

ENVIRONMENTAL DEGRADATION: THE IMPACT OF OIL EXPLORATION IN THE NIGER-DELTA REGION, NIGERIA

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This paper is an attempt to discuss the impacts of oil exploration in the Niger-Delta region of Nigeria. It highlights the problems and discusses the far reaching socio-economic implications which appear in this process. It concludes with a suggestion on how the situation could be remedied and a healthy environment where socio-economic activities would thrive will be achieved.

Keywords: environmental degradation, unsustainable oil exploration, Niger-delta region.

INTRODUCTION

Niger-Delta region of Nigeria covers a land mass of about 21,000 square kilometers and have a population of about 31 million people which accounts for about 23% of Nigerian population. The region is made up of nine (9) states namely: Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and River States; all located at the south-south, south-east and south-west geographical area of Nigeria. The region which falls under the tropical rain forest zone has the highest wetland in Africa and ranks third among the world's largest wetlands. The Delta region consists of rivers, creeks, estuaries, fresh water swamps, lagoon marshes, beach ridges which covers about 86,000 square kilometer and the mangrove swamps which spans about 1,900 square kilometer (Awosika, 1995). The ecosystem of the area is highly diverse, rich in biodiversity and supportive of numerous species of terrestrial and aquatic flora and fauna (Uyigue and Agho, 2007). According to the Nigerian Federal Ministry of Environment, 60% of the fish caught in West Africa breed in the coastal marine ecosystem which includes the vast Delta mangroves (Phase 1-Scoping Report, 2006). Invariably, Iyayi (2004), argued that the Nigerian Delta region is the richest wetland in the world while Aneej (2004), and FME, et, al (2006) believed it is one of the 10 most important wetlands and marine ecosystem in the world.

Crude oil was discovered in this region in 1956 and by 1958, Nigeria had commenced commercial production of Oil and Gas. Today, Nigeria has the largest natural gas reserve and the second largest oil reserve in Africa with its proven reserves available for the next 29 years. (<http://www.nigeriamasterweb.com/nmwpg1nigeriaoil.html>). Oil and Gas are the main source of national revenue in Nigeria accounting for about 97% of its total export. Significantly, the oil from the Niger-Delta accounts for more than 90% of Nigeria's exports and about 80% of the government revenue. (Twumasi and Merem, 2009). In addition, palm oil production, aquatics and agricultural produce come in larger quantity from this region. Thus, the Niger delta region holds a central place in the Nigerian economy.

STATEMENT OF PROBLEM

The Niger-Delta region of Nigerian being natural blessed with abundance of oil deposit has suffered series of environmental degradation as a result of oil exploration and other related activities. Consequently food crops largely have been defoliated; vegetation covers, flora and fauna are quickly disappearing. Many forest and its resources have been damage and depleted.

Moreso, the fertility of land is fast depreciating due to incessant oil spillage and industrial waste deposits. This has resulted in continuous yearly decrease of agricultural produce in the region. Similarly, aquatic life has not fared much better. Some species of fish have migrated and others have become virtually extinct as a result of oil spillage and industrial effluents that are wantonly disposed in mangrove swamps and fresh waters across the Niger-Delta. (Oshwofasa, Anuta & Aiyedogbon, 2012). Furthermore, air pollution due to gas flaring is a common phenomenon in this region. Pollution impact heavily not only on human health but also on the ecosystem.

In summary, the terrestrial and marine environments have both been badly injured and one of the primary causes is the activities of the oil industry and other associated industries. The Delta is one of the 5 most severely petroleum damaged ecosystems in the world. It may even be worse than other notoriously impacted regions such as Azerbaijan, Kazakhstan, Siberia and Ecuador. (Scoping Report: Ministry of Environment, Abuja Nigeria, 2006).

