### EFFECTS OF ENVIRONMENTAL DEGRADATION ON RURAL COMMUNITIES' SUSTAINABLE DEVELOPMENT: NIGER DELTA COMMUNITIES IN FOCUS

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#### ABSTRACT

The thrust of the paper is the determination of the effects of environmental degradation on rural communities' sustainable development, with emphasis on rural communities in Niger Delta Region (NDR) of Nigeria. Unarguably, the strategic importance of Niger Delta Region to Nigeria as nation cannot be over stated because of the considerable volume of oil deposits located there. It is significant to the survival of the nation because it lays the golden egg that feeds and sustains the nation. A large proportion of government revenue is generated mainly from the region. Generally, oil is cardinal and central to sustainable development of a nation, socially, politically and economically. However, despite the huge oil deposit in the NDR, many communities in the region are bedevilled with monumental environmental challenges. The authors relied on secondary data such as textbooks, journals, relevant books and magazines etc. The study recommends that as an antidote to continued environmental degradation in rural communities in the NDR, the physical environment should not be further degraded through the use of obsolete technology while the devastated areas should be reconstructed, while the government also need to demonstrate the necessary political will by massively investing in human, infrastructural and capital development, job creation and confidence building measures among others. The paper concludes that except the environmental challenges in the NDR rural communities are substantially addressed, the much talked about restoration of peace and security would be futile and elusive.

Keywords: Environmental degradation, Rural communities and Sustainable development

### INTRODUCTION

The strategic importance of oil to any nation cannot be over stated. It has continued to be the nexus and lubricant of World politics even in the coming decades (O. J. Offiong & F. O. U. Oriakhi). In other words, it is critical to the sustenance of the modern world economy. According to Ikelegbe, 2001b:438, Ekuerhare, 2003:13), oil located in the NDR of Nigesria provides between 81% and 96% of total government revenue from 1973 to 1999 and between 85% and 95% of total export earnings in the same period. Successive governments at all levels and their agencies including the multi-national companies operating in the area have not been able to fully address or reverse the ecological challenges and under-development trends in the area.

The quality, growth, sustainability and lifespan of any living organism is largely dependent on its habitat, be they animals or human beings (homo- sapient). However, this unique and critical element which plays very significant roles in the existence of living organisms has continued to be degraded directly or indirectly through degrading elements. thus causing incalculable damage to individuals and endangering their lives and root means of livelihood. This has continued to make life uncomfortable and sometimes unbearable. This is evident in Nigeria with particular reference to communities in Delta State thus creating a feeling of apprehension and uncertainties in the rural dwellers. This is understandable because of the important and critical role the environment plays in their lives. For instance, the environment is necessary for survival generally, source of livelihoods and global life support system for planet earth resource base used for agriculture and agricultural lands, source of food, source of income, drives a number of ecological processes that control the climate, the eco-system within which all living organisms (including man who) interact with the physical elements (Oladipo, 2001; 340), cleanse the air and water, regulate water flow, recycle essential elements, create and regulate soils and keep the earth perpetually fit for life and living while the rivers and creeks are widely used as source of drinking water, for batting and other sundry domestic purposes such as washing, just to state few.

Oil and gas came into limelight in 1956 when the Nigerian Bitumen Corporation discovered oil in commercial quantity at Oloibiri, present day Bayelsa State of Nigeria. It became a major economic activity subsequently. This eventually resulted to the age long oil and gas related environmental issues and disasters.

#### STATEMENT OF THE PROBLEM

The debilitating effects of petroleum exploration and exploitation where it is located had long been acknowledged by eminent scholars. According to Juan Pablo Perez Alfonso:

"I call petroleum the devil's excrement. It beings trouble.....Look at this locura – waste, corruption, consumption, our public services falling Apart. And debt, debt we shall have for years"

For late Ken Saro-wiwa:

"the presence of oil in the NDR has created an ecological war in which no blood is spilled, no bones are broken, no one is maimed, but men, women and children die, flora, fauna and fish perish;

soil and water are poisoned, and finally the land and its inhabitants die." Cited in Onosode, (2003:112).

