



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

IJDR

**International Journal of
DEVELOPMENT RESEARCH**

International Journal of Development Research
Vol. 5, Issue, 10, pp. 5830-5837, October, 2015

Full Length Research Article

NATURAL GAS EXPLORATION ACTIVITIES AND THE LINGERING POVERTY IN THE NIGER DELTA COMMUNITIES

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ARTICLE INFO

Article History:

Received 30th July, 2015
Received in revised form
26th August, 2015
Accepted 19th September, 2015
Published online 31st October, 2015

Key Words:

Poverty,
Niger Delta,
Socioeconomic Activities,
Environmental Degradation,
Exploration Activities.

ABSTRACT

Natural gas exploration activities have been singled out as a source of the lingering poverty and a direct negation of the concept of sustainable development in the peasant rural communities. Thus, this paper examines the impact of natural gas exploration activities on the lingering poverty in the Niger Delta region. Essentially, the main environmental challenge in the region is how to tackle environmental degradation from natural gas production activities which undoubtedly have serious impact on socioeconomic activities and the livelihoods of the local people. The region is suffering from administrative neglect, high unemployment, food insecurity, social deprivation, abject poverty, filth and squalor, endemic conflicts with limited economic opportunities and crumbling social infrastructure. The paper argued that poverty in the Niger Delta is directly linked to the fragile aquatic ecosystems, exacerbated by environmental degradation from natural gas production activities. The inhabitants of the Niger Delta are predominantly rural peasant farmers depending mainly on the environment for subsistence living. Thus, it is impossible for any meaningful development to subsist upon a deteriorating environmental resource base because the level of agricultural production depend largely on the quality of the environment.

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INTRODUCTION

To appreciate the role which natural gas exploration activities have played in creating and heightening the level of poverty in the Niger Delta peasant communities, it is important to understand the influence of oil and gas production to the revenue generation of the government and the mono product economic of Nigeria. It is also fundamental to appreciate the role of other factors such as conflict, unemployment, inequality, marginalisation, migration, deprivation and the dispossessed rural farmers generated by several years of oil and gas production in the region. In the Niger Delta oil and gas producing communities, the circle of poverty is endemic and demonstrates a culture of lack of development, from the government to the oil companies. Access to basic necessities of life is almost certainly not available because the presence of government and oil companies is very marginal (UNDP 2006). Succinctly argue that poverty is prevalent because of the impact of the environment on the livelihood of the local people and also the lack of development benefit to compensate for environmental degradation.

Thus, Emmanuel, Olayiwola, and Babatunde (2009) contends that one of the indicators of poverty is the constant disruption of the mainstay of the traditional economy of the local people by oil and gas operation activities which often leads to pollution of the coastal water that produces fish for the people, dispossession and stoppage of farming activities and other socioeconomic activities.

The poverty situation in the oil and gas producing communities of the Niger Delta is similar to the national level, but there appears to be a serious argument as to whether there should be poverty at all in the Niger Delta region in view of its vast natural resources and the revenue generated to the Nigerian economy. Thus the incidence of poverty rose to 66.9% recorded in 1996 in Cross River State, far above the all time national average of 65.6% recorded in 1996. In Rivers State, poverty level stabilizes at 44%, but fluctuates rapidly in other States of the Niger Delta region. However, compared to the national level of the analysis from the table above, the rate of poverty in the Niger Delta in 1980 was significantly lower. Drawing conclusions about the pervasive nature of poverty in the oil and gas producing communities of the Niger Delta, Aworawo, (2000) contend that poverty is endemic because of the relentless disruption of the mainstay of the traditional

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economy of the local people by the activities of the oil exploration companies lead by the world renowned oil giants – Shell, Mobil and Total FinaElf. This is further exacerbated by the culture of misapplication of huge oil revenue meant to provide sustainable community development for the people. In the view of UNDP (2006), there is an almost total lack of roads and basic infrastructure in a region whose wealth is funding gigantic infrastructural development in other parts of Nigeria. However, Ebegbulem, Ekpe, and Adejumo (2013) noted that the construction of access roads that link the various oil and gas field which most oil companies ascribed as development is to facilitate oil and gas exploitation. They noted that road networks linking oil field locations are in good condition, whereas that is not the situation in locations without oil field.

