

# Oil Exploration and the Challenges of Food Security: A Reflection on the Indigenous Minorities of the Niger Delta

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## ABSTRACT

The paper examines oil exploration and the challenges of food security in the Niger Delta. Oil exploratory activities inevitably upturn the balance of the earth crust and degrade the larger environment through the dumping of harmful wastes, gas flaring and intermittent oil spillage. The paper maintains that the indigenous minorities have been particularly badly hit since most of their economic activities tied to the environment are either disrupted or destroyed. The hitherto fertile farmlands have regressively lost fertility. The rivers are without fishes and the forests without animals. This no doubt, has adverse implication for food security. Environmental degradation and its attendant problem of food insecurity are exacerbated by lopsided and impotent environmental policies that are formulated by the Nigerian state. Based on the above, the paper recommends among others, that the Nigerian state should as a matter of necessity, develop environmental regulatory framework that can guarantee steady oil production with minimal adverse environmental impact on the prevailing food chain of the indigenous minorities in the Niger Delta.

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## 1. Introduction

Societies all over the world are closely and intricately linked to the natural environment. Human beings irrespective of time and space, interact with the environment in the inevitable quest to satisfy basic existential needs. In the process of this human – environment interaction, the environment is being tampered with and this has dire consequences for human beings and the entire society. The frequency and the magnitude of the negative impact on the environment is determined by the level of technology adopted and the nature of resources being tapped. The more sophisticated the level of technology, the higher the magnitude of the degradation and vice versa.

The exploration of natural resources before the coming of the multinational oil companies reveals a balance between human population of the Niger Delta and its environment. Then, the exploration was basically for subsistence agriculture, hunting, fishing, construction materials, wood fuel, herbs and roots of trees for traditional medical purposes and other exploratory activities with less frequency and magnitude. The environment was within the sustainable limit. The available resources was not only more than the need of population, the mode of exploration posed no threat to the environment.

With the coming of the multinational oil companies, the environment was altered in disfavour of the indigenous minorities that inhabit the Niger Delta. Exploration activities of the oil companies altered the frequency and magnitude of the impact. Oil and gas exploration infringed on the environment opening up the previously primordial ecosystem to various forms and magnitude of environmental degradation. The rate of degradation has exposed the region to ecological disaster and food insecurity. The paper explores the relationship between oil exploration and food insecurity as well as the role of the Nigerian state on the plight of the indigenous minorities of the Niger Delta.

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## 2. The Environment and the Indigenous Minorities

The environment is a combination of the elements whose complex interrelationships make up the settings, the surroundings and the condition of life of the individual and of the society. An environment has four basic components namely atmosphere, hydrosphere, lithosphere and the biosphere. There exists a complex system of interaction within the components of the environment otherwise known as ecosystem that human beings depended on for their existential needs. (Chanlett 1973, Canter 1977, Adriano, 1986, Kormondy 1991, Olokesusi 1992). The meaning and usefulness of the environment is succinctly captured by Asthana & Asthana thus:

*The environment encompasses the air we breathe the soil on which we stand and the living and non living organism... it is from the environment that we get food to eat, water to drink and all the necessities of day to day life (Asthana & Asthana 2003:3).*

The assertion summed up the importance and inevitability of the environment to human beings especially in the provision of sustainable food security. It shows that the life of human beings is mostly dependent on land, a vital component of the environment. It is the dependence of man on the environment that makes it an area of interest to the environmental sociology. Human beings invent technology with which he is able to shape, modify and refine the environment into a highly versatile sustaining food secured society. The application of technology by man is intensified as society move steadily towards industrialisation.

The environment occupies a prime place in the life of the indigenous minorities of the Niger Delta. It is perceived as an inseparable pillar of existence. As part of their belief, they see the land as being inhabited by a pantheon of spirits and gods that are continually appeased and venerated in recurrent festivals to appreciate the supportive role of the land in food security and sustenance of life. The indigenous minorities rely on farming as their dominant occupational activities organise yam festivals to celebrate environmentally induced achievements. In fishing settlements, the people celebrate fishing festival directed at Olokun - the goddess of the river for the benevolence in replenishing human beings with unceasing supply of fish (Jike & Ogege 2005). This explains why the economic activities of the indigenous minorities provide them with surplus foods that adequately meet their dietary and nutritious requirements.