Despite the huge endowment of human resources coupled with natural mineral deposits, the NDR has remained one of the least developed areas in Nigeria. Their natural habitat and source of livelihood (environment) has persistently grossly eroded and degraded. This has led to discontent and frustration. The people are so overwhelmed by poverty due to the damage done to their community, environment, traditional institutions and culture that all their energies are channelled into the struggle for survival. This has led to agitations, protest and violence by residents in such communities.

After over half of a century of unbroken harvest of oil and gas by the multinational companies operating in the region, the people are yet to be convinced that petroleum is not after all a accurse to them.

Oil spills sometimes lead to serious pollution and huge cost to the environment. For instance, oil spillage has resulted in massive devastation and destitution from the over 68,000 reported oil spills involving over 56 million barrels (Ranfield, 1998, 30, 31) apart from fouling the air, water and land. It could also lead to drains of soil nutrients, cannot support plant life, destruction and shortage of community farmlands. This may ultimately lead to a particular land being cultivated year after year thus resulting in low and poor yields. Erosion may also wash off several farmlands which may lead to scrambling for few available lands by community members. This could lead to family disagreements, division and sometimes results in violence. Other effects of erosion include but not limited to: removal of a wide range of organisms; lower soil fertility by removing natural fertilizers; poor agricultural yields and threat to food security.

Oil spillage and product leakages through the use high pressure pipelines to transfer products from the oil fields and refineries to various parts of the country also destroyed wildlife, farmlands, forests and human life and serious disasters. (Amnesty International 2009, Imoni 2000, and Centre for Population and Environmental Development 2007). It could massive destruction such as the death of thousands of people such as the one that happens in Jesse, a town near Oghara in Delta State when scores of persons died while scooping oil.

Similar incidence also took place in 1980 at Finuwa, Sangana when one of the oil wells heat blew out the entire jack up rig and raised down an estimated 3million barrels of crude oil were spilled into the environment for an unbroken period of over four weeks. This created a period of untold hardship in the affected communities.

Water pollution arising from the activities of the multinational companies and construction channelization poses yet another serious health implication for the inhabitants of the rural communities in NDR where the vast majority of the people live and where there are no options at all or the choices are most limited. Apart from making drinking water scarce, these pollutions and contaminations also disrupt the ecological and environmental balance as well as constituting a veritable hazard to the health of the entire communities.

According to United Nations environment programme UNEP (2004;p61) water shortages in regions like the Niger Delta are also caused by the irreversible degradation of wetlands, floored plains and costal eco system; deforestation of catchment areas; and the damming of rivers. Water deficit or shortages affects the poor and the most vulnerable

segment of the society first and hardest. This is because impoverished families tend to depend mostly on common pool water resources such as rivers, streams, lakes, and ponds for their sustenance (Kerapeletswe, & Lovett, 2001). Rural communities has no choice but to depend on these vulnerable and unsafe contaminated and polluted sources of water from rivers, streams, lakes, ponds and shallow hand dug wells. The rural poor bear the brunt of coping with water needs and deficit. Water is an indispensable requirement for man's existence. In fact, it is very crucial for human socio-economic development particularly among the rural poor communities. It is needed for drinking, general cleaning and bathing (thus maintaining family health and hygiene), cooking and raising small livestock like domestic animals. Base line studies have estimated that only about 20 percent of the people dwelling in rural areas of the Niger Delta region have access to portable water (Omuta, 2011). In the Niger Delta oil spillages and consequent pollution of both surface and underground water resources are very common occurrences resulting in greater burdens.

For instance, in 1989 it was reported that the inhabitants of OBIO/Akpor and Bonny local government areas of River state had a traumatic experience when their rivers, wells, springs, and all other sources of drinking water were polluted as a result of oil spillage. Similarly in Ondo state, another incidence happened when tidal incursions due to the soil erosion resulting from oil exploration hazards forced women in some fishing villages such as Apaa, Awoye, Ojumote to paddle for at least twelve hours into other parts of Ondo states and even to neighbouring Edo state in search of fresh drinking water. Also, 34 communities in Delta state including Gbarnatu clan, Okorenkoko, Kokodia, Opurosa, Korotie, Okolobobugbene, Benekrukru, Epemu, Obafa, Kunkunu, Asama and Igbogho which source their drinking water from the cricks were adversely impacted when oil leakage from a 28 year old trunk pipeline leaking Jones crick oil field which occurred on Thursday 26<sup>th</sup> march 1998, spilling some 20 thousand barrels of crude oil into the creeks and mangrove swamp.

