

Risk Management and Regulatory Failure in the Oil and Gas Industry in Nigeria: Reflections on the Impact of Environmental Degradation in the Niger Delta Region

Philip Ejoor Agbonifo¹

¹ Department of Medical Records, Barts Health NHS Trust (Royal London Hospital), London, E1 1BB, UK

Correspondence: Philip Ejoor Agbonifo, Department of Medical Records, Barts Health NHS Trust (Royal London Hospital), London, E1 1BB, United Kingdom. E-mail: philipagbonifo@yahoo.co.uk

Received: February 20, 2016 Accepted: May 18, 2016 Online Published: June 8, 2016

doi:10.5539/jsd.v9n4p1

URL: <http://dx.doi.org/10.5539/jsd.v9n4p1>

Abstract

Risk management practice and effective policy intervention are critical to achieve stable environment and sustainable development. They are mechanisms for environmental management, environmental sustainability and sustainable community development for the people of the Niger Delta region. Informed by intuitive insights on the large scale of degradation in the Niger Delta, theoretical analysis of extant literature and content analysis of field interview/observation, this paper identified poor environmental risk management and regulatory failure as the bane of environmental degradation in the Niger Delta region. Why has regulatory agencies failed to protect communities against the impacts of environmental degradation and other consequences of oil and gas exploration activities? While there are enough legal and regulatory frameworks, however, weak enforcement and poor implementation of the existing regulations provides fertile ground for environmental degradation to persist. Thus, this article analyses some of the salient environmental issues as well as the regulatory and risk management failures in the oil and gas industry in Nigeria. It concludes that failure to carry out effective regulations and oversight in the oil and gas industry have resulted in environmental degradation (oil spills and gas flaring), contamination of water for fishing and farming activities, dispossession of rural farmers from their means of livelihood, poverty, migration and food shortages in the Niger Delta.

Keywords: risk management, regulatory failure, environmental degradation, policy failure, environmental policy, Niger Delta region

1. Introduction

The petroleum industry is a complex combination of interdependent operations that generates mixed blessing – wealth and fortune on the one hand, and environmental injustices and hopelessness on the other hand. More crucially, the debates over risk and environmental management in Nigeria have continued to attract serious attention due to lack of deliberate national policy aimed at environmental protection (Elenwo and Akankali 2014). There is virtual lack of knowledge of the workability of interdependent linkage between development processes and environmental factors. Whereas the lack of environmental management and policy failure arise from the obvious lack of socioeconomic development that impoverish the space of living of the poor, which is a key challenge to the people of the Niger Delta region.

Nevertheless, tackling the potential risk through regulation is critical to making an immense contribution to environmental degradation, albeit within the context of the existing framework of sustainable development. However, there is a poor understanding of the various risks associated with the oil and gas industry (Zuofa and Ochieng 2014), but managing the potential risks from degenerating into disastrous occurrences, and coping and containing the impact lies with the full implementation of existing regulations. Thus, this paper places emphasis on environmental protection through effective regulations and standard setting in the oil and gas industry to ameliorate the suffering of the people. This aligns with the view of the UNDP (2006) that social and economic deterioration, ignored by policy makers, undercuts enormous possibilities for development of the oil and gas producing communities.

Drawing from the works of Ingwe et al (2013) they subscribed to the deleterious impacts of technologies for oil and gas exploration activities among other applications on the ecological system and/or the environment which

they particularly acknowledged through various contributions. In addition, Onyekuru (2011) also acknowledged that there were no concerted regulatory policies towards environmental protection until the 1990s as there was the near total lack of public awareness concerning environmental protection and development. Thus, it became increasingly evident that there is a need for a more purposeful framework for the regulation of environmental activities in Nigeria to avoid the brunt of ecological adversities associated with oil and gas production. The unsustainable large scale environmental practices which affect the social and economic lives of the local population, particularly in Ogoni Land have in the last few years attracted the attention of the United Nations Environment Programme (UNEP). There is also a paradigm shift in the level of environmental awareness in the last few years due to the global campaign for climate change, which has resulted in growing agitation for environmental regulation and standards setting in the Niger Delta region.

It is imperative to acknowledge also that the manifest and continuing environmental problems in the Niger Delta rural communities point towards weaknesses in policy and regulation, or even policy failure. This is caused by a number of factors including weak enforcement and over centralisation which provides a fertile ground for environmental degradation to persist. Government control and direct involvement in oil and gas exploration activities and environmental protection are limited because of the passive partners in the JV with MNOCs (Obi 2010), but rely solely on the revenue accrual from the ownership status. This view has been further supported by several research studies, including those by William 2002; Ajibade and Awomuti (2009); Ibaba (2010); Onyekuru (2011); Ogonnaya (2011); Akpomuvie (2011) which shown that weak enforcement and inadequate capacity is responsible for environmental degradation. This evidence paints a gloomy picture of serious failure of national and international environmental protection policies to address the problem of environmental degradation in the oil and gas producing communities.

