are standards for equipment and products, such as construction requirements for underground storage tanks and pipelines. Poorly designed, constructed or outdated equipment may pose a greater threat to the environment. Three major organizations that set standards in the international oil industry are the ISO, the API and CEN, the European regional

[43] Gas Flaring in Nigeria: A human rights, environmental and economic monstrosity (climate justice programme and Environmental Right Action/friends of the Earth Nigeria)

[44] http:/www.climatelaw.org/media/media/gas.flaring.suit.nov2005/ni.shell.nov2005.decision.pdf accessed on 20/11/2011

[45] Yinka Omorogbe; Oil and Gas Law in Nigeria simplified (Malthouse Press Ltd) 2001 Lagos, p.134

[46] S. 1, Petroleum Production and Distribution (Antisabotage)

[47] F C Onuoha, "Poverty, Pipeline Vandalization Explosion and Human Security: Integrating Disaster Management into Poverty Reduction in Nigeria" *African Security Review*, 2007, 16 (2): 94108

body corresponding to ISO.[48] The second type of standard addresses environmental practices, including the observance of environmental standards such as limits on emissions, and the implementation of recommended environmental practices such as waste disposal methods. Poor environmental practices, such as the unsafe disposal of toxic drilling wastes, and gas flaring, generally pose a greater threat to the environment.

Environmental and Social Impact Assessment: EIA is a procedure whereby the significant environmental impacts of a proposed development project are assessed prior to activity taking place.[49] EIA has the potential to be a powerful tool to ensure that the environmental and cultural impacts of proposed development activities are assessed, taken into account in decision making, and mitigated. While the features of EIA vary between jurisdictions, there are a number of common elements. These are:

1. *Screening*: A mechanism to identify projects with potentially significant adverse environmental impacts in order to "screen out" proposals with minimal impacts.
2. *Scoping*: A process of determining the range of issues to be addressed in the EIA and for identifying the significant issues relating to a proposed action.
3. *Alternatives*: The identification and measurement of the impacts of alternatives to a proposed development that may cause less environmental damage, including the option of "no development."
4. *Baseline Environmental Study*: This provides a description of the existing environment of the proposed development site and its environs, including a cultural resources survey, prior to any activity taking place.[50]
5. *Impact Prediction*: A procedure for ensuring that all potentially significant environmental impacts, including cultural and social impacts, are identified and taken into account. Women and children seem to bear the burden and are disproportionately affected in situations of hardship and poverty, and also in economic recessions. This has been endemically entrenched in the Nigerian society and indeed many other societies due to the long-standing socio-economic and cultural discriminatory practices against women. When women are poor, their children can never get the best of life. In a situation where the waters of a community are polluted, and their lands made sterile, an emergency arises because both men and women have been deprived of their livelihood and when poisonous substances are injected into the air, children and pregnant women being the most vulnerable, bear the brunt. The debilitating socio-economic and cultural situations have a way of subjugating women. This again is due to the endemic and age-old male dominance and imputed inferiority of the female.[51] The far Eastern Economic Review aptly put this position thus:

> When men leave their villages for better paid jobs in cities abroad, women get saddled with the farm work as well as their domestic chores. When bloated state enterprises rationalize

[48] API, "Standards Safeguard the Environment and Human Health", 30 June 1999, <http://www.api.org/step/standards.htm>; Accessed on 71/7/12. See also The OGP's Catalogue of International Standards Used in the Petroleum and Natural Gas Industries (Report No 1.24/299, November 1999) which lists hundreds of ISO standards that are used in the international oil industry.

[49] A Gilpin, *Environmental Impact Assessment (EIA): Cutting Edge for the Twenty-First Century* (Cambridge UK: Cambridge University Press, 1995) ; P. Morris and R. Therivel (eds), *Methods of Environmental Impact Assessmen*t (London: UCL Press Limited, 1995).

[50] T King, "What Should be the "Cultural Resources" Element of an EIA?" (2000) 20 Environ Impact Assessment Rev 5 at 1516

[51] F A Anyogu, *Access to Justice in Nigeria*: *A Gender Perspective* (2nd Edition, Enugu, Ebenezer Productions 2013) p 378.

> their work forces, women get laid off before male heads of household. When swept shops seek under paid casual labours, women are the first to be recruited. When newly rich men dabbled in vice, village girls get dragooned into prostitution and middle aged matrons wind-up divorced. Yet when fast changing lifestyles provoke a traditionalist back-lash patriarchy re-asserts itself with a vengeance. When inflation bids up dowries and social pressures depress birthrates, girl babies get aborted or murdered in their cribs to make way for male heirs. When the resulting skew in the sex ratio makes for a shortage of marriageable women, a black market arises for kidnapped brides. This graphical presentation is the plight of women who face multifaceted discrimination and exploitation even today.