In several ND communities, huge volume of natural gas are flared daily usually in close vicinity of human dwelling and with serious cost to the environment (Akpabio, 2006, Akpobome, 2004, Alakpodia, Iyayi, 2010, Ogbonanya, 2003, Otuaga, 2004 & Udoinyang, 2005). According to a report, as far back as 1982, Shel, Gulf, Mobil, Texaco, Pan Ocean and Elf ffared over 13 billion cubic metre of gas in 145 communities in Nigeria. In 1911, Nigeria exceeded the world average from natural gas flaring by 72% of total production per averaged 18% (IDEA, 2000:146). In the same vein greenhouse gases flaring pumps into the atmosphere, negatively affects both wild life and humans and makes normal life and living very unbearable.

Unmitigated gas flaring and indiscriminate dumping of untreated drilling water based waste on land and into the swams (Onakuse and Lenihan; 2003 p8) the Fenuwa disaster experience can be replicated in hundreds of communities across Niger delta region.

Discharge refineries effluents and harmful liquid wastes that flow out of the refinery during the process of refining also has serious negative consequences on the environment, man, land and creatures. Crude oil spill into water sources and farmlands could lead to food shortages and extinction of species of plants, animals and fish. It could contain toxic materials which can be stored in brains of fishes for a long time thus causing food poisoning. Moreover, recurring problem of oil spillage and destruction makes the area uninhabitable and unfit for agricultural purposes.

In the agricultural sector, fuelling of trees for industrial purpose and commercial plantations leads to deforestation of important and economic trees (Inoni, 2009). This affects negatively materials associated with forest trees such as furniture and art works, electricity transmission polls, building such as walling and roofing, bamboo, fuel wood and chewing stick, wild life conservation - their shelter and safety and may lead to their extinction. Leave roots and some trees found in the forest of the Niger Delta are known to serve as sources of some potent traditional medicines. As a result of these myriad of challenges, the people in the rural communities are disillusioned and discouraged from agricultural activities, thus hampering development in the agricultural sector.

Due to lack of adequate modern energy needed for human development, such as electricity for basic needs of cooking, warming or heating, lighting and reading and for other household and productive activities, the rural communities in NDR depend almost solely on fuel wood (biomass fuels), crop residues and cow dung as their major source of energy. Deforestation forces poor rural people to travel for miles in search of woods. This involves incalculable expenditure of energy and time needed for other social and economic ventures. Report on the energy consumption of the people in the NDR (Omuta, 2011), has confirmed that there is an inverse relationship between levels of poverty and exploitation of common pool resources.

However, the use of biomass fuels has its own side effects. **Soot and** smoke can cause respiratory complications such as asthma, cough, pneumonia and chronic bronchitis while suspended particulate matter (SPM) cause pulmonary diseases and eye related problems such as cataracts. and fire out break especially with low quality of building materials mostly used by the poor (International Energy Forum (IEF) 2009, Omuta 2011, Warwick and Doig 2004, Wokocha 2010)

Construction of rails, roads and other structures, especially those associated with mineral exploitation industries constitute serious threat to plants, animals and human life in ND rural communities. Apart from the disregard to eco-system, there is also the issue of deafening, offensive and irritating noise from the heavy duty equipments that are used for such constructions. Poor road conditions could also affect sales of economic goods especially perishable ones. This tend to weaken the economic endeavours and hampers development initiatives by the people.

Blocked channels, Badly constructed canals and causeways, leads to flooding on farmlands, residential homes and even towns and cities while rural roads used by heavy earth moving machines and equipments for their operational bases with no rehabilitation work done on them also constitute serious problems such as flooding and hampering free mobility due to bad conditions of roads. For instance, some communities are yet to recover from the devastating impact arising from the construction of the railway from Itakpe in Kogi State to Aladia in Delta State. Hardships still persists till date.

Industrial activities and wastes could also pollute the environment, with serious adverse health implications such as emission of fumes that causes air pollutants and blindness.