Furthermore, Emoyan et al (2008); Eneh and Agbazue (2011) indicated quite succinctly that the emergence of weak environmental legislation is further exacerbated through policy distortions, ineffective oversight and enforcement of environmental standard. Emoyan et al (2008:29) argued that “environmental degradation is made plausible by skewed and cynical legislation on natural resource ownership, successive years of bad governance, ineffectual policies that are operated by a bloated and obtuse bureaucracy, as well as selfish and inefficient allocation of development resources”. Continuing they maintained that although the impact of environmental degradation is overwhelming, however, the plight of the oil and gas producing communities needs to be identified and rehabilitated within the framework of the goal of sustainable development and the National Policy on Environment.

Accordingly, Ogonnaya (2011) contended that why comprehensive and effective regulatory, commitment to environmental monitoring and enforcement of standards are the bedrock of sustainable development, unfortunately, environmental protection agencies have inadequate capacity, weak enforcement, over centralisation as well as the political will to enforce relevant environmental laws to checkmate the activities of the MNOCs degrading the environment. Thus, Edino et al (2010:67) indicated quite logically, that “lack of capacity, large-scale mismanagement and lack of oversights have militated against the proactive enforcement of environmental regulation and standard setting in the oil and gas industry”.

Similarly, Odumugbo (2010) argued that political instability and institutional weaknesses are deeply rooted in poor environmental and risk management in Nigeria. This is because the Nigeria economy depends on the huge revenue from oil and gas for development, and would seem that production activities take pride of place over safe and healthy environment (Aghalino 2008). This is consistent with the view expressed by Ogonnaya (2011) that dearth of qualified employees, inefficient allocation of resources and lack of political will are plausible explanations for failure to enforce environmental regulations and standard setting in the oil and gas industry in Nigeria. He contended that closures of defaulting oil companies for environmental degradation as spelt out in the Associated Gas Act 1979 and its amended provisions may spell doom for the Nigerian economy.

2. Environmental and Risk Management Tools in Nigeria

There were tangential regulations for risk management and environmental protection in the oil and gas such as the Oil Pipeline Act 1958, Oil in Navigable Waters Act 1968, Petroleum Act 1969 and the Associated Gas Re-injection Act 1979 and its amended provisions which cover the pioneering era of environmental regulation in Nigeria. The second era of environmental regulation emerged from the dumping of hazardous waste in Koko, a small port town in the old Bendel State (now part of Delta State), in the Niger Delta region in July 1988. The 3,880 metric tons toxic waste originated from Italy and was shipped through the MV Baruluk vessel to Koko, Nigeria.

Prior to 1988, there were no concerted efforts in term of regulation targeted towards environmental protection

and standard setting in Nigeria. Thus, the Koko incident happened at a time “when there was a lack of serious institutional capacity and legislation to manage the magnitude of environmental crisis, which mark a turning point in environmental regulation and development in Nigeria” (Eneh and Agbazue 2011:4). Consequently, the Federal Environmental Protection Agency (FEPA) Act 1988 was promulgated aimed at tackling the problem of environmental degradation in Nigeria. In the latter era emerged the Environmental Impact Assessment (EIA) Act 1992, the National Oil Spill Detection and Response Agency (NOSDRA) Act 2006 and the National Environmental Standards and Regulation Enforcement Agency (NESREA) Act 2007 which aimed at environmental protection and standard enforcement.

The main institutional organ to risk management in the oil and gas industry is the Department of Petroleum Resources (DPR). The DPR supervises and regulate all operations in the oil and gas industry, including enforcement of environmental regulation, standards setting and safety. It is formally an arm of the Ministry of Petroleum Resources (MPR) and the Nigerian National Petroleum Corporation (NNPC), but is now aligned with the Ministry of Energy, Petroleum Resources (DPR 2004). The primary role of the Ministry is to develop energy resources in Nigeria to which the oil and gas industry is an integral part. DPR regulates standards in the oil and gas industry through the Environmental Guidelines and Standards for Petroleum Industry in Nigeria (EGASPIN). It is a comprehensive working document within the framework of the National Policy on the Environment (NPE) which was launched in 1989. It regulates standards that oil and gas companies should adopt to ensure good environmental standards for the preservation and protection of the Niger Delta, oil producing communities and the Nigerian environment. Oil and gas companies are expected to follow the guidelines and standards to minimise oil operations hazard and pollution to the environment. The environmental guidelines and standards are to guide the treatment and disposal of effluents, handling of drilling mud, cutting drills and oil spills. Numerous statutes and regulations conferred on DPR the authority to set up environmental standards for the petroleum industry. Consequently, in 1991 the DPR released the EGASPIN, which was later reviewed in 1998 and finally in 2002.

The main objectives of the EGASPIN are:

- To establish guidelines and standards for environmental quality and control with respect to the oil and gas industry without ignoring existing local conditions and monitoring program.
- To provide pollution abatement guidelines and standards in the oil and gas industry.
- To standardize environmental abatement monitoring procedures.
- To ensure that construction of processing facilities and depots with a capacity of 50,000 barrels and above need environmental impact assessment.
- To ensure that environmental impact assessment is developed for dredging activities of about 500m².