## 3. The Traditional Economic Activities of the Niger Delta People

The Niger Delta is heterogeneous, multicultural and ethnically diverse region that cut across nine contiguous states namely: Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers (Egbuche, 1998, Alagoa 1972, Durotoye). The Niger Delta is lying low devoid of remarkable hills and has a deep coastal belt that is interlaced with rivulets, streams and rivers. The geo-environmental features of network of river flowing over an expansive flat terrain made the region vulnerable to flooding. The difficult physical characteristics of the region shaped their settlement pattern and economic activities.

Basically, the economic activities of the Niger people subsisted on agriculture with farming and fishing engaging about a greater proportion of its labour force. However, the ecozone that people find themselves determines their occupational activities. Those that settle in a particular zone exploit the resources that are evidently abundant in their environment. Farming is the predominant occupation of the people who settle in the upland areas. The crops they grow are cassava, yam, groundnut, pepper, cocoyam, vegetable, potato, plantain, and melon.

Fishing is next in the hierarchy of predominant economic activities of the people. It is prevalent among those that settle in the coastal areas. They rely mostly on the traditional method of using nets and hooks. Some of the inhabitants of the swampy rainforest take to hunting as their occupation. They hunt and set traps for animals such as rabbits, grass cutters, porcupines, antelopes, reptiles, bush pigs hyena, buffalo and any other animals that inhabit that ecological zone.

It is worthy to note that the people are not restricted to a single occupation. Those that choose farming as their major occupation, compliment it with either fishing or hunting. Farmers engage in fishing mostly during the peak of the rainy season when the land for farming is either flooded or inaccessible. What can be

deduced from this is that everybody who is within the traditional working age bracket and is willing to work must engage himself or herself in one economic activity or the other. Also of a significant note is that there was a steady progress towards self sufficiency and food security. This prevailing order was altered with the advent of multinational oil companies.

#### **4. Multinational Oil Companies' Activities and the Environment**

The activities of the multinational oil companies comprised two broad stages namely exploration and production. The exploration commences with a seismic operation in which the land is delineated to pave way for prospecting. This is accompanied with the laying of cables to link up the various points at which explosives, usually dynamites are detonated. The detonation enables the sensors to determine the oil bearing synclines. Water based chemicals such as EP 20 soda ash and pipe lax are applied on the synclines (Omoweh 1998).

The exploration stage has severe negative impact on the environment and the economic activities of the inhabitants of host communities. The detonation of the explosives produces sound that causes earth tremor that leads to flight of animals. Apart from the above negative impact on land, the use of dangerous chemicals such as gamalin 20 affects all aquatic creatures. Animals of totemic value are indiscriminately killed with impunity by oil worker as delicacies. Tampering with lives of such sacred animals could spell calamity for the communities and their indigenous inhabitants. This calamity finds expressions in outbreak of animal and plant diseases, unusually prolonged drought and general poor harvest.

The second stage after a successful exploration is production. The production of crude oil involves drilling, gas flaring and transportation. Drilling of crude comes immediately after the completion of a successful exploration. Drilling incorporates the cutting of well formation. Apart from the use of harmful chemicals in the drilling process, drilling also generates toxic wastes. From the dump sites, the pollution can spread to about forty metres away. The spread can be facilitated by rainfall which enables the pollution to spread to other areas. When such pollutants mix with water, all living organisms including fishes and aquatic animals and organisms die from intoxication (Jike 2002, Omoweh 2005). This scenario portends serious challenge to food security in the host communities.

Also in the production process, associate gas has to be extracted. The extraction process is achieved through flaring. This accounts for why the sight of huge tongue of fire with deafening howl of thick frames bellowing into the sky is prevalent in the Niger Delta for over five decades now. According to World Bank (2002), Nigeria has the highest percent of gas flaring. Nigeria flares 76 percent of its gas as against 4.0 for Mexico, 4.3 for Britain and 0.6 for some countries in the U.S. Gas flaring produces heat that can potentially dry up ponds or even lakes. It can also lead to deforestation and desertification in areas that are close to flaring sites (Isichei & Sanford 1976, Alakpodia 1980, Ukaegbu 1987). Gas flaring has gradually desiccated the soil turning the once rain and mangrove forests into derived savannah.

Oil and gas are not refined or consumed in the production site, rather the product is transported from the point of production to the point of refining and consumption. This is achieved through the network of pipelines laid across oil and non-oil producing communities in Niger Delta and beyond. In the passage of time, some of these pipelines get burst due to corrosive effect, equipment failure, accident, engineering error or direct human effort of pipeline vandals. This leads to oil spillage either on land or water. Whether land or water, oil spillage has devastating impacts on the sustainability of the environment in terms of flora community and aquatic organisms including fishes and animals (Jike 2004, Ogege 2010, Wilcox 2013).