Table 1. Incidence of Poverty in the Niger Delta

| State | 1980 | 1985 | 1992 | 1996 | 2004 |
|----------------|------|------|------|------|-------------------------------|
| Nigeria | 28.1 | 46.3 | 42.7 | 65.6 | 54.4 |
| Edo/Delta | 19.8 | 52.4 | 33.9 | 56.1 | Delta 45.35 Edo 33.09 |
| Cross River | 10.2 | 41.9 | 45.5 | 66.9 | 41.61 |
| Imo/Abia | 14.4 | 33.1 | 49.9 | 56.2 | Imo 27.39 Abia 22.27 |
| Ondo | 24.9 | 47.3 | 46.6 | 71.6 | 42.15 |
| Rivers/Bayelsa | 7.2 | 44.4 | 43.4 | 44.3 | Rivers 29.09 Bayelsa 19.98 |

Source: UNDP (2006)

Poverty is prevalent as a result of the change in the socioeconomic condition of the people triggered by environmental degradation. The environment in which the inhabitants depend solely on is altered by the air quality and other forms of pollution. Orubu (2006) argued that the people are suffering from natural resources curse, because the state of poverty in the oil and gas community is directly associated with the discovery and subsequent oil exploration and production in the Niger Delta. Interestingly, the state of poverty raises a lot of academic and moral debate (Obi 2010) why environmental degradation was allowed to deteriorate for so long despite the huge oil and gas revenue accruing to the government. Why has revenue from oil and gas not used to provide infrastructural development for the local people?

It is also fundamentally important to explore linkage between natural gas exploration activities, poverty, economic inequalities, violent conflicts and its consequences for the oil producing communities. Cramer (2003) argued that inequity is responsible for the high rate of poverty in the Niger Delta region and this is hugely important in explaining the state of conflict situation brought about by oil and gas exploration. As the people economic activities were systemically eroded, they became increasingly poor and thereby vent their anger and frustrations through violent protests that resulted attack on oil and gas facilities. Over the years, there have been violent demonstrations often led by youth and women demanding environmental protection, compensation and economic development of their communities. There is a perceived belief that the activities of oil exploration companies affect the livelihood and wellbeing of the people. With this mindset and the lack of trust, there exists a breakdown of the relationship between the oil companies/government and the producing communities in the Niger Delta to such that best intentions, even to promote sustainable development are often misjudged.

The continuing foray of oil exploration activities by the multinational oil companies (MNOCs) exacerbated agricultural productivity and created disharmony between government/MNOCs and the oil and gas producing communities who bear the greater burden and harmful impact of environmental degradation. Cole *et al.* (2009) strongly argued that the chronic negligence on the part of the MNOCs and successive government has been responsible for environmental degradation and also accounts for failure to provide for example, employment to a large number of teeming youths to compensate for loss in agricultural productivity. The failure to compensate for environmental damage and to provide sustainable development within a highly localized context in the Niger Delta region is directly linked to poverty, violence, conflict, insecurity, unemployment, underemployment and migration in the region. This is congruent to Opukri and Ibaba (2008) that the prevailing socioeconomic and violent conflict brewing in the Niger Delta region, which has attracted attention across the globe, is attributed to environmental degradation and its consequences.

The Niger Delta communities have become increasingly aware of the sad paradox of having oil and gas wells located in their neighborhood that drive the wheels of the Nigerian economy, building skyscrapers in major cities such as Abuja and Lagos, yet languish in impoverishment. The fundamental injustice arising from failure to provide sustainable community development and to operate according to internationally accepted industry standards has brought disillusion, inequality and conflicts. In the simplest of terms, the failure of the government 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 oil and gas producing communities.