There is utter neglect of the rural communities by both government and the companies who undertake industrial activities especially the oil companies, resulting in a state of deprivation, inequality, injustice and under-development of the rural communities resulting in grim struggle for survival by the people. Moreover, the people lack of basic amenities such as pipe born water, electricity, quality health care and educational facilities

and opportunities in the rural areas of ND. The question begging for an answer is: what has been the level of compensation (if any) by the multinational oil companies after decades of oil exploration and exploitation for the health hazards and economic woos their activities or operations have caused over the years to the rural people in NDR? Moreover, all the domestic legal regimes and international conventions and agreements put in place for the control and regulation of environmental challenges in Nigeria have not yielded the desire results.

### **REVIEW OF RELATED LITERATURE** The Concept of environment

A plethora of definitions of the concept of environment exist in the literature. They range from the sweeping and general to the sophisticated, technical and specific. As a social science and technical subject, controversies exist about its definition because it covers a wide range of ecological issues. In the opinion of Kofi Anan, from whatever perspective environment is defined, it is the source of sustenance that humanity depends on for food, fuel, traditional medicines and materials.

From the above definitions, it is germane to state that uncontrolled human activities in his interaction with the natural environment have serious negative consequences.

According to Omuta (2011), a logical extension of these definitions is that since the mix of physical and cultural (man-made conditions) almost always varies from place to place, the character and quality of the environment will correspondingly vary from place to place.

#### **Concept of Environmental Degradation**

Environmental degradation entails the deterioration of the physical environment through human various activities by the displacement of natural landmarks and the introduction of pollutants into the atmosphere (Odogbor, 2005).

Incidentally, the rate at which human activities degrade and assault unprotected vulnerable natural resources due largely to population growth is faster than the rate at which the environment regenerates and renews itself.

In his argument that human activities are radically altering the ecological processes that make the planet earth fit for life and living, he conclude by warning that within the development contest there is a general realization that if the present rate of human induced resource depletion continues unchanged and unmitigated, the limit to growth on the earth could be rich in less than hundred years irrespective of our faith in technology (Oladipo; 2001 p 341).

Environmental quality and the sustainability of environmental resources are fundamental to the overall wellbeing and development of the people (Omuta, 2011, p.20). This is because over 70% of the people in the region depend on the natural environment for their livelihood. Amnesty International (2009:2) quotes: Any pollution of, and or damage to the environmental resources of the region constitutes a significant risk to, and indeed an infringement of the fundamental rights of the people to decent and healthy living. Hoverer, according to Omuta (2011):

"the issues of oil and gas operations and their environmental related challenges have spilled a lot of blood, crushed many bones

and prematurely terminated the lives of tens of promising youths".

Some of the platforms and measures that have been put in place in the past were merely palliative, considered as window dressing that hardy meet the needs and aspirations of the people. Even the Niger Delta Environmental Survey (NDES) that was set up in 1995 as a private initiative by Shell Petroleum Development Company (SPDC) on behalf of its joint partners; namely: Nigerian National Petroleum Corporation (NNPC), ELF and Agip (2000), which primary goal was to carry out a holistic survey of environmental issues in NDR, and the Niger-Delta Master Plan did not yield much results.

#### **Concluding Remarks**

The rural poor perceived their well being as ultimately tied to the core importance of environmental resources and the genera ability to be in control of their lives. They are more vulnerable to uncertainties and environmental challenges. Therefore, any adverse environmental issues such as socio-cultural and economic dislocations affect their physical, emotional and mental health more.

Since man had had an age long association and affinity with the environment (especially with land) coupled with the fact that the environment is the sustaining fabric and foundational infrastructure, he must be deliberately and consciously concerned about it.

According to (Ogon; 2006 p10), the extraction of environmental diverse resources meets the various needs of the local population. Indeed living in natural communities in the Niger Delta essentially revolves around its forest and the resources that are found in and around them. However, several communities in the NDR are progressively and massively being invaded and violated with the resultant exposure to all kinds of economic, social and health challenges.