#### **5. Environmental Degradation and the Challenges of Food Security**

According to the World Food Summit held in Rome in 1996, food security is a situation or condition in which all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary requirements and food preferences for an active and healthy life (FAO 2001, Agulanna & Snowman 2009). Food security comprises three components namely food availability, food accessibility and food utilization (UNEP 2002, World Bank 2003).

Food availability refers to the provision of sufficient quantity and appropriate quality of safe and nutritious food. Food availability does not necessarily guarantee that those that need it will get it. Food accessibility is the ability to acquire foods also known as food entitlements. Whereas food production influences food entitlements, food accessibility is dependent on the purchasing power of income and the right to land for subsistence farming and foraging. Food utilization is simply the way in which people use food which revolves around acceptability and substitution among broad categories of staple food.

Central to the issue of food security is that it is tied to environment, agricultural and related economic activities. In other words, there exists an intricate linkage between food security, the environment and man's efforts. The indigenous minorities of the Niger Delta witnessed how oil production poisoned their waters and destroy their vegetation and agricultural land by intermittent oil spills and other pollutants that occur in the course of the oil production process.

The arable farmland that was hitherto fertile has retrogressively lost fertility. The land is so polluted that it can no longer support the growth of most of the crops like cassava, yam, plantain, potato and cocoyam. Arable farmland has been so degraded that the hitherto productive areas are now turned into wasteland. With the increasing degradation of the soil, and the dwindling agricultural productivity, farmers have become occupationally disoriented and displaced thereby creating acute scarcities of farm produce and food insecurity. Besides the loss of soil fertility, the food chain and the right to livelihood of the indigenous minorities are also threatened by the intricate crisis-cross of oil pipelines and rig facilities. Most people now resorted to farming in their compounds and building sites in the neighborhood. However, the produce from such endeavour is hardly sufficient for even the smallest households.

Apart from farmers, fishermen also suffer similar plight. The contamination of the water has serious implication for food security. Most indigenous minorities settle along river banks and the river provides water for domestic use and for fishing. Quite sadly, with the advent of oil exploration, the streams, lakes and rivers are now without fish. The incessant pollution has grossly depleted the fish population. Whenever there is oil spillage on any water body an oil slick is automatically formed on the surface of the water and this reduces the dissolution of oxygen causing fishes to suffocate to death. Most of the fish species that cannot survive the adverse condition have gone into extinction due to migration or death. This is why indigenous minorities who settle in the river bank now rely on frozen fish and chicken as their source of protein. Apart from food availability being affected, accessibility is equally a problem. Most people do not have money for the frozen food and the few that have the money can hardly get them to buy.

The forests are not spared in the degradation. The forest is the habitat of animals such as grass cutter, antelopes, monkeys, hyena, porcupines to mention jus a few other forest resources. The animals constitute the common games for hunters. But with the commencement of oil exploration, most of the animal species had fled the region as a result of the sound generated from detonated explosives during exploration. Apart from the animal species being depleted, other forest resources and income yielding trees are degraded resulting in deforestation. The indigenous minorities extracts a variety of forest products including edible fruits and nuts fuel wood, snails, palm wine etc for domestic consumption and for commercial purposes. This further aggravates the problem of food insecurity in the Niger Delta.

## **6. State Response to the Plight of the Indigenous Minorities**

The debilitating impact of oil exploration and production on the food security calls for public concern. Against this backdrop, the Nigerian state put in place environmental regulatory framework that could check the excesses of the oil companies in relation to their operations. Early attempts at addressing the problem of environmental degradation and food insecurity on the indigenous minorities in the Niger Delta were embedded in decrees and legislative enactments. In adherence to the resolution of the international convention for the prevention of oil pollution in the sea, the Nigerian state enacted the environmental management policy known as the Oil in Navigable Waters Decree No 34 of 1968. The decree prohibited the discharge of any petroleum products into inland and territorial waters in Nigeria (Boele 1995). The second effort was the Petroleum Decree No 51 No of 1969 which empowered the Petroleum Commission to ensure good field practice by preventing the escape of petroleum products into the water ways (Paterson 1986, Shyllon 1989, Omoregbe 2000). The Shagari administration enacted the Association Gas Re-injection Act

cap 20 of 1980. The act had the power to compel oil company operating in Nigeria to submit a preliminary programme for the re-injection of gas in the course of operation (Eboe 1985).