Natural Gas Exploration and the Environment

Nigeria has the best quality of natural gas in the world (Economides, Fasina, and Oloyede (2011), which is pivotal to Nigeria economic prosperity, and ostensibly the most important export oriented product. Nigeria is ranked as the 9th proved natural gas reserves in the world estimated in the region of 182 trillion standard cubic feet (see table below) and the largest in Africa (BP 2012). This represents more than 5% of the world's total, that largely described Nigeria as a gas province (Gaius-Obaseki, 1996; Kupolokun, 2006). Undoubtedly, the Nigerian gas sector is in its infancy and remain largely unexploited, present production is accidental to crude oil production (associated gas), meaning that it occurs in crude oil reserves as free gas (Gaius-Obaseki 1996; Aghalino 2009). Based on the total reserves, 86% are found in relatively simple geological structures along the country's Niger Delta while 14% from deep water offshore block (Economides *et al.*, 2011). The Benin basin, Anambra basin, Benue trough, Bida basin and Chad basin are potential hydrocarbon bearing basins that are yet to be explored. Consequently, the estimated combined probable and possible reserves could be more than 300 trillion cubic feet which indicated that Nigeria has often been referred to as a gas province with large reserves of stranded gas.

Table 2. Top 10 Gas rich Countries and Proved Reserves (trillion cubic meters)

| Country | Proved Reserves | % Share of Total |
|----------------------|-----------------|------------------|
| Iran | 1187 | 18.0 |
| Russian Federation | 1162.5 | 17.6 |
| Qatar | 885.1 | 13.4 |
| Turkmenistan | 618.1 | 9.3 |
| US | 300.0 | 4.5 |
| Saudi Arabia | 290.8 | 4.4 |
| United Arab Emirates | 215.1 | 3.3 |
| Venezuela | 196.4 | 3.0 |
| Nigeria | 182.0 | 2.8 |
| Algeria | 159.1 | 2.4 |

Source: BP Statistical Review of World Energy (2012)

According to Edino, Nsofor, and Bombom (2009, 67) there are three basic ways to remove natural gas in the oil production process; re-injection into the reservoir to enhance oil production, harvesting for commercial uses, and finally, burning off the associated gas, known as gas flaring. While the first two options are common practices in many developed countries such as the North Sea (Scotland) and Alberta (Canada), however, the latter is the most common practice in Nigeria.

Thus, gas flaring has largely contributed to the incidence of poverty in the immediate communities. In addition, the NNPC Statistical Bulletin (2013) revealed that average daily gas production in Nigeria in 2004 was estimated at about 5.7mmscf/d (million standard cubic feet a day) with 20% used as Liquefied Natural Gas (LNG), 2% for Natural Gas Liquid (NGL), 16% for re-injection/lift, 15% sold, 4% used in operations, and a whopping 43% was flared. Drawing similarity to environmental degradation in other parts of the world, the United States Centre for Energy Economics (2007) has argued that Nigeria accounts for 12.5% of the global flared gas per ton of crude oil produced, which represent second largest flaring by any country in the world behind Russia Federation. Environmental degradation as a result of natural gas production has remained consistent in the Niger Delta region since 1971 when Nigeria become a prominent member of the Organization of Petroleum Exporting Countries (OPEC).

Shielding more light on the importance of natural gas to the global energy consumption and the Nigerian economy, Odumugbo, (2010) argued that natural gas is the energy breakthrough to a healthier and prosperous economy in Nigeria and the fuel of the future with a projected growth rate of over 70% by 2025. Furthermore, he argued that global natural gas demand is on the increase, and is now more embarrassing that the unwanted by-product in the earlier stage of energy utilization, or more correctly, a co-product of crude oil production, now provides about one fifth of the entire world's primary energy requirement. In the view of Sonibare and Akeredolu (2006); Economides et al (2011), the domestic gas utilization projects comprise the power, cement, fertilizer, aluminum industries, petrochemical plants, steel industries and liquefied petroleum gas (LPG). Furthermore, Odumugbo argued that the regional and international network of gas development in Nigeria promotes mainly gas export, and consist of the Liquefied Natural Gas (LNG) and the West Africa Gas Pipeline (WAGP) to supply gas to some neighbouring countries (Ghana, Togo and Benin Republic) in

the West Africa sub-region, OSO natural gas liquid (NGL), escravos gas project (EGP), gas to liquid (GTL), Brass River LNG, Olokola LNG and the proposed Trans-Saharan Gas Pipeline Project. Diugwu et al (2013) indicated rather succinctly that Nigeria is on course, growing LNG rapidly and now the second fastest LNG holder in the world with a capacity of 22 million tons per annum of LNG and 4 million tons per annum of LPG, adding significantly to the global gas market. This is one of the boldest and most ambitious steps in Nigeria's quest to stem the tide of gas flaring for environmental preservation. However, the extent to which the LNG can spearhead the growth for economic growth, environmental preservation, and a hallmark of sustainable development remain a question mark owing to the growing pace of environmental degradation in the Niger Delta.