For example, the EGASPIN 2002 guidelines regulate and control the discharge of fluids, drilling mud, drill cuttings, air emission and flaring, noise and management of wastes in the oil and gas industry. In relation to oil spills clean up, EGASPIN guidelines recommended that clean up should start within 24 hours when spills occur. For all water pollutions, the guidelines also stipulate that there shall be no visible sheen after the first 30 days irrespective of the extent of the spill. The extent of environmental degradation in the Niger Delta region as revealed by the UNEP report suggests that some essential provisions in the EGASPIN are continually being disobeyed by the oil companies in Nigeria without adequate sanction.

Despite this legislation, William 2002; Obi (2010) noted quite illogically, that the Nigerian state opens the Niger Delta region to foreign oil exploration companies and does little to regulate relations between MNOCs and the people of the oil and gas producing communities in a manner that accommodates their aspiration towards control of environmental activities. Lack of appropriate regulation has lead to rise in environmental degradation which affects the wellbeing of the local people. For example, section 3(1) of the Associated Gas Re-Injection Act 1985 stipulates that, with a written permission, the Minister of Petroleum Resources can permit a company to continue to flare gas from a particular field(s) if he is satisfied that utilisation or re-injection is not feasible. This provision has systematically encouraged large scale gas flaring rather than discouraging it which demonstrates the scale of environmental policy failure in the oil and gas industry. Also, the Petroleum Act 1969 which is outdated is still largely in force in the Nigerian oil and gas industry.

Conceptualising the structure and the political economy of the oil and gas exploration activities in Nigeria, Obi (2010:221) noted that “the government assumed ownership of the industry by statutory monopoly through the NNPC, but institutionalised its partnership with MNOCs through joint oil venture (JV) agreements and production and risk sharing contracts”. Continuing, he maintained that although the government provides

controls through regulation and gets a larger share of oil profits, production activities are entirely in the hands of the MNOCs. They have considerable leverage over costs and the environment, of which the government has little or no capacity to monitor or regulate, but the larger burden is borne by the oil and gas producing communities. The failure to carry out effective regulations in the oil and gas industry has resulted in environmental pollution (oil spills and gas flaring), contamination of water for fishing and soil for farming activities, and the dispossession of rural farmers from their means of livelihood. Thus, poverty, migration and food shortages in the oil and gas producing communities become endemic.

3. Conceptual Argument of Environmental Management in the Niger Delta

To conceptualise the theoretical arguments of environmental management in the Niger Delta it is imperative to understand the nature and scope of oil and gas operations and its environmental implications for the producing rural communities. Within the sustainable community development context, two different standpoints were identified from the debate of environmental management as a result of risk management and policy failure in the oil and gas industry in Nigeria.

Firstly, the environmental management school of thought which advocates the need for community to be involved in the process of environmental management. Conceptualising the theory of environmental management in Nigeria, Emoyan et al (2008: 32-33) asserted that “because the regulatory agencies mandated with environmental management and protection in the oil and gas industry have severe limited manpower and financial resources, therefore, with appropriate assistance, communities and local government authority could be empowered to become responsible for and be part of the watchdogs of their own environment”. Unfortunately, Nigeria’s environmental regulation and standards as presently constituted does not create incentives and conditions that encourage host community as stakeholder in environmental management and compliance monitoring. According to Orubu et al (2004:210), “there has been a paradigm shift from the 1980, originating at the international level in favour of sustainable development, which accords man and his condition of living a central focus in development policy debates”. They noted that a key feature in the context of sustainable development approach is that it recognises the principle of consultation in policy formulation and implementation. How effective the concept of consultation has been for the oil and gas producing communities in the Niger Delta region remain to be seen because serious policy failure in environment management. Orubu et al (2004) further advances the need for the oil and gas producing communities to be recognised by the MNOCs as partners in environmental management and development process given the nature of environmental degradation on their livelihood and the role which the local population can play in environmental protection and safeguarding of oil and gas facilities in the Niger Delta region.

The second perspective, the sustainable development and enabling environment school of thought advances the need to examine the concept of infrastructural development of effective risk management of the oil and gas producing communities to compensate for several decades of environmental degradation in the Niger Delta. Advocate in this argument, Jike (2004:692) suggested “the need to examine the perpetual conflicts, divergence of opinions between the MNOCs, the government and the dispossessed peasant rural farmers in the oil and gas producing communities for lack of sustainable development and enabling environment”. Specifically arguing, he noted that the crux of the matter is the prevailing odds raised by the environmental degradation that has exacerbated the environment of the local people with impact on socioeconomic activities, declining health, food insecurity/shortages, migration, inequity, poverty and conflicts. This is a direct negation of the fundamental concept of sustainable development. To resolve the divergence of opinion, the school of thought argues that there is a need to institute people centered development agenda and comprehensive policy framework to deal with the impact and to mitigate environmental degradation. An enabling environment implies necessary regulatory and comprehensive frameworks anchored in the concept of sustainable development to encourage investment in the oil and gas sector, provide incentives for business activities that minimises environmental degradation and the protection of the environment for safe and healthy living for the local people.