Although this presentation had the Asian women in mind, the writers are of the opinion that the description more succinctly portrays the plight of the Nigerian women in the various situations portrayed therein.

6. *Mitigation Measures*: The identification and discussion of measures to mitigate predicted adverse environmental impacts.
7. *Environmental Impact Statement (EIS) or EIA Report*: The document, usually prepared by the proponent of an activity, which describes a proposed development, discloses the predicted impacts on the environment, and sets out information on feasible alternatives and mitigation and protection measures.
8. *Public Participation and Review of EIS*: Public consultation and participation are an integral part of an effective EIA process, and may take place at all stages in the EIA process. As a minimum, EIA procedures in democratic countries allow for public review and comment of a draft EIS before a final EIS is prepared.[52]
9. *Decision*: After the final EIS has been prepared, the relevant decision-making body must make a decision regarding whether the proposed development should proceed, and if so, whether any conditions on development will be imposed.
10. *Post Project Analysis*: This includes ongoing surveillance and control over development activities and their effect on the environment through monitoring and auditing.[53] Usually, Social Impact Assessment (SIA) is a method for assessing the impact of development strategies and projects on societies and cultures and is undertaken as part of the EIA process.[54] "Social impacts" are "the consequences to human populations of any public or private actions—that alters the way in which people live, work, play, relate to one another, organise to meet their needs, and generally cope as members of society. The term also includes cultural impacts involving "changes to the norms and beliefs that guide and rationalise their cognition of themselves and their society."[55] For some developments, the social and cultural effects may be far more significant than the impacts of the project on the physical environment, and yet social impacts may be more difficult to assess, predict

[52] C Wood, *Environmental Impact Assessment: A Comparative Review* (Essex UK: Longman Group Limited, 1995) p.227

[53] *Ibid* at 197199

[54] IUCN Inter-Commission Task Force on Indigenous Peoples, indigenous Peoples and Sustainability: Cases and Actions (Utrecht: International Books, 1997) at 150.

[55] The Interorganisational Committee on Guidelines and Principles for Social Impact Assessment, "Guidelines and Principles for Social Impact Assessment" (1995) 15 Environ Impact Assessment Rev 11 at 11.

and manage laws[56] and industry guidelines, and are imposed as conditions of lending and assistance by international financial organizations.

A thorough and well-conducted EIA provides a number of benefits, including the following:

(a). it provides a procedure for identification of likely adverse environmental impacts, including cultural impacts, *before* a decision to proceed with a development activity is made;

(b). it provides opportunities to the public and affected people, such as indigenous peoples, to present comments and recommendations to the decision-maker and participate in the development process;

(c). it precludes secrecy in official decision making, and opens the process of development to scrutiny;

(d). it provides an opportunity to identify and take alternative development options;

(e). it presents an opportunity to identify and incorporate mitigation measures into a development activity; and

(f). conditions of approval may ensure monitoring of environmental (including cultural) impacts, annual reporting by the proponent, postproject analyses and independent environmental auditing.[57] There is a number of advantages of environmental and social assessment for oil and gas companies.[58] First, EIA can be beneficial to the project schedule and cost through the "significant financial savings" that can arise from the early identification and resolution of potential problems and conflicts, the avoidance of delays, and from improved decision making and project planning. Second, EIA allows companies to demonstrate a management capability for self-regulation thus avoiding unnecessary regulation by governments. EIA assists companies to demonstrate a scientific and technical credibility, "an integrated approach to social and environmental issues" that is "likely to lead to projects that are more acceptable and hence more likely to be supported, especially in sensitive areas", and a willingness to participate in local debate; address the information needs of stakeholders; and provide assurance to government and the public, thereby generating trust and confidence and enhancing the company image.[59]

Environmental Management Systems (EMS): Environmental Management Systems are procedural rules for the organization that assist managers in preventing and detecting environmental violations. They assist managers to comply with existing legal requirements, and to define management processes to be followed to control the impact of a corporation's activities on the environment. Most of the major international oil and gas companies have started to adopt detailed EMS and internal environmental operating guidelines.[60] A number of organisations have produced standards and guidelines for EMS, including the ISO, the European Union, and oil and gas industry bodies.

Environmental Performance Evaluation (EPE): EPE is a management tool or process designed to ensure the ongoing measurement and improvement of an organisation's environmental performance. It is a process by which a company measures its environmental

[56] EEC Directive on the Assessment of the Effects of Certain Projects on the Environment, adopted 27 June 1985, 85/337/EEC, OJEC L 175 (5/7/85); see also EIA, Act, 1992, Nigeria.