The Niger Delta Region and its Environmental Impact

The Niger Delta region is the largest wetland in Africa (Akpomuvie 2011), made up of 9 States (see figure 1 below) with about 20 million populations, 40 different ethnic groups and situated in the Gulf of Guinea, South Western Region of Nigeria. The wetland consists of flat, low lying swampy terrain that is crisscrossed by meandering streams, rivers and creeks. The original Niger Delta region (about 25,640 square kilometers) comprises the area covered by the natural delta of the River Niger and the areas to the east and west, which also produce oil (Akpomuvie 2011). It consists of four ecological zones; lowland rainforests, freshwater swamps, mangrove swamp forests and coastal barrier island (Edino et al 2009). In the view of Emoyan, Akpoborie and Akporhonore (2008) summary descriptions of Niger Delta geology and physiography may be found in some existing literature (Jike 2004; UNDP 2006; Omofonmwan and Odia 2009). More importantly, Osuji and Onojake (2004); Edino et al (2009) noted that the Nigerian economy depends mainly on Niger Delta region, the source of more than 80% of Nigeria's crude oil production. It contributes approximately 2.5 million barrels of oil per day from a network of over 900 oil wells, about 1,500 kilometres of trunk lines, 100 flow station/gas plants, as well as over 45,000 kilometres of oil and gas flow lines. This view was echoed by Jike (2004) who asserted that the region is the engine room that propels and drives economic growth and development in the larger Nigerian society. However, the UNDP (2006) argued that there are 13,329 settlements in the Niger Delta region, and 94% of these have populations of less than 5,500. Therefore, limited space for economic and social activities due to the geography of the Niger Delta explains the prevalence of small settlements in the region.

Ironically, this incredibly well-endowed ecosystem, which contains one of the highest concentrations of biodiversity on the planet, is a subject of environmental abuse arising from decades of oil and gas production activities. The widespread environmental degradation by the MNOCs has severely affected employment for the teaming population, migration, population displacement, violence and poverty as well as a serious threat to the well being of the subsistent peasant economy and livelihood of the immediate communities. This is consistent to the views canvassed by the UNDP (2006) that the local inhabitants are subjected to perceived structural inequality, abject poverty and neglect in the midst of huge oil