4. Impact of Environmental Degradation in the Niger Delta

The oil and gas producing communities depend mainly on their environment for economic subsistent. It is a common sight to find peasant rural women and farmers drying tapioca (cassava) and fish at gas flaring sites to boost economic activities, indication of economic empowerment (Onyekuru 2011). These products (fish and tapioca) are widely traded in the local markets, sadly highly contaminated with soot and toxic emanating from gas flare. Ironically, the flares burn off energy into the atmosphere which also serves as a source of light to villages/communities, with no access to electricity, particularly at night (Aghalino 2009). The rural farmers who use stack flare to dry their farm products as well as being a source of light at night are neither aware of the health

impact of being close to the flare sites nor its environmental consequences. Whereas “at the earlier stage of oil and gas industry activities in Nigeria, most communities in the Niger Delta thought it was evidence of development” (Aghalino 2009:220).

The lingering environmental degradation is a serious threat to the well being of the subsistent peasant rural communities and basic survival of the people in the Niger Delta region. Analysis of environmental change in Nigeria done by Hassan and Kouhy (2013) revealed that the magnitude and scale of environmental degradation have severe impact on fishing, crops, human health, ecology and life expectancy of the inhabitants of the oil and gas producing communities. For example, gas flare sites, most cases without perimeter fence is located few meters from residential houses and farmlands. Ojimba and Iyagba (2012); Diugwu et al (2013) aptly noted that the heat and toxin spare, neither the resident nor vegetation, leaving in its trail severe health consequence, such as miscarriages, asthma, blood disorders and skin diseases.

Reacting to the socioeconomic consequences of environmental degradation, Opukri and Ibaba (2008); Eregha and Irughe (2009) noted that it is indisputable that environmental degradation is of topical concern to the oil and gas producing communities in the Niger Delta region. This view is consistent with Ukeje (2001) who argued that environmental degradation from oil and gas exploration activities have severe impact on farmlands, streams, rivers, human health and the environment. He maintained that the oil producing communities of the Niger Delta are aggrieved because they are not adequately compensated for the damages done to their land and the environment. In the views of Akpomuvie (2011), the power structure, climate of perceived injustices, flawed and outdated environmental regulation and laws have helped to aggravate conflicts, disillusionment and poverty in the Niger Delta region. What is at stake is security in the region, community development, the ecosystem, poverty and the survival of the people who find themselves in deprived social conditions due to poor environmental management policies (Jike, 2004).

5. Research Methodology

To achieve the objective of this paper, semi-structured in-depth interviews were drawn from 10 notable personalities (village/community head, environmentalists and religious/youth leaders) who live in the oil and gas producing communities in the Niger Delta region. Other participants are 5 senior managers of the DPR and 3 management staff of the NNPC with top management experience gained over several years in the oil and gas industry. Saunders et al (2007:152) asserted that “if you interview top bosses you are likely to encounter the good news syndrome, but if you collect press cuttings from newspapers, there are the tendency and the likelihood for a political bias in your findings”. One advantage of using interviews was to gain in-depth rapport with each of the stakeholders and get deeper insights about people experience, feeling and interpret the social world of the interviewee (Bryman and Bell 2007; Yin 2012), particularly as it relate to policy and environmental management in the Niger Delta.

The findings of this study are structured around the research questions which are primarily on policy failure and environmental degradation in the Niger Delta, such as (i) why has environmental protection policies failed to protect communities against the impact of environmental degradation? (ii) What is the impact of environmental degradation on the oil producing communities? In addition, a review of the extant literature from previous studies contributed to the main findings of this paper. This enables the chain of evidence to be established and to maintain clear linkages between the various stages of the study by allowing conclusion to be traced to the research questions, relevant literature, data collection tools employed and the evidence. However, the survey responses drawn from participants are made anonymous for confidentiality.

The analysis of data obtained provided the basis for consistent explanations and discussions. Yin (2009) asserted that data analysis involves a number of stages such as data generation, management, interpretation and presentation. Data analysis in this study begins with categorisation and organisation in search of patterns, critical themes and meanings, comparing categories and the themes developed in order to understand the data in relation to the research issue to unravel the findings.

The validity of the study was established by assessing the plausibility of existing knowledge and the research questions on the key issues by the well informed participants. Thus, Ikeda (2009) anchored this argument by asserting that validity in research is associated with the description and explanation of methods and whether the explanation fits the description. The question of validity revolves around the accuracy of asking the right question during the research interview, accuracy of precision of the data and accuracy of the information gathered. Similarly, Denscombe (2002) added that the question of validity is fundamental to social research if it must stand for critical examination. In this study, validity shows the extent to which data collection method accurately measures what they were intended to measure in order to draw a conclusion.