### The way forward

Certainly, the environmental challenges in many communities in the NDR are not insurmountable or defy any solution provided there are genuine desire by the governments at all levels, multi-national companies, communities and other informed stakeholders to reverse the bad situation. The following recommendations are proffered on how best to ameliorate the environmental challenges in the NDR:

There should be a synergy between the government and the communities in chatting the positive way forward in addressing the myriad of environmental challenges ravaging the NDR while the government and its agencies and multinational companies should show more concern and interest in the development of ND rural communities through the empowerment of the people especially the youths to meet their economic and social needs. The government and other stakeholders should formulate strategic plans and measures or Intervention programmes to ensure efficient and effective management and protection of the environment.

There should be a holistic approach to sustainable development and poverty reduction, while findings and recommendations for policy and poverty reduction measures especially at the grassroots level must be fully implemented and form the component of government actions. There is also the need to collaborate and draw from the experiences

from other states at the international level on how best to manage and tackle environmental challenges.

An integrated anti poverty and multi-dimensional approach that would ensure clear equity participation in the oil economy should be adopted by the government to ensure sustainable development in the rural communities in the NDR.

Frantic and genuine efforts must be made to speedily and effectively remediate the environment, regenerate local economies, build infrastructure, rehabilitate destroyed and dislocated lives, build industries and provide social services, improve health care and eliminate health hazards associated with oil industry.

The oil company responses to the environmental challenges of the region must be by compensating those affected directly promptly and adequately to enable them live normal lives.

The environment of the NDR is naturally fragile, vulnerable, delicate, and very sensitive with grievous consequences. Therefore, a well protected and secured environment in the NDR will be a potent platform and a sine qua non for accelerated, sustainable and enduring development in the Niger Delta rural communities.

#### REFRENCES

- Akpabio, Z. K. A. (2006). The Impacts of Gas Flaring on Micro Environment & Yield of Plantain in Rivers State, Nigeria. *Environmental Perspectives* 10(1).
- Akpobme, C.A. (2004). Oil Spillage and Gas Flaring and Environmental Degradation in the Niger Delta, Nigeria. *Journal of Environmental Analysis*. 2(2).
- Alakpodia, I. J. (2000). Soil Characteristics under Glass Flare in the Niger Delta, Southern Nigeria. *Geo-Studies Forum*, 1(1 & 2).
- Amechi, E.P.(2009). "Poverty, Socio-Political Factors and Degradation of the Environment in sub-Saharan Africa: The Need for a Holistic Approach to the Protection of the Environment and the realization of the right to Environment", Law, Environment and Development (LEAD) Journal, Vol.5, No.2.
- Amnesty International (AI), (2009). Petroleum, Pollution and Poverty in the Niger Delta, (June) Index: AFR 44/021/2009, London: Amnesty International Secretariat Peter Benenson House.
- Aregbeyen B. O. & Adeoye B. W. (2001). "The Oil Industry, Environmental Health and Sustainable Development in Nigeria." *African Journal of Environmental Studies*. 2(2).
- Center for Population and Environmental Development (SPED) (2003). Demographic and Baseline Studies for the Niger Delta Regional Master Plan.
  Center for Population and Environmental Development (SPED) (2007). Pilote Study on Community Based Forest Management in Nigeria – Amahor Forest Reserve, Igueben LGA, Edo State. A report prepared for Food & Agricultural Organization (FAO) & National Forest Development Committee, Federal Ministry of Environment, Abuja.
- Ekuerhare, J. S (2003). "Development Options for the Niger Delta Region", *The Delta Bureaucrat*, April, Vol.3/1.

- Environmental Resources Management Limited (ERML) (1997). Environmental & Socio-Economic Characteristics of the Niger Delta.
- Federal Republic of Nigeria (2004). Niger Delta Regional Development Master Plan, Nigeria: NDDC.

Ikelegbe, A. (2001b). "Civil Society, Oil & Conflict in the Niger Delta Region of Nigeria: Ramifications of Civil Society for a Regional Resource Struggle", *Journal of Modern African Studies*, 39/3.

Imoni, O. E. (2009). "Effects of Forest Resources Exploitation on the Economic Wellbeing of Rural Households in Delta State, Nigeria". *Agricultural Tropica et Subtropica Vol.42, No. 1.* 

International Energy Forum (IEF) (2009). "Reducing Energy Poverty through Cooperation and Partnership", Background Paper for IRF Symposium of Energy Poverty, 8-9 December, Johannesburg, South Africa.