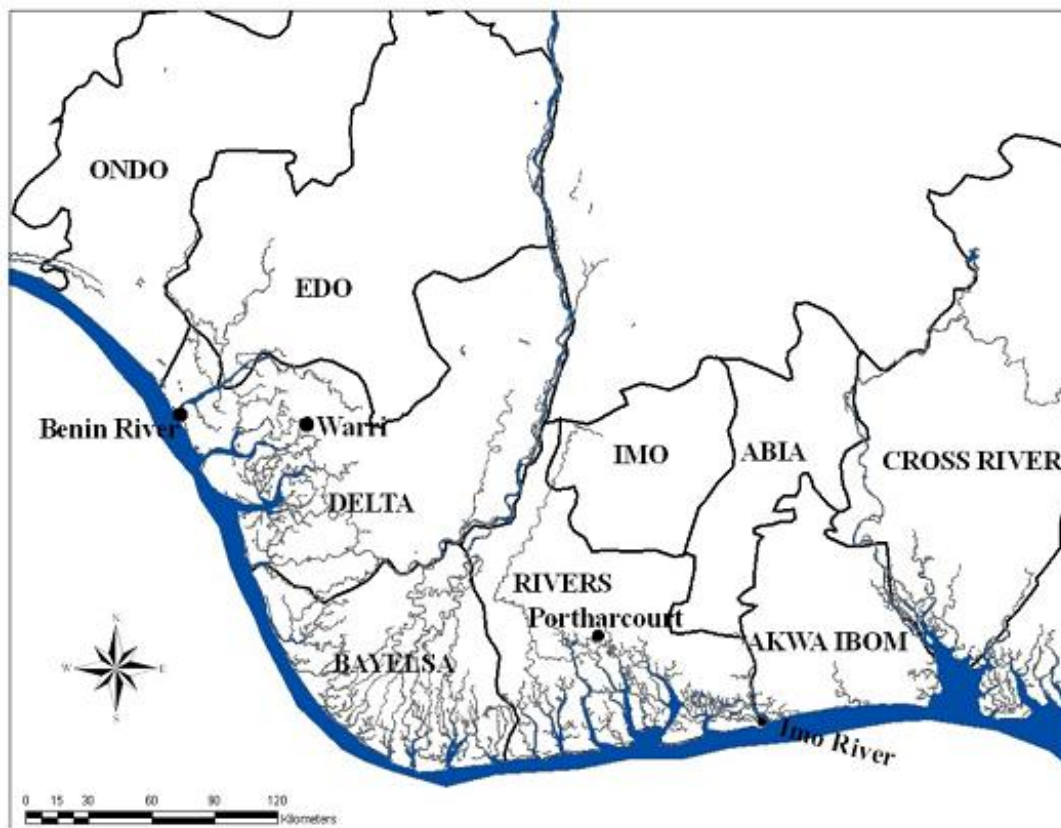
and gas revenue accruing to the Federal government of Nigeria for several decades which contribute to widespread unemployment, poverty and insecurity in the region. There is a delicate balance between the human population in the oil producing communities and its fragile ecosystem thereby pushing the Niger Delta towards ecological disaster (Odoemene 2011). The disruption and dispossession of the means of subsistence of the local farmers through gas flaring activities and other forms of pollution orchestrated poverty, violent conflict, unemployment and other social vices. Social and economic deterioration, ignored by policy makers, undercuts enormous possibilities for sustainable development. Consequently, there exist a relationship between environmental degradation on one hand, and migration, dispossessed rural farmers, inequitable distribution of wealth and poverty amongst the local people on other hand.

Environmental Degradation and Poverty in the Niger Delta Region

The understanding and conceptualization of environmental degradation, poverty and its socioeconomic implication on the oil and gas producing communities of the Niger Delta have been gaining ground in the last five decades (Odoemene 2011). A large number of studies (Jike 2004; Ajibade and Awomuti 2009; Eregha and Irughe 2009; Madueme 2010; Akpomuvie 2011; Ismail and Umukoro 2012; Ojimba and Iyagba 2012; Kafada 2012) have evaluated the socioeconomic interface which includes the violence, unemployment, migration from internal population displacement, poverty and food insecurity, as well as potential challenges and

and the ecosystem. Thus, Odoemene (2011) asserted that the destruction of traditional means of livelihood such as fishing and farming has forced the local people into an environment-related poverty, deteriorating living conditions, social and economic deprivation, unemployment and underdevelopment. The extinction of biodiversity (flora and fauna), the destruction of forest, contamination of soil and the flaring of gas deteriorate the environment and brought hopelessness to the inhabitant of the oil and gas producing communities. Environmental degradation not only has an impact on the environment, but on the quality of agricultural productivity. Besides farms produce, timber production has fallen very rapidly because of retarded growth in woods. The same with other economic plant like cocoa, orange, mango, cashew and kola nut. Gas flaring and other forms of environmental degradation affect soil fertility with a tendency to create perennial environmental conflicts that are endemic among the rural communities of the Niger Delta.

Specifically arguing about the social and economic impact 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.