[57] A Gilpin, Op. Cit, at 3

[58] O E & P Forum, View of Environmental Impact Assessment, Report No. 2.40/135, October 1986 at 3

[59] E&P Forum, Principles for Impact Assessment, at 4.

[60] J Wagner, "Oil and Gas Operations and Environmental Law in Latin America" (1998) *16 JERL* 153 at 179

performance against criteria set by management.[61] The most critical aspect of EPE is the choice of meaningful indicators to measure the environmental impact of activities. Indicators basically relate to three areas: the management system (environmental management indicators, or EMIs); the operational system (environmental performance indicators or EPIs); and the state of the environment (environmental indicators or EIs). EMIs track and measure actions performed primarily by management employees that are aimed at reducing environmental impacts, for example, the implementation of training plans. EPIs, which deal with the operation of facilities and equipment, help assess the actual discharges, wastes generated, resources used, and other impacts of the actual facilities and equipment on the environment. EIs are used to assess the state of the environment, including the biological, physical and socioeconomic impacts produced by the organisation.[62] The measurement of social and cultural performance by oil companies is also an emerging trend. However, there are as yet no common, standardised indicators used by companies, nor do the majority of companies yet report on their performance in these areas. Just a few examples of current indicators used by companies include the existence of community advisory panels; investment in educational and community programmes; support for the Universal Declaration of Human Rights; the number of reported bribes; the number of forums organised to discuss employee conditions; and the level of local content of projects in terms of jobs and procurement.[63]

The measurement of social and environmental performance has a number of benefits. The evaluation of environmental and social performance provides companies with benchmarks for improving their performance in these areas. Monitoring ensures compliance with environmental and social regulations and with any conditions imposed upon development on the basis of an EIA. It "provides a tool to evaluate and update mitigation strategies, if conditions change or original strategies prove not to be effective", allows anticipated impacts to be documented, and "can identify any unanticipated impacts" of In view of the foregoing, monitoring should be ongoing throughout the life of a project, and that effective monitoring increases credibility for a number of reasons, which include: improving acceptance of current projects; providing a basis for ongoing consultation; contributing to the development of improved mitigation tools; providing a mechanism for learning from past operations and experience; and providing information for performance reporting.[64] Environmental auditing is "the practice of comparing environmental regulatory and management requirements against the operational and management performance record of a facility by evaluating such records and systems against a set of predetermined standards."[65] It is a systematic, periodical evaluation of a company's environmental organisation, performance and standards.

Environmental and Social Reporting: Companies across all industry sectors, including the international oil and gas industry, are facing increasing pressure to disclose information regarding their environmental and social performance to governments and the public. The holistic view of reporting on environmental, social and economic issues, in contrast to "stand alone" measures of environmental performance and social performance, is referred to as "triple bottom line" reporting. Some key reasons why companies are moving into environmental

[61] W Kuhre, *ISO 14031: Environmental Performance Evaluation (EPE)* (Upper Saddle River, New Jersey: Prentice Hall PTR,
[62] *Ibid* at 24-26
[63]*Ibid* at 44.
[64]*Ibid.*
[65] W Prince and D Nelson, "Developing an Environmental Model: Piecing Together the Growing Diversity of International Environmental Standards and Agendas Affecting Mining Companies (1996) *7 Colo J Int'l Envt L & Pol'y* 247 at 292.

reporting are to: i. satisfy community and individual "right to know" requirements; ii. improve company performance in social and environmental areas by measuring and publicly reporting on these areas; iii. demonstrate corporate accountability for the social and environmental impact of operations; iv. add shareholder value through the demonstration of a superior ability to manage environmental and social impacts; and v. report contributions to sustainable development by measuring and reporting "triple bottom line" impacts.[66]

As regards mandatory disclosure, a number of countries require corporations to report on the release inventory schemes, for example Australia's National Pollutant Inventory, Canada's National Pollutant Release Inventory, the UK's Chemical Release Inventory and the USA's Toxic Release Inventory.[67] Despite these mandatory disclosure schemes, most environmental reporting initiatives are voluntary schemes led by industry organisations, IGOs and NGOs. One example is the European Commission's EMAS, which has, as one of its objectives, the promotion of continuous environmental performance of industrial activities by "the provision of information of public."[68] Companies that voluntarily participate in the scheme must prepare an environmental statement specific to each site, have the statement independently verified by an accredited environmental verifier, and disseminate the validated statement to the public.[69]