OIL EXPLORATION INDUCED ENVIRONMENTAL DEGRADATION

Oil discovered at the Niger-Delta region of Nigeria has contributed immensely to the economic growth and development of Nigeria. However, unsustainable oil exploration activities has rendered the Niger Delta region one of the five most severely petroleum damaged ecosystems in the world. (FME, et. al. 2006). Forest and farm land has been degraded due to consistent oil spillage and toxic waste discharge. Thus the agricultural soil has been rendered infertile thereby denying the local people their means of livelihood and sustenance While gas flaring and stack emissions pollute the air, thousands of tons of industrial waste deposit and oil spills have brought about the acidification of the water bodies. This does not only pose health problems but also has resulted in the extinction of some aquatic biological diversity. Fishing – a mainstay of the Delta rural economy - has been reduced in both fresh water and marine eco-systems. (Scoping Report: Ministry of Environment, Abuja Nigeria, 2006). Moreso, natural habitat and vegetation cover has been badly affected as a result of laying of several thousands of miles of oil and gas pipeline across the delta habitat. Due to this significant degradation of the environment, erosion and flooding have become a regular phenomenon among the Niger-Delta states. In fact, the Niger-Delta is one of the most oil-impacted ecosystems in the world.

SOCIO-ECONOMIC IMPLICATIONS

The socio-economic fortune of Nigeria is linked with oil exploration which accounts for about 90% of export earning and 80% of government revenue as well as generating over 40% of the GDP. It is true that the oil exploration has generated massive economic and social transformation in Nigeria, however, unsustainable exploration activities of oil industries in the Niger-Delta has often resulted into diverse socio-economic problems. The Niger Delta region is a sensitive and fragile ecosystem. In spite of its vast resource endowment and immense potential for socio-economic growth and its contributions to the overall development of Nigeria, the oil-bearing areas within the Niger Delta remain under threat from rapidly deteriorating economic and environmental conditions as well as social tensions. (Aneej, 2004). The perception of local people living in the oil communities is that the government is acting negligently, while the valuable ecosystems on which they depend for their livelihood are devastated by oil extraction. As a result, the situation degenerates into violence and this draws a disproportionate reaction from the government, deepening the people's resentment and sense of alienation. Figure 1.1 below illustrates the diverse

socio-economic problems of the Niger-Delta region generated as a result of unsustainable oil exploration.