Iyayi, F. (2010). "Environmental Cost of Gas Flaring in Nigeria" in Ojo, G.U. (ed), Envisioning a post Petroleum Nigeria (Leave Oil in the Soil, Yenegoa, Portharcourt, Lagos: ERA/FoEN, Chapter 5.

Juan, P. P. A. (2004). Cited in The Economist, September 25, London.

Kerapeletswe, C. K. & Lovett, J. C. (2001), "The Role of Common Pool Resources in Economic Welfare of Rural Households", *Environmental Department Working Paper 2001-2004*, University of York.

Niger Delta Environmental Survey (NDES), (2000), *Niger Delta Development Priorities and Action Plan*, Phase II Report.

- Odjugo, P. A. O. (2010). "The Impact of Natural Gas Flaring on Microclimate & Yield of Egusi Melon (Citrullus Lanatus), in the NDR of Nigeria. Centre for Population & Environmental Development (CPED), *Policy Paper Series No. 2.*
- Odogbor, P. O. (2005). "Effects of Environmental Degradation on the Cultural Heritage of the Niger Delta and the implications on Sustainable Rural Development, (ed)., F. Parker Publishing Company.
- Ogbonanya, I. (2003). "The Effects of Glass Flaring on Natural Vegetation and Wildlife". Journal of Ecosystem. 7(1).
- Ogon, P. (2006). "Land and Forest Resource Use in Niger Delta: Issues in Regulation and Sustainable Management", <u>www.ippnigeria.org</u> (an adobe acrobat document.
- Offiong O. J. & Oriakhi I. O. U. 2005). "Oil, the State, Internal Colonialism & the Crisis of Accumulation: A Study of The Real-Politic of Fiscal Federalism in Nigeria, In Federal, State & Resource Control In Nigeria, (F. Parker Publishing Company).
- Oladipo, E. O. (2001; 340). "Key Elements of Environmental Impact Assessment in Nigeria", in Abumere, S. I.and Soyinbo A., (eds.), *Development Policy and Analysis*, Ibadan, Development Policy Center.
   Omuta, G, E,D. (2011), "Poverty and Environmental Quality in the NGR:

Dependence on Biomass Fuels as the source of Household Energy", A commissioned paper for the Centre for Population and Environmental Development (SPED), Benin City, Nigeria.

Onakuse S. and Lenihan E. (2003). "Livelihood Systems and Rural Linkages in NDR of Nigeria". www.nuigalway.ie/.../44-stephen-onakuse-andeamon+lenihan;pdf.

Onosode, G. O. (2003). "Towards Environmental Management and Sustainable Development in the Niger Delta", in Chokor, B.A.(ed.), Environmental Issues and Challenges of the ND: Perspectives from the Niger Delta Environmental Survey Process (Selected Speeches and Presentations (1995-2001) by Gamaliel O. Onosode), chapter 9. Onuorah, A. O. (2000). "The Oil Industry and Environmental Degradation". *Journal of Atmospheric Science 10*(2).

- Otuaga, C. O. N. (2004). "The Social Perspective of Gas Flaring and Human Health in Southern Nigeria". *Environmental Perspectives 8(1)*.
- Udoinyang, G. U. (2005). "The Effects of Glass Flaring on Sweet Potato Production in Niger Delta, Nigeria". *Journal of Ecosystem*.
- United Nations Development Programme (UNDP), (2006). Niger Delta Human Development Report, Vol. 2.
- United Nation Environmental Programme (UNEP), (2004). *Women and the Environment*, Policy Series: Nairobi, United Nations.
- Warwick, H. and Doig A. (2004). Smoke: The Killer in the Kitchen Indor, Air Pollution in Developing Countries, ITOG (Practical Action).
- Wokocha, G.A. (2010), "Impact of Biomass Fuel Utilization in Rivers State", *European* Journal of Scientific Research Vol.48, No. 1.
- World Bank, (2007). The 2007 Global Monitoring Report: Confronting the Challenges of Equality and Fragile States, Washington D.C.