6. Findings

Findings based on the research question (i) above revealed that environmental degradation is mainly localised, but the local government authorities do not have the discretion to enforce and implement environmental regulation because it falls within the purview of the Federal government. Participants posited *that there is no adequate protection for the local people*. Disappointingly, they are required to deal with the protests and other problems arising from environmental degradation which has been the basis of grievances in the oil and gas producing communities. This situation is further compounded by functional overlaps (DPR and NOSREA), duplication of responsibilities (Ministry of Niger Delta and Niger Delta Development Commission), role conflict (DPR and NNPC) and lack of coordination between various agencies on environmental protection and standard setting. Participants argued thus: *the activities of the regulatory agencies are ambiguous and incoherent, which gives the oil companies too much leverage over the environment*.

Environmental regulation is evolving in Nigeria, but DPR continues to struggle in key technical area such as effective monitoring of operation of oil companies, offshore deepwater and creeks which reflect a lack of effective control mechanism. Thus, participants argued that *regulatory agencies lack the needed technical capacity to effectively monitor oil and gas operations across the gamut of the Niger Delta region*. Effective control mechanism and enforcement are often difficult, particularly where there is a lack of transparency, institutional incapacity and uncertainty. This is congruent to the view expressed by Ogbonnaya (2011) that the over reliance on oil and gas revenue by all tiers of government (local, state and federal) may make the full implementation of the existing regulation and effective control impossible because of its implications on the Nigerian economy.

The findings, based on the research question (ii) above revealed the impact and consequences of environmental degradation on socioeconomic activities of the local people with multiplier effects such as economic deprivation, social vices, health hazards, poverty, unemployment, migration, low life expectancy rate and miscarriages. Environmental degradation has heightened the ecosystem of the region given rise to intense land degradation, rapid agricultural decline, fisheries depletion, rampant and toxic water contamination.

The impact of environmental degradation is already being felt in the region with some level of food insecurity, population drift and increasing risk of disease in the human population. While there is a vast proportion of arable land in the region, however, the effect of internal population displacement, conflict and migration has started to manifest with effect on food shortages. Interestingly, participants posited that *environmental degradation has exacerbated the tragedy of internal population displacements and dislocations experienced by most people in the region*. In particular, environmental degradation is responsible for the collapse of the local economies which induce voluntary migration. The participants agreed that *environmental degradation is deeply felt by the rural farmers through low yield in crops and change in vegetation*. This is further compounded by the action of the government and the oil companies who are not bothered about the concern of the local communities who bear the greater burden. Available arable land for farming activities are diminished, and in some cases lost entirely due mainly to proximity to gas flaring or oil spill sites. This has serious effects on socioeconomic activities and basic survival of the people. Participants posited *that oil and gas exploration was initially envisaged as the engine of economic development for the local people, but they soon realised that it is more of a curse than a blessing*. The extinction of biodiversity (flora and fauna), the destruction of forest, and contamination of soil brought hopelessness to the inhabitant of the oil and gas producing communities who are mainly peasant farmers.

Findings revealed that environmental degradation is also visible in the physical observation of farmland and building with a corrugated iron sheet roof. Participants argued that *flaring site is too close to houses and farmlands which impact on the roof of the buildings and farming activities*. There is also the presence of acid rain usually noted during the first rainfall of the season, which is usually very dark because of the presence of soot on the corrugated roof top of buildings. This development suggests a growing frustration for the people of the peasant rural communities. The loss of economic opportunities due to lack of access to development infrastructure is the root cause of conflict and violent crimes in the Niger Delta region. Overwhelmingly, participants posited that *huge revenue generated from oil and gas over several decades has been filtered away by the elites without recourse to the development process of the people of the Niger Delta region*.

7. Discussions

This section discusses the major findings of this study on risk management and regulatory failure in the oil and gas industry in Nigeria and its implications for the Niger Delta. On risk management and regulatory failure in the oil and gas industry, environmental protection agencies have inadequate capacity with respect to technical,

human and material resources. Some enormous environmental responsibilities in the oil and gas industry require the mobilisation of human and material resources to enforce and abate. In many cases, the agencies have neither a mechanism to monitor pollution, a method of computing the levels of gas flared, nor a functional laboratory for the analysis of soil and water samples. Moreover, in planning, inspection visits to some degraded communities, the regulatory agencies are almost wholly reliant on the MNOCs for logistical support. The agencies have neither a helicopter nor a boat to monitor onshore and offshore oil and gas operations given that the Niger Delta region topography is made up of mainly swamps, creeks and deep seas. Sometimes, they also rely on the MNOCs for even motor vehicles and boats for transportation to investigate degraded sites. The lack of technical capabilities undermines sustainable development in the oil and gas communities and is strikingly inconsistent with the huge oil and gas revenue accruing to the government for several decades. The finding is consistent with the view expressed by (Muller 2010) that oil and gas operations' record are kept manually with poor accounting records by DPR, and rely mainly on NNPC and the MNOCs to determine payment of royalties and petroleum profit tax (PPT) from oil and gas activities based on export rather than production figures.