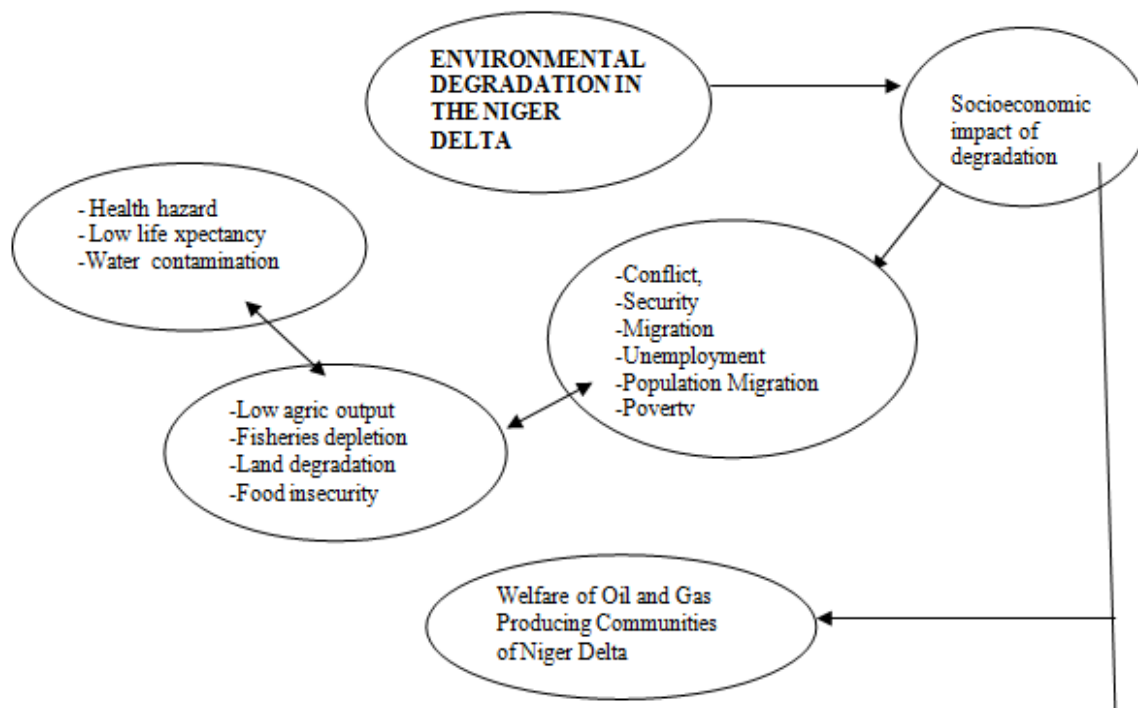


Sources: Adegoke, Fageja, Agbaje, and Ologunorisa (2010)

Figure 1. Map of Niger Delta Region and its State

compensated for the damages done to their land and the environment, which breed poverty. This is consistent with Akpomovie, (2011) who argued that the power structure, climate of perceived injustices, flawed and outdated environmental laws and the politics of gas flaring have helped to aggravate conflicts, disillusionment and poverty in the Niger Delta region.

protest, resistance and confrontation as the last resort. On the other hand, Opukri and Ibaba (2008) provides a more robust explanation by stating that oil and gas production activities in the Niger Delta are responsible for the internal population displacement which is a definite social condition that diminishes individuals and group capacity to pursue interests that may or may not involve relocation.



Source: Field Survey (2013)

Figure 2. Socioeconomic Welfare Degradation Model in the Niger Delta

The figure above represents a cognitive map to demonstrate the perspectives in the understanding of the socioeconomic welfare degradation model and the impact of environmental degradation on the oil and gas producing communities. The people are mainly peasant rural communities with very limited economic opportunities, depending mainly on the environment for sustenance. Infrastructure and social services are generally deplorable and in short supplies, inhabitants are subjected to abject poverty and suffering in the midst of huge oil and gas revenue.

Furthermore, Ojimba and Iyagba (2012) noted that the impact of environmental degradation is already being felt in the Niger Delta region with food insecurity and increasing risk of disease in the human population. Similarly, the UNDP (2006) amply argued that low values of Human Development Index (HDI) of 0.564, poor quality and accessibility of basic health care services and poor quality infrastructure amongst others as the bane of the people of the Niger Delta region. Furthermore, the UNDP (2006) opined that sustainable livelihoods depend on adequate roads, electricity, house and basic social services that are rarely available to the larger population of the oil and gas producing communities. Oil and gas production activities contribute to social and economic deprivation with capacity to further complicate the development process and entrench poverty on the peasant rural communities. Consequently, the dispossessed rural farmers who are deprived of their means of livelihoods that are frustrated and alienated resort to violent

They argued that gas flaring and other form of environmental degradation have largely induced internal population displacement and aggravated the level of poverty in the Niger Delta. Similarly, Effiong and Etowa (2012) noted that medical studies have shown that gas flaring contribute to an average life expectancy in the Niger Delta region of 43 years, and also have Nigeria's highest infant mortality rate – 12% of newborns fail to see out their first year. Aghalino (2009) specifically argued that gas flaring “spares neither the vegetation nor any life form in the path, including human beings, belching heat and smoke menacingly at homes, shops and villages in the oil and gas producing communities”.