It is worthy to note that as laudable as the policies appeared, they were impotent and ineffective as far as the issue of environmental degradation was concerned. They were lopsided, only emphasising the prevention and remained silent about the outcome of actual pollution. In other words, none of the regulatory frameworks stipulate any hard punitive measure for non compliance. The Navigable Waters Decree can discharge an oil company from being culpable if the discharge of petroleum product was due to leakage or other damage in the vessel and if the company takes immediate steps to ameliorate the discharge.

Oil companies also shift the blame of oil spillage to sabotage, in line with the loophole provided by the Nigerian laws which exonerate oil companies, if spillage is traceable to sabotage (Olisa 1981, Osuno 1981, Okunola 1996). In the same vein, the Associated Gas Re-injection Act permits oil companies to flare gas recklessly upon the payment of royalty to be determined by the petroleum minister. What could be deduced from the policies is that they have inbuilt escape roots for the oil companies to the detriments of the indigenous minorities. In other words, the Nigerian state tactically encourages environmental degradation through insincere and ineffective regulatory framework.

The insincerity of the Nigerian state persisted till 1988, when it promulgated the Harmful Waste Decree No 42. The decree was necessitated by five shipload of toxic wastes dumped in Koko Port in Delta State by an Italian firms (Ikhariale 1989, Okaba 2004, Ighodalo 2005). Still in that same year, the Federal Environmental Protection Agency (FEPA) was established by Decree No 58 of 1988. The agency was charged with the responsibility of protecting and developing the environment including prescription of standards, making regulations on water quality, effluent emission implementation of Environmental Impact Assessment (EIA) as well as the disposal and control of substances that are hazardous to man. Still there was no harsh punitive measures for violation, thus, the adverse impact on environment and food security of the indigenous minorities has not been mitigated (Ogege 2010).

The Nigerian state took a step further to address the plight of the indigenous minorities through the establishment of Niger Delta Environmental Survey (NDES) in 1995. This agency was to provide viable data base aimed at understanding and tackling the environmental problems of the indigenous minorities in order to achieve a development that is environmentally and socially sustainable (Onosode 2000). In 2007, the National Environmental Standards and Regulations Enforcement Agency (NESREA) was established to ensure compliance with environmental standards (Derri & Abila 2009). This agency also fails to meet the environmental aspirations of the people. Quite unfortunately, none of the provisions address the issue of environmental degradation caused by the activities of the multinational oil companies in Nigeria. In fact it was a blatant disregard for and neglect of the plight of the indigenous minorities of the Niger Delta.

## **7. Conclusion and Recommendations**

Oil exploration and its production processes have no doubt, impacted adversely on the environment, thus, creating a problem of food insecurity for the indigenous minorities of the Niger Delta. The impact on the food chain is so devastating that it virtually threatens their only means of livelihood. The value added to the traditional economy of the indigenous minorities in the spheres of job placements and sustainable food security are no more. Farming and fishing activities which traditionally constituted the main source of food have been gradually undermined. The indigenous minorities now brace up to the hard choice of alternative options between survival and decimation. Although, their plight is most worrisome, the Nigerian state has not made any determined and committed effort to put in place environmental regulation framework that can restore their disrupted food chain and overall life support system. It is imperative at this juncture to recommend some mitigation measures. The Nigerian state should as a matter of necessity formulate viable environment regulatory policies that will ensure that multinational oil companies conform to globally accepted oil exploration and production standards. Non compliance to the terms of operation should attract commensurate punitive measures. There must also be a taskforce that will monitor the exploration and production excesses of the oil companies and any one that fall short of the standard should be made to face the full wrath of the law.

As a short term recommendative measure, there is the need for the oil companies and the Nigerian state to at regular intervals send relief material that could ameliorate the problem of food insecurity on the indigenous minorities of the Niger Delta. While that is on, it should be followed up with measures that can detoxicate the arable land and waters in order for it to be fit for farming, fishing and any other activities that are tied to the environment. In a situation where the farmlands and waters can not be detoxicated, the indigenous minorities should be provided with alternative sites for their economic activities.

Finally, the previous as well as subsisting environmental regulatory frameworks are quite impressive. However, the loopholes and escape avenues deliberately incorporated therein to give undue advantage to the multinational oil companies to the detriment of the host communities should be expunged. Any law on environmental protection should contain adequate provisions that will sufficiently address the problem of reckless environmental degradation and its impact on food security. The provision that criminalise environmental degradation associated with oil companies' activities should be enforced. It is our strong conviction that if these recommendations are implemented to the latter, the problem of food insecurity induced by environmental degradation will be adequately addressed.

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