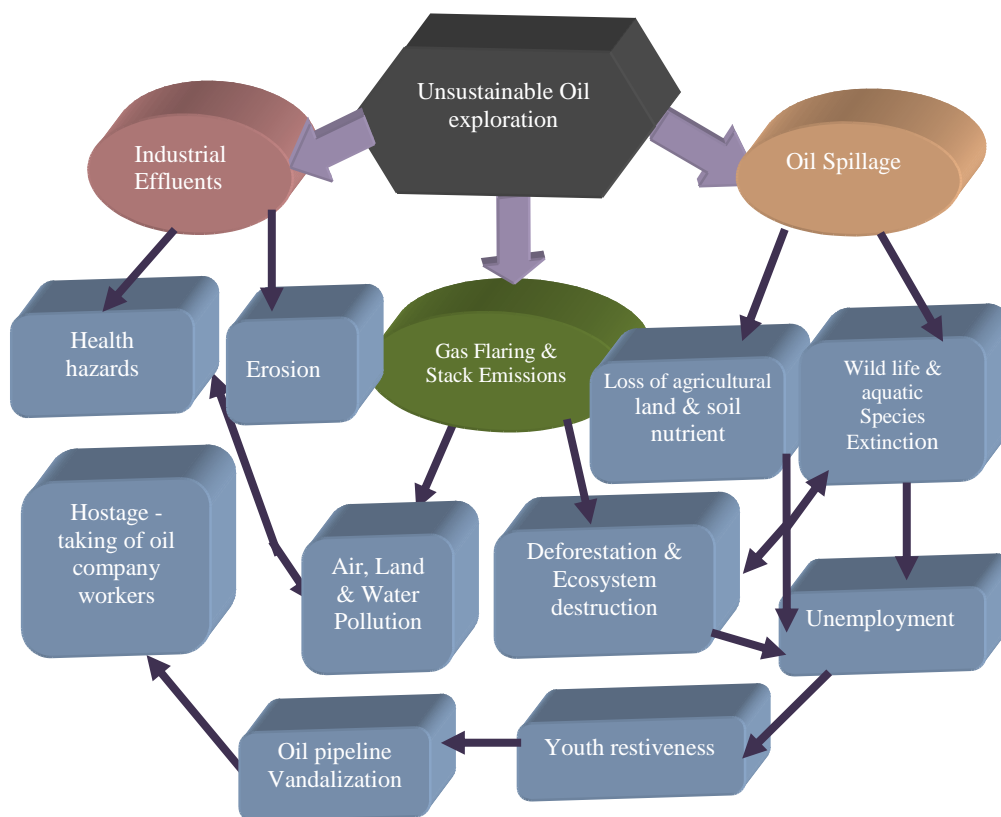
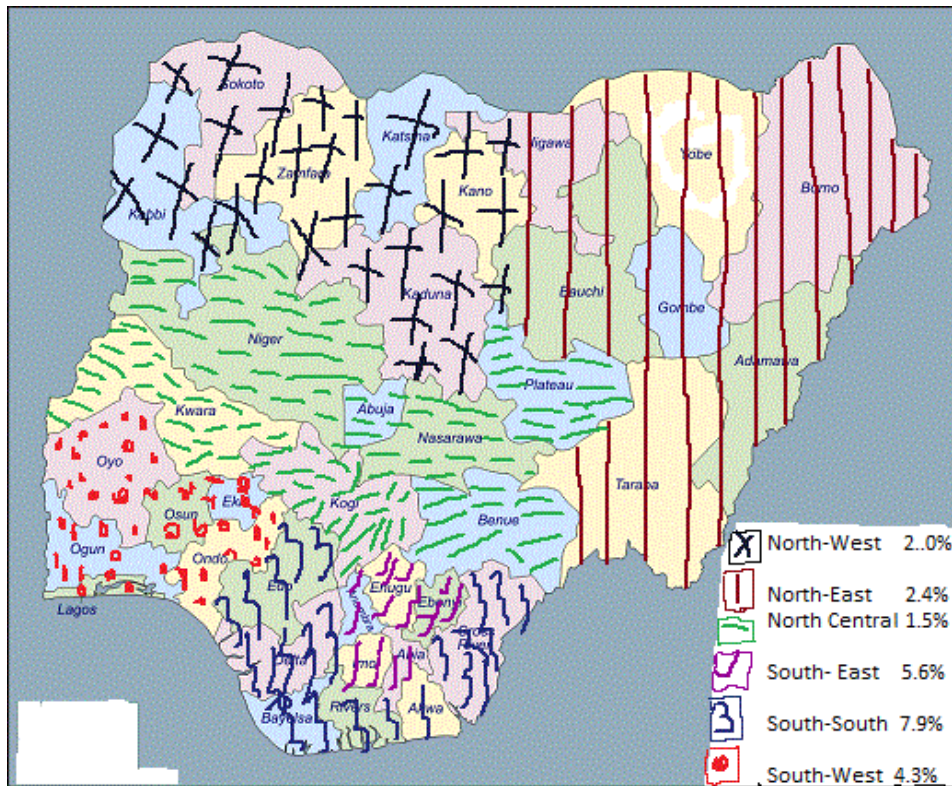


Figure 1 - Socio-economic implications of unsustainable oil exploration

The figure above is an attempt to show how the three cardinal effects of unsustainable oil exploration in the Niger-Delta – Gas flaring, oil spillage and industrial effluents – affected the socio-economic system of the region. The arrows indicate the trend and movement. It is worthy of note that the main occupation of the people of this region were subsistence farming, cash crop production, fishing and hunting games. Good percentages of the population of this region are gainfully employed by these occupations and thus make a livelihood from them. However the trend changed when these sources of livelihood are destroyed and people lost their occupation hence increase the rate of unemployment in this region.

Unemployment has over the years remained a major indicator of socio-economic issues in the Niger-Delta region. Although oil production has tremendously improved the economy of Nigeria, yet it is paradoxical to state that the region that accounts for 80% of Nigerian income earning through oil production has the highest rate of unemployment. Below is a map of Nigeria indicating the regions and their percentage unemployment. See figure 1.2

Figure 1.2 shows that the south-south zone which harbors the majority of the oil companies in Nigeria has the highest unemployment rate of about 7.9% followed by other Niger Delta states - south-East and South-West with 5.6% and 4.3% respectively.