The statement must contain: i. a description of the site's activities; ii. an assessment of all the significant environmental issues; iii. a summary of figures on pollution emissions, waste production, consumption of raw material, energy, water and noise; and iv. a presentation of the company's environmental policy and site's EMS.[70] The quality and content of corporate environmental reports varies considerably between companies. The quality and usefulness of the reports are undermined by lack of comparability from company to company, with companies using different indicators, definitions, measurement and estimation techniques, reporting periods, and geographic coverage of operations. In addition, oil companies remain divided on the benefits of third party, independent verification of which is the process of accounting, preparing and publishing information on social impacts and social performance, including cultural impacts, lags well behind environmental reporting.[71] Public concern in this area generally relates to corporate security arrangements involving paramilitary or government armed forces; links to human rights abuses; distribution of costs and benefits; poor environmental management and pollution among local communities; traditional land rights of indigenous communities and the right of self-determination; discrimination in the workforce; occupational health and safety; and bribery and corruption.[72] The lag of social reporting behind environmental reporting is true for industry in stating that the systems for monitoring, measuring and reporting corporate social responsibility generally accepted indicators are still in their infancy.[73] While this move towards "corporate social responsibility", including the assessment and reporting of environmental and social performance, has benefits for the community, it also raises a number of concerns, in particular the questions of whether and to

[66] C Deegan, "Environmental Reporting for Australian Corporations: An Analysis of Contemporary Australian and Overseas Environmental Reporting Practices" (1996) 13 EPLJ 120 at 125126.

[67] Sustainability Ltd/UNEP, Appendix 2 at 62-63 lists a number of mandatory environmental reporting initiatives.

[68] European Council Regulation 1836/93 of July 10, 1993, Concerning Voluntary Participation by Companies in the Industrial Sector in a Community Eco-Management and Audit Scheme O.J. (L 168/1), above n50, Article 1(c).

[69] *Ibid* Article 3(f) (h).

[70] *Ibid* Article 3(f) and Annex V; See also European Commission, "Eco-Management and Audit Scheme", <http://www.europa.eu.int/comm/environment/emas/>. Accessed on 7/12/12.

[71] *Ibid* at 41.

[72] *Ibid* at 43.

[73] World Business Council for Sustainable Development (WBCSD), Meeting Changing Expectations: Corporate Social Responsibility (1998), <http://www.wbcsd.ch/publications/csrpub.htm>. Accessed on 7/12/12.

what extent the Board of Directors and senior management of a corporation, who are responsible to shareholders for the financial health of the company, can incorporate social objectives into the company's operations, while still maintaining the long term profitability of the corporation.[74]

6. Conclusion and Recommendations

EIA practice in oil and gas exploration and production in Nigeria faces many challenges. These include the paucity of accessible data, lack of public participation, lack of post-approval enforcement and lack of quality control in EIA practice. Data is difficult to access since often it is owned by private entities which do not wish to make this data public or government agencies that do not have websites or do not want to share this data until they have conducted internal analyses. The following recommendations are generally proffered in this paper;

1. Although EIA in the oil and gas sector has contributed to environmental development in Nigeria, further measures are needed to fulfill the intentions of this process. Quality assurance needs to be incorporated into the practice of EIA in the country so that EIA reports are of a consistently high quality instead of the current variability
2. Each major sector and the oil and gas industry in particular should be subjected to an SEA to improve the local EIA process, which is currently limited to project EIA's.
3. Public participation should be improved within the EIA process. Innovative ways for involving the public must be sought due to the consistently low attendance at pubic consultations.
4. Clear avenues of communication need to be established among the regulators, industry and stakeholders to manage environmental impacts throughout the project life cycle and not just at the preapproval stage of the EIA process.
5. Government being a stakeholder should put in place laws and policies that empower women so that that they will not be so disproportionately affected in the event of crises.
6. Communities must be recognized and it must be clearly shown to the communities themselves how their comments and concerns will be addressed.
7. Trust must be engendered among stakeholders, regulators and industry to ensure that the consultation process for EIA is improved.
8. Mechanisms for the dissemination of information including social and environmental data with respect to the oil and gas industry and specific projects within this industry also need to be developed.
9. Environmental issues need to be mainstreamed into the various government agencies in the Country and EIA is one tool which can be used to achieve this aim.
10. Since oil companies are the most ardent polluters of the environment in Nigeria, they should be compelled by the government to adopt sustainable means of carrying out their oil operations.
11. Government should set aside special funds for the enhancement of the agencies to enable purchase modern equipment like helicopters, speedboats, waste disposal trucks, etc, to facilitate their monitoring and enforcement roles. It is hoped that when these recommendations are adhered to, the benefit of the God given resources shall be harnessed without much detriment to the populace.

[74] C Friedman, "The Social Responsibility of Business is to Increase its Profits", *New York Times*, 13 September 1970 (Magazine), No.6 at 32, 126.