Fundamentally, the environmental agencies are poorly funded to carry out the necessary enforcement measure, compare to the superior capabilities of the MNOCs who are more influential politically (UNDP 2006). For example, out of the total budget of ₦30,224,693.445 allocated to the DPR by the Federal Ministry of Petroleum Resources in 2011, a whopping sum of ₦25,438,390,659 was used for recurrent expenditure, while a paltry ₦4,786,302,786 was used as capital expenditure. Similarly, 2012 and 2013 revealed a decline in capital expenditure of ₦4,786,302,790 and ₦3,470,000,000 respectively, as against the total allocation of ₦35,997,149,841 and ₦34,743,189,286 respectively during the same period under review. This finding is consistent with the views expressed by Cole et al 2008; Nwokeji 2009; Obi 2010; Muller 2010 that the environmental watchdogs are poorly funded coupled with shortages of competent and highly skilled manpower.

Another finding is the lack of stringent measure (fines and penalties) which provide fertile ground for environmental degradation to persist. Given the scale and the impact of environmental degradation, the issue of fines that is even celebrated (seen as a major achievement) appeared to be paying lip service to environmental protection. For example, the government earned between US\$150,000 to \$370,000 annually from fines and penalties, whereas loses US\$2.5 billion (based on LNG value) to gas flaring each year (Friend of the Earth 2005; Aniche 2015). It appears that in practice, MNOCs act as if they are beyond the law because the oil and gas industry is dominated by them and the law is tokenistic. It is perceived that the industry is so important to the Nigerian economy and dominated by the foreign MNOCs, it is feared that full implementation of the existing regulation may spell doom for the Nigerian economy (Ogbonnaya 2011). Paradoxically, whilst oil and gas resources ought to improve the economic and social well being of communities, it turns out to be, instead a serious threat and a fierce struggle for environmental protection.

Some provision in the oil and gas industry regulations and standards, promote environmental degradation with a clear violation of individual and community rights. The Petroleum Act 1969 and the Oil Pipelines Act 1956 empowers the leases and license holders with authority to conduct operations activities and potentially damaging activity on any land covered by the permit. The Oil Pipelines Act confers so much power on the holder of the 'permit to survey' such as right to dig the soil and get free of charge any gravel, sand, clay, stone and other similar substance within any land and within the area covered. It also confers right to cut and remove any trees and other vegetation causing impediment to oil and gas exploration, and to do other acts necessary to ascertain the suitability of establishment of an oil and gas pipelines or ancillary installations at the detriment of the producing communities' right. According to the provision of the Oil Pipeline Act 1956, consideration of the objection of land and interest in land is at the discretion of a Minister of Petroleum, whose interest, at the very least, is to ensure that oil and gas exploration is not hampered, and in most cases, with little or no regard to the environment. Under the Petroleum Act, the Minister is empowered to grant oil prospecting licenses, oil mining lease and allocate oil exploration licenses, but does not take into consideration oil producing communities' consultation and objections. It only allows limited provisions within subsidiary legislation to prohibit or restrict activities that would harm the human population of the affected communities.

The lack of integrity, technical competence and professionalism suggests that officials of regulatory agencies may be vulnerable to influential interest group in the oil and gas industry (Nwokeji 2007). A vivid example is the liquefied natural gas (LNG) scandal involving \$182 million (£115m) cash for contract bribed to some Nigerian officials by KBR, a subsidiary of Halliburton prior to 2007, in respect of the construction of a US\$6 billion LNG contracts for gas plant in Southern Niger Delta, Nigeria (The News 2010). Consequently, Albert Jackson Stanley, the former KBR boss pleaded guilty in February 2012 and was sentenced to 30 months in prison. Similarly, two former employees of American company operating in Nigeria (Wilbros Group Inc.), Jim Bob Brown and Jason

Edward Steph both pleaded guilty to Judge Lake in American District Court. They paid US\$6 million bribes in early 2005 to some Nigerian officials to secure and retain Eastern Gas Gathering System (EGGS) Project, which was valued at approximately US\$387 million (US Department of Justice 2009). Regrettably, all these sentences took place abroad, as no Nigerian official has ever been found guilty in Nigeria for corruption. These are glaring signs that undermine the capacity of regulatory agencies to function effectively. This is consistent with the view of the UNDP (2006) that traditional economic pursuit is suffering because easy money is flowing from the oil companies which are often mismanaged.

Furthermore, on the impact of environmental degradation on the rural peasant communities, evidence indicates that there is a delicate balance between the human population in the oil producing communities and its fragile ecosystem thereby pushing the Niger Delta towards ecological disaster. The disruption of the means of subsistence of the local farmers through oil and gas exploration activities orchestrated poverty, violent conflict, unemployment, conflict and migration. The fundamental concept of sustainable development which has the capacity to unlock the value of oil and gas resources to the government while reducing its environmental, social and economic impact on the people has been severely neglected. This leaves the oil and gas producing communities in whose domain environmental degradation take place with the adverse environmental consequences. Cole et al (2008) strongly argued that the chronic negligence on the part of MNOCs and successive government to provide infrastructural development has been responsible for environmental degradation and also accounts for failure to provide, for example, employment to a large number of youths to compensate for loss in agricultural productivity. The failure to compensate for environmental damage and to provide sustainable development within a highly localised context in the Niger Delta region is linked to the root causes of poverty, violence, conflict, poverty, inequality, unemployment, population displacement and migration in the region. The prevailing socioeconomic and violent conflict brewing in the Niger Delta region, which has attracted attention across the globe, is attributable to environmental degradation and its consequences. The crux of the matter is that the people feel a deep sense of social deprivation, alienation and inequality.

