

Nigerian Environmental Pollution Concerns and Remediation: A Study of the Coastal Areas of Nigeria

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Abstract:

This case study explores the environmental pollution concerns and remediation of oil spillage in Coastal Niger Delta of Nigeria. Relying on data from government and non-government sources, this study discovered that oil spill is the result of vandalization by the local inhabitants of oil pipelines, usage of old pipelines, blow out of oil from the flow stations, clean-up of oil tankers on the high seas and disposal of used oil into the drains by road side mechanics. The study discovered monumental damages to lives, properties and the environment of Niger Delta by oil pollution. Nigerian government has enacted laws and regulations to manage oil environments, and is signatory to some anti-pollution conventions but their impacts are non-existent in the area. The study concludes that the government of Nigeria needs to adopt a more realistic and sustainable approach towards curbing oil pollution in Niger Delta.

Keyword: *oil spillage, environment, carbon dioxide, metals, Niger Delta, oil pollution.*

1. Introduction

Ecological issues have become of grave worry to the world, regardless of whether the approach towards explaining them is gaudy. The world is in more serious risk of its own avarice today than it was amid the period of the frosty war or weapons contest. The occupants are undermined by the consistent pulverization of nature, the normal legacy of humanity, in an unexpected journey to overcome it. There is no piece of the world that is resistant

from the rampaging impacts of an assaulted and brutalized condition. The earth is reeling in natural issues of foolish affinity. This is obvious wherever – noticeable all around, land and ocean – and in all nations of the world. The air is loaded with carbon dioxide and different metals discharged from common and human sources. On the land, unbridled modern and human exercises to misuse regular assets and ill-advised attitude of both household and mechanical squanders are the real offenders of contamination.

Oil spill: It refers to that type of contamination that outcomes from the stream out of a fluid oil hydrocarbon into the environment, particularly into the seas, because of human activity. It incorporates the release of raw petroleum from tankers, boring apparatuses and wells, seaward stages, spills of gas, diesel and other refined oil-based goods and their results, heavier fills, the spill of any slick white substance reject or waste oil and furthermore there might be regular oil leaks. It is exceptionally hard to tidy up and, in some cases, take months or even a very long time to tidy up. Open consideration and control has tended to center most strongly around seagoing oil tankers as it has turned out to be one of the genuine natural issues Nigeria is at present confronting and fighting with particularly in the Niger Delta zone. At the less than desirable end of this natural issue there are numerous Oil people group who have bring forth a great deal of worries with the administration segment.

Objectives of the study: The main objective of the paper is to study the issues, concerns and consequences of oil spillage. The paper also examines the remediation of oil spillage.

2. Research Methodology

Case study method was used in this study to examine the various issues and concerns and also to know the consequences. The data was gathered from past and present data available from government and non-government reports. The information acquired was investigated utilizing spellbinding technique of descriptive method to acquire reasonable findings to give a true picture of the situation.

3. Issues, Concerns and Consequences

Natural issues in Nigeria came to spotlight in 1987 when approximately 1,079,000 metric tons of poisonous waste were dumped in the waterfront town of Koko, Delta state, by some Italian specialists. Beside causing a political line amongst Nigeria and Italy, the dumping of the unsafe material shocked the government of Nigeria into the foundation of an environmental administrative body known as Federal Environmental Protection Agency (FEPA) in 1988. The truth and impacts of ecological contamination was unfolded on Nigerians, particularly as its effect began mounting on laborers utilized to evacuate the waste. They experienced chemical burns, paralysis attacks, nausea and other forms of sicknesses. Public outrage resulted in the formation of NGOs on environment which included Nigerian Conservation Fund (NCF), Nigerian Environmental Study/Action Team (NEST) and Foundation for Environmental Development and Education in Nigeria (FEDEN).

Sabotage and theft through oil siphoning has resulted in increasing natural debasement in Niger River Delta states. Oil siphoning has actually turned into a major business, with the stolen oil rapidly advancing into the black market. In late December 2006, more than 200 people were slaughtered in the Lagos locale of Nigeria in an oil line blast. Nigerian controls of the oil business are frail. Pressure has been mounting on the government to reorganize the omnibus and corrupt Nigeria National

Petroleum Corporation (NNPC) for a more efficient operation.

Oil slick has devastated cultivatable lands and streams, and eventually, prompted a court case in which Shell Petroleum was approached to pay for tribulations. Pollution of the air in the Coastal area resulting from oil activities is noticeable in the cloud of soot that often envelop the area. The December 2006 pipeline blast is just one among various oil slicks that have happened since 1958 when oil investigation began in Nigeria. Oil slick has turned into a consistent marvel from that point forward, and onlookers and players in the oil business have lost tally of its events.