The World Bank report cited in Osuoka and Roderick (2005) has similarly noted that the adverse effect of particulates, suggests that gas flaring from just one part of the Niger Delta, Bayelsa State would likely cause annually, 49 premature deaths, and 4,960 respiratory illnesses. In the same vein, Odoemene (2011) indicated rather succinctly that “the Niger Delta is highly susceptible to adverse environmental changes because it is an oil producing community located in the coastal region of the world; little wonder why reports on the environmental state of the community are conclusive that the area is rapidly becoming an ecological wasteland”. This view is congruent with Obi (2010) that “the extraction and dispossession of the means of livelihood of the mass of the population toward the upper classes or from the vulnerable to

richer aptly capture the situation in the Niger Delta". Fundamentally, migration is a major multiplier effect of environmental degradation that is prevalent in the Niger Delta communities occasioned by the destruction of people's means of livelihood. Traditional economic pursuit of the rural population is being seriously undermined by rendering the land unsuitable for cultivation and local inhabitants subjected to economic hardship. In some cases, farmers are forced to relocate to other communities in pursuit of the farming activities, turn to another occupation or/and relocate to urban cities in search employment which worsen the already unemployment situation in the urban centres.

Compensation for Environmental Degradation and Poverty in the Niger Delta Region

Lack of adequate compensation for environmental degradation is the basis for poverty, frustration, anger and persistent violent conflict that are the hallmark of the oil and gas producing communities. Compensation computation for environmental degradation in the Niger Delta region fails to weight fairly all the factors, including use and non-use values (intrinsic, existing and future use values), the cultural heritage and significance of resource areas, and more importantly the need for long term sustainability of the oil and gas producing communities. According to Oshwofasa, Anuta, and Aiyedogbon (2012), the government guidelines for compensation are far from adequate and comprehensive, which is detrimental to the oil and gas producing communities.

The current level of government and the MNOCs involvement, that is centered on compensation for crops and other physical infrastructure that are measurable without due consideration to the emotional and psychological impact on the oil and gas producing communities is attributable to persistent violent conflict and dissolution in the Niger Delta region (Ajibade and Awomuti 2009). Given the high population density of the Niger Delta region and the severity of oil and gas exploration activities in the peasant rural communities, the regulatory framework ought to cover health, psychological and emotional damage as well as other forms of the socioeconomic impact of environmental degradation. The lack of focus on the unmeasured aspect of environmental degradation is the principal reason why the issue of gas flaring has persisted (Emoyan *et al.*, 2008).

insecurity in the producing communities of the Niger Delta. Compensation computation for environmental degradation raises more questions and is far from adequate and comprehensive (Muller 2010). In particular, compensation is not paid for gas flaring; probably because of the assumption that the actual effect is not measurable (Aghalino 2009), compare to, for example, oil spills. But in real terms, gas flaring is hazardous, harmful and detrimental to the well being of the rural peasant communities of the oil and gas. In the view of Akpomuvie (2011, 207) once it is proven that pollution in the case of oil spills occurs as a result of deliberate acts, irrespective of who is behind such action, the affected communities are not entitled to any form of compensation. Thus, oil companies have often hidden under this pretext to evade compensation even when pollution is as a result of operational problem or pipeline failure. Communities have no technical expertise or other means of verification once it is claimed by oil companies that it was carried out by sabotage and compensation is refused (Orubu 2006).