Finally, oil producing communities have become increasingly aware of the sad paradox of having oil and gas wells located in their neighbourhood that drive and oil the wheels of the Nigerian economy, yet languish in impoverishment. This fundamental injustice arising from failure to provide sustainable development and to operate in accordance with internationally accepted industry standards has brought poverty, disillusionment, inequality and conflicts. Hence the argument can be summed up that the failure of environmental management and the MNOCs to account for communities' perspectives is the basis for violent conflict, poverty, unemployment, migration and other forms of adverse socioeconomic conditions in the Niger Delta region.

8. Conclusion and Implications

This paper provides useful insights and direction to understand the scale of environmental challenge in the Niger Delta, which undoubtedly appears to be far more complex politically than previously thought theoretically. The politics of environmental degradation inflicted socioeconomic and environmental disequilibrium on the people of oil and gas producing communities with deeply entrenched dilemma of sustainable community development that is inimical to the development process of the Niger Delta region. Poor environmental management, weak enforcement and over centralisation, lack of oversight, inadequate capacity, poor policy implementation and duplication of responsibilities have been identified as the key issues in environmental management and policy failure in the oil and gas industry in Nigeria. Environmental protection has considerable socioeconomic benefit, because the consequences of non protection are enormous and far reaching.

The findings and discussion section in this paper are critical from both theoretical and empirical perspectives for proper understanding of environmental management problem in the Niger Delta. The study represents a small step and provides a further challenge to conduct an in-depth research to generate wider valid constructs that contribute and strengthen the ongoing debate on risk management and regulatory failure in the oil and gas industry in Nigeria

References

- Aghalino, S. O. (2009). Gas Flaring, Environmental Pollution and Abatement Measures in Nigeria, 1969 – 2001. *Journal of Sustainable Development in Africa*, 11(4), 219-235.
- Ajibade, L. T., & Awomuti, A. A. (2009). Petroleum Exploitation or Human Exploitation? An Overview of Niger Delta Oil Producing Communities in Nigeria. *An International Multidisciplinary Journal*, 111-124. <http://dx.doi.org/10.4314/afrev.v3i1.43559>
- Akpomuvie, O. B. (2011). Tragedy of Commons: Analysis of Oil Spillage, Gas Flaring and Sustainable