Official records from the National Oil Spill Detection and Response Agency, NOSDRA, covering the period, 2006 and 2015, demonstrate that there were more than 5,000 spillage locales from the more than 9,000 spills. A portion of the most noticeably bad oil slicks incorporate the 2008 Bodo oil slick which left the ranches and places of 69,000 individuals living inside the region of rivulet town secured with around 40,000 barrels of oil. Another real oil slick covering more than 115 miles happened in 2011 from the Bonga field of Shell Petroleum Development Company. The organization has constantly faulted pipeline vandalism, old pipelines or laborers' mistakes for the spills.

Oil slick in Nigeria does not just influence natural surroundings, it also causes loss of lives because of blasts from oil spillages and pipeline vandalism. In the vicinity of 1998 and 2016, around eleven pipeline blasts were recorded in Nigeria. The deadliest among them was the Jesse town, Delta state blast which happened on October 18, 1998. It exuded from a burst pipeline possessed by Nigerian National Petroleum Corporation (NNPC). The impact accounted for fire that slaughtered over a thousand people and pulverized towns, farmlands and people's sources of living. The year 2006 saw various pipeline impacts among which are the Atlas Creek blast of May 12 and the Abule Egba impact of December 26. These two blasts caused the loss of 150 and 500 lives separately and were said to have been caused by pipeline vandals. On May 16, 2008 a NNPC pipeline detonated at Ijegun, a suburb of Lagos when a bulldozer struck on the pipeline. The impact murdered around 100 people.

The series of oil spills that have occurred over the years in the Niger Delta region of Nigeria have left behind devastated environment and ruined lives. The contamination of the environment has affected the farmlands, plants, animals, sea habitats and human beings, and brought about the impoverishment of natives. The federal government of Nigeria launched a clean-up exercise of Ogoni land in 2016 with an initial cost of 1 billion US dollars. The exercise is said to be moving at slow pace. Before the launching of the clean-up campaign, Shell Petroleum Development Company had been sued in 2011 in a London court by the host community for the oil spills of 2008 and 2009. Another law suite was slapped on the company in 2016 for multiple oil spills by two communities in the delta region.

Oil spillage majorly affects the biological community into which it is discharged. Colossal tracts of the mangrove timberlands, which are particularly powerless to oil (for the most part since it is put away in the dirt and re-discharged yearly amid immersions), have been annihilated. An expected 5% to 10% of Nigerian mangrove biological communities have been wiped out either by settlement or oil devastation. The rainforest which already involved exactly 7,400 km² of land has vanished also. Spills in populated territories frequently spread out to cover a wide region, annihilating yields and aquacultures through tainting of the groundwater and soils.

The utilization of broken down oxygen by microbes bolstering on the spilled hydrocarbons additionally adds to the demise of fish. In horticultural groups, regularly a year's supply of sustenance can be demolished momentarily. In view of the thoughtless idea of oil activities in the Delta, nature is becoming progressively dreadful. Individuals in the influenced regions gripe about medical problems including breathing issues and skin injuries; numerous have lost fundamental human rights, for example, wellbeing, access to nourishment, clean water, and a capacity to work. Loss of mangrove timberlands: Vegetation in the Niger River Delta comprises of broad mangrove woods, harsh marsh woodlands, and rainforests. The huge breadths of mangrove woodlands are assessed to cover roughly 5,000 to 8,580 km² of land. Mangroves stay essential to the indigenous individuals of Nigeria and also to the different life forms that occupy these biological communities. Human effect from poor land administration upstream combined with the consistent contamination by oil has

made five 10% of these mangrove woods to vanish. The unpredictable, rapidly infiltrating, and thick properties of oil have wiped out extensive zones of vegetation. At the point when spills happen near and inside the waste bowl, the hydrologic power of both the stream and tides constrain spilled oil to climb into zones of vegetation.