The amounts of money paid for pollution and the scope of compensation under the non-judicial process is a source of concern to the oil producing communities. According to Ajibade and Awomuti (2009), compensation is narrowly prescribed to include crops, economic trees, buildings, loss of fishing rights and loss of value of land. Compensation guidance in the oil and gas industry is set by the Oil Producers' Trade Section of the Lagos Chamber of Commerce and Industry (OPTS) and does not include long term impact such as injury to health, psychological and emotional damage. The oil producers association comprises mainly oil companies, and compensation rate are set without the knowledge or input from the affected oil producing communities. A situation where victims are poorly compensated or polluters determine the compensation to be paid for environmental degradation is neither fair nor transparent and amounts to a perpetual miscarriage of justice and a source of poverty (UNDP 2006).

The tables above show compensation rate of environmental degradation for some selected crops. The rates are considerably low and do not reflect the current market reality. In addition, the life span of these economic trees is not taken into account. According to the UNDP (2006), people are clamouring for restitution for all the damage that has been done by oil and gas operations activities.

Table 3. Recommended Compensation Rate for Economic Trees by the Oil Producers Trade Sections for Oil and Gas Industry (Rates are in Nigeria Naira)

| Income Producing Trees | Mature | 1994 Medium | Seedlings | Mature | 1997 Medium | Seedlings | Mature | 2001 Medium | Seedlings |
|---------------------------------------------------------|--------|-------------|-----------|--------|-------------|-----------|--------|-------------|-----------|
| Avocado | 180 | 90 | 45 | 360 | 180 | 90 | 2400 | 1200 | 600 |
| Banana | 160 | 80 | 40 | 320 | 160 | 80 | 500 | 250 | 125 |
| Breadfruit | 80 | 40 | 20 | 160 | 80 | 40 | 1900 | 950 | 475 |
| Calabash Tree | 10 | 5 | 3.5 | 20 | 10 | 5 | 1440 | 720 | 360 |
| Cashew | 120 | 60 | 30 | 240 | 120 | 60 | 2200 | 1100 | 550 |
| Cocoa | 500 | 200 | 100 | 1000 | 500 | 250 | 2500 | 1500 | 750 |
| Cocanut Palm | 300 | 150 | 75 | 600 | 300 | 150 | 5450 | 2750 | 1360 |
| Timber and Mangrove Timber (Iroko, Abura etc. (mature)) | 600 | 300 | 150 | 1200 | 600 | 300 | 34000 | 17000 | 8500 |
| Mangrove (per hectare) | 1500 | 750 | 375 | 3000 | 1500 | 750 | - | - | - |

Source: UNDP (2006)

There is also a link between compensation computation model for environmental damage and persistent conflict and

Furthermore, they argued that compensation rarely reaches all those affected because of the benefit captor syndrome. The

shortcoming from the above compensation computation is that the Nigerian environmental laws are outmoded, consistently flawed, and issues relating to compensation computation were not made explicit (Emoyan *et al* 2008).

Conclusion/Recommendation

Environmental degradation is a common practice in the oil and gas production process and most challenging for the rural peasant communities of the Niger Delta region. It is also of topical concern to the peasant rural communities because of its multiplier effect. In order to address the poverty challenge, there should be a genuine desire to commit resources from oil and gas to an alternative development agenda that are people centered with a clear mandate to provide sustainable community development in the region with much less political interference. In practice, government and the MNOCs should focus on improving the social infrastructure, building capacities, create new opportunities for the marginalized and deprived oil and gas producing communities and help mend a broken relationship that is the basis of violent conflict – this is a very different practice for government than is currently the case.

What is required is a comprehensive program of remediation within the framework of sustainable community development. In addition, there should be a comprehensive approach that pursues development on the basis of socioeconomic and sustainable development. There is a need to put in place an independent environmental policy and governance with sustained interest, to respond to socioeconomic consequences of the local people and to enforce and monitor compliance. Environmental action must be improved comparably to meet the best industry practices elsewhere in the world that affect socioeconomic conditions for sustainable development of the oil and gas producing communities. There is a lack of concerted effort to develop a partnership framework that allows community collaboration and involvement with institutions on the principle of effective management of sustainable resource use. This is particularly important where existing institutions are weak and failed to utilize allocated resource to provide development infrastructure for the people. Community participation for any development initiative such as infrastructure projects specifically design for community use, increase ownership by communities and improve implementation.

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