- Development of the Niger Delta of Nigeria. *Journal of Sustainable Development*, 4(2), 200-209.
- Bryman, A., & Bell, E. (2007). *Business Research Methods* (2nd ed.). Oxford University Press Inc., New York.
- Cole, L., Mitchell, R. A., Ohlsen, G., Rinaldi, G., & Unumeri, G. (2008). Exploring Conflict Sensitive Programming in the Niger Delta: A Rough Guide for the Practitioner, Ontario, pp. 2-64.
- Dencombe, M. (2002). *Ground rules for good Research-a 10 point guide for social researchers*. Buckingham: Open University Press.
- Diugwu, I. A., Ikaiya, M. A., Musa, M., & Egila, A. E. (2013). The Effect of Gas Production, Utilization and Flaring on the Economic Growth of Nigeria. *Natural Resources Journal*, 341-348. <http://dx.doi.org/10.4236/nr.2013.44041>
- Edino, M. O. et al. (2009). Perceptions: and Attitudes towards Gas Flaring in the Niger Delta, Nigeria. *Springer Science + Business Media*, 30, 67-75.
- Elenwo, E. I., & Akankali, J. A. (2014). Environmental Policies and Strategies in Nigeria Oil and Gas Industry: Gains, Challenges and Prospects. *Natural Resources*, 5, 884-896. <http://dx.doi.org/10.4236/nr.2014.514076>
- Emoyan, O. O., Akpoborie, I. A., & Akporhonore, E. E. (2008). The Oil and Gas Industry and the Niger Delta: Implications for the Environment. *Journal of Applied Science and Environmental Management*, 12(3), 29-37.
- Eneh, O. C., & Agbazue, V. C. (2011). Protection of Nigeria's Environment: A Critical Policy Review. *Journal of Environmental Science and Technology*, 1-8. <http://dx.doi.org/10.3923/jest.2011.490.497>
- Environmental Rights Action/Friends of the Earth, Nigeria. (2005). *Nigerian Gas Flaring Fact Sheet*. Retrieved 2009, December, from <http://www.eraction.org/component/content/70?task=view>
- Eregba, P. B., & Irughe, I. R. (2009). Oil Induced Environmental Degradation in the Nigeria's Niger-Delta: The Multiplier Effects. *Journal of Sustainable Development in Africa*, 11(4), 160-174.
- Hassan, A., & Kouhy, R. (2013). Gas Flaring in Nigeria: Analysis of Changes in its Consequent Carbon Emission and Reporting. *Accounting Forum*, 37, 124-134. <http://dx.doi.org/10.1016/j.accfor.2013.04.004>
- Ibaba, I. S. (2010). Environmental Protection Laws and Sustainable Development in the Niger Delta, *Africana*, pp.45-74.
- Ikeda, A. A. (2009). Reflections on Qualitative Research in Business. *Revista de Gestao USP, Sao Paulo*, 16(3), 49-64. <http://dx.doi.org/10.5700/rege372>
- Ingwe, R., Bessong, P. K., & Uwanade (2013). Risk and Disasters in Nigeria's Petrocapitalistic Oil and Gas Industry: A Pluralistic Theoretical-Conceptual Framework. *Riscuri si catastrophe*, NR. XII, Vol. 13, NR, pp. 185-198.
- Jike, V. T. (2004). Environmental Degradation, Social Disequilibrium, and the Dilemma of Sustainable Development in the Niger-Delta of Nigeria. *Journal of Black Studies*, 34(5), 686-700. <http://dx.doi.org/10.1177/0021934703261934>
- Muller, M. (2010). Revenue Transparency to Mitigate the Resource Curse in the Niger Delta: Potential and Reality of NEITI. Bonn: Bon International Center for Conversion (BICC), pp. 9-35.
- Nwokeji, G. U. (2007). The Nigerian National Petroleum Corporation and the Development of the Nigerian Oil and Gas Industry: History, Strategies and Current Directions, Baker III Institute for Public Policy at Rice University.
- Obi, C. I. (2010). Oil Extraction, Dispossession, Resistance, and Conflict in Nigeria's Oil-Rich Niger Delta. *Canadian Journal of Development Studies*, 30(1-2), 219-233.
- Odoemene, A. (2011). Social Consequences of Environmental Change in the Niger Delta of Nigeria. *Journal of Sustainable Development*, 4(2), 123-130. <http://dx.doi.org/10.5539/jsd.v4n2p123>
- Odumugbo, C. A. (2010). Natural Gas Utilization in Nigeria: Challenges and Opportunities. *Journal of Natural Gas Science and Engineering*, 310-316. <http://dx.doi.org/10.1016/j.jngse.2010.08.004>
- Ogbonnaya, U. M. (2011). Environmental Law and Underdevelopment in the Niger Delta Region of Nigeria. *International Multidisciplinary Journal, Ethiopia*, 5(5), Serial No. 22, pp. 68-82. <http://dx.doi.org/10.4314/afrev.v5i5.7>
- Ojimba, T. P., & Iyagba, A. G. (2012). Effects of Crude Oil Pollution on Horticultural Crops in Rivers State,

- Nigeria. *Global Journal of Science Frontier Research Agriculture and Biology*, 12(4), 36-44.
- Onyekuru, N. A. (2011). Environmental Regulations and Nigeria's Economic Decision on the Niger Delta Crisis: the Way Forward. *Asian Journal of Exp. Biol. Science*, 2(2), 336-342.
- Opukri, C. O., & Ibaba, I. S. (2008). Oil Induced Environmental Degradation and Internal Population Displacement in the Nigeria's Niger Delta. *Journal of Sustainable Development in Africa*, 10(1), 173-190.
- Orubu, C. O., Odusola, A., & Ehwareme, W. (2004): The Nigerian Oil Industry: Environmental Diseconomies, Management Strategies and the Need for Community Involvement. *Kamla-Raj*, 16(3), 203-214.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students* (6th ed.). Harlow, Pearson Education Ltd.
- The News online. (2010). *The Halliburton Expose*. Retrieved 2011, October, from <http://thenewsafrika.com/2010/05/17/the-halliburton-expose/>
- Ukeje, C. (2001). Youths, Violence and the Collapse of Public Order in the Niger Delta of Nigeria. *Africa Development*, 26(1&2), 337-366.
- UNDP. (2006). Niger Delta Human Development Report, Abuja, pp. 35-90.
- US Department of Justice. (2009). *Former Willbros International Consultant Pleads Guilty to \$6 Million Foreign Bribery Scheme*. Retrieved 2011, October, from <http://www.fbi.gov/washingtondc/press-releases/2009/wfo111209.htm>
- William, W. (2002). Citizenship Questions and Environmental Crisis in the Niger Delta: A Critical Reflection. *Nordic Journal of African Studies*, 11(3), 377-389.
- Yin, R. K. (2012). *Application of Case Study Research* (3rd ed.). Thousand Oaks, CA: Sage.
- Zuofa, T., & Ochieng, E. G. (2014). Issues in Risk Management: The perspectives of Managers in Nigeria's Oil and Gas Industry. *International Journal of Engineering Research and Technology (IJERT)*, 3(4), 369-374.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).