The angling business is a fundamental piece of Nigeria's manageability in light of the fact that it gives truly necessary protein and supplements for individuals, yet with the higher request on angling, angle populaces are declining as they are being drained speedier than they can reestablish their number. Kadafa (2012) observed that “*Oil exploration and exploitation activities such as this have significantly contributed to the environmental degradation of the Niger Delta region in spite of government measures to stop gas flaring by 2008 and the existence of monitoring agencies, regulations and standards, the flaring activities in the area is still a problem. Gas flaring in the area is a major source of Cox, Nox, Sox and particulate matter and the cumulative environmental impact of these flaring activities result in contaminant build up on land, shallow ground water, greenhouse effect and general global warming and have also caused high concentration of acid rain within the region*”.¹

4. Control and Management of Oil Spillage

Oil Spillage Disaster Management: The Federal Government, oil organizations and non-legislative offices have influenced several efforts to oversee oil to spill catastrophe along our coastline. These endeavors are examined in the accompanying segments.

4.1 Nigerian Government Action: To decrease the rate of oil spill occurrences along the Nigerian Coast especially as an aftereffect of vandalization, the Federal Government through the co-operation of the National Assembly made the Niger Delta Development Commission (NDDC). Part of the obligations of the Commission is to build up an all-inclusive strategy for the advancement of the Niger Delta, develop a framework and create an empowering condition

¹ https://globaljournals.org/GJSFR_Volume12/2-Environmental-Impacts-of-Oil-Exploration.pdf

for business and industrialization. Additionally, there are a few different laws managing issues identified with oil contamination in the country. Moreover, guidelines for the advancement of the natural affectability record maps for the bank of Nigeria have been created by the Environmental Systems Research Institute (ESRI). These principles are to be utilized by all the oil organizations to get ready Environmental Sensitivity Index (ESI) maps for their regions of activities in Nigeria.

The Federal Government of Nigeria has enacted various laws and regulations to regulate oil exploration and protect the exploratory environment from oil hazards. Such laws include: Endangered Species Decree Cap 108 LFN 1990, Federal Environmental protection Agency Act Cap 131 LFN 1990, Harmful Waste Cap 165 LFN 1990, Petroleum (Drilling and Production) Regulations, 1969, Mineral Oil (Safety) Regulations, 1963. Of greatest significance to the management of oil business in Nigeria is the Oil Pollution Act (OPA) 1990.

Nigeria is also a signatory to some conventions for managing oil prospecting and exploration environments such as International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, Convention on the Prevention of Marine pollution Damage, 1972, African Convention on the Conservation of Nature and Natural Resources, 1968, and International Convention on the Establishment of an International Fund for the Compensation for Oil Pollution Damage, 1971.

A number of Federal and state organizations manage the issues of oil slick in Nigeria. The offices include: The Department of Petroleum Resources (DPR), the Government Ministry of Environment, the State Ministries of Environment and the National Maritime Authority. A National Oil Spill Detection and Response Agency (NOSDRA) has been shaped and affirmed by the Government Executive Council of Nigeria. The Ministry of Environment, which started the Agency, has moreover sent to the government official gathering for endorsement, the assessed draft National Oil Spill Alternate course of action (NOSCP) which the Agency would oversee (Alexandra Gas and Oil Connections, 2006).

The foundation of the alternate course of action and the organization was in consistence with the International Tradition on Oil Pollution Preparedness, Response and

Cooperation (OPRC90) to which Nigeria is a signatory. This protocol requires member countries to establish policies for dealing incidents of pollution from ships carrying oil. They can combat the pollution internally or with the co-operation of member countries. National Oil Spill Detection and Response Agency (NOSDRA) is saddled with this responsibility, apart from escalating endeavors towards consistence in checking and implementation of oil and gas controls and benchmarks, the service is additionally mounting weight on the oil and gas administrators for a gas flare-out. Exertion is additionally being made, as per the sources, to guarantee the utilization of natural benevolent boring liquid and mud frameworks.

5. Conclusion

This paper why examined the concerns and remediation of oil pollution in the Niger Delta region of Nigeria observed that the laws and regulations on oil exploration in Nigeria have not been able to remedy the environmental catastrophe in the oil region. This is evident from the number of oil spills, pipeline blasts, loss of lives from pipeline fire and the devastated environment available on records. Oil spills are caused by human blunders and inconsiderateness which manifest as vandalization or non-replacement of old pipelines in due time. Sometimes, however, it can be caused by catastrophic events, for example, tropical storms or quakes. The cause notwithstanding, it has caused irreparable damage to its environment and habitat. Laws and conventions on the management of oil drilling environments have not had much impact on the host communities as they are still reeling in abject squalor as a result of oil pollution. The government needs to adopt a more realistic and sustainable approach towards curbing oil pollution in the Niger Delta region. The Ogoniland cleanup programme by the Federal Government is one of the practical steps to reclaim the devastated environment but the program has been embroiled in controversies.

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