Source of data: Journal of Sustainable Development in Africa, Vol 11, No 4, 2011

Figure 2 – Percentage of unemployment among the 6 geographical zones of Nigeria

The reason for this is obvious – oil exploration activities in the region. Before the discovery of oil, agriculture was the main stay of the region's economy. Economic trees such like Palm tree, cocoa and other cash crops were grown in commercial quantity in the region. Again, a good percentage of the local population earns their living from farming, fishing and hunting games. But with the commencement of oil exploration, came oil spillage, industrial waste deposit, pollution (air, water, land) and gas flaring. The resultant effect of these practices in an unsustainable manner, was the depletion of forest and its resources; land degradation and the damage of soil nutrients; water pollution and the extinction of aquatic diversity; and the destruction of cash crops and extinction of wild life. People whose source of livelihood depended on these occupations and who were gainfully employed by them lost out and were rendered jobless hence the high rate of unemployment in the region. Thus many people from this region were denied of their means of livelihood and sustenance. The outburst or rather expression of this ill fate, invariably became youth restiveness, oil pipeline vandalization, hostage taking of oil company workers and other forms of social ills.

Data collected from structured questionnaire administered proved this fact. Before the structured questionnaire was administered, open ended/unstructured questions as to the cause of high rate of unemployment in the region, were administered and the response of the people became the

basis of the four cardinal reasons of the structured questionnaire. See table 1.1 below.

Table 1 – Results of sociological questionnaire “Why is unemployment rate in this region (Niger-Delta) higher than other regions?”

Respondents	Soil Degradation and Extinction of biological diversity	National Economic Policy and Inflation	Climate Change and Global Economy Depreciation	Pollution and Oil Exploration Activities	Total
Male	25	5	2	23	55
Female	20	2	1	22	45
Total	45	7	3	45	100

The data shows that 25% of the male respondents attribute high unemployment rate in the region to soil degradation and extinction of biological diversity while 23% believes it is the result of pollution and oil exploration activities. Also 20% and 22% of the female respondents respectively affirm this. However, 5% of the male respondents believe it is economic policy and inflation and 2% points to climate change and global economy depreciation as the cause of high rate of unemployment in the region. 2% and 1% of the female respondents agree with them respectively.

CONCLUSION

From the foregoing, it is evident that oil exploration and production which ofcourse has boost the Nigerian economy, has produce a far reaching impact in the Niger-Delta region with serious socio-economic implications. The fact remains that oil production cannot be discontinued because it is the main stay of the national economy. However a carefully planned and sustainable exploration activity will not only protect the environment but allow the continuation of agricultural activities (terrestrial and Aquatic) which prove to be the hub of economy and livelihood of the people of Niger-Delta. To achieve this, Environmental Impact Assessment policy should be evoke and taken serious.

Environmental Impact Assessment (EIA) is a key aspect of many large scale planning applications. It is a technique which is meant to help understand the potential environmental impacts of major development proposals. (‘Friends of the earth, 2005). It is an assessment of the possible positive or negative impact that a proposed project may have on the environment, together consisting of the environmental, social and economic aspects. When these three aspects are dully put into consideration before any oil-well is explored, the incidence of oil exploration induced environmental degradation would be minimized if not eliminated. This cannot be achieved alone. It will take the cooperate efforts of the oil companies, the government and all stake holders. By this, the Niger-Delta region would enjoy their God given natural resources with the assurance of a healthy environment.

ЕКОЛОГІЧНА ДЕГРАДАЦІЯ: ДОСЛІДЖЕННЯ ФАКТОРІВ ВПЛИВУ НАФТИ В РЕГІОНІ ДЕЛЬТИ РІЧКИ НІГЕР

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Ця стаття є спробою обговорити наслідки розвідки нафти в регіоні дельти р. Нігер, Нігерії. У дослідженні висвітлюються проблеми і обговорюються далекосяжні соціально-економічні наслідки, які з'являються в цьому процесі. На закінчення наводяться пропозиції що до виправлення ситуації, оздоровлення навколишнього середовища.

Ключові слова: фактори навколишнього середовища, економічний розвиток, розвідка нафти, дельта річки Нігер.

ЭКОЛОГИЧЕСКАЯ ДЕГРАДАЦИЯ: ИССЛЕДОВАНИЕ ФАКТОРОВ ВЛИЯНИЯ ДОБЫЧИ НЕФТИ В РАЙОНЕ ДЕЛЬТЫ РЕКИ НИГЕР

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Эта статья является попыткой обсудить последствия разведки нефти в дельте реки Нигер, Нигерия. Обсуждаются далеко идущие социально-экономические последствия, которые появляются в процессе добычи нефти. В заключение приводятся предложения по исправлению сложившейся ситуации, имеющие своей целью оздоровление окружающей среды.

Ключевые слова: факторы окружающей среды, экономическое развитие, разведка нефти, дельта реки Нигер.

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