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## CAUSES AND EFFECTS OF ILLEGAL OIL BUNKERING AND REFINING ON ENVIRONMENTAL DEGRADATION IN THE NIGER DELTA REGION OF NIGERIA

### ABSTRACT

Crude oil illegal bunkering has become a lucrative business in Nigeria. It involves stealing of crude oil through pipeline vandalism, processing and finally selling the refined products in the ever available illegal markets. Blasts at the illegal processing or refining sides and spillages are common occurrences in Niger Delta region. This have led to significant environmental degradation and economic loses to region. Despite consistent government and multinational oil companies' efforts to bring an end to this illegal and lucrative business, the activities of oil bunkering seem to be on the increase. The paper examines the causes and effects of illegal crude oil bunkering and refining in Niger Delta region, which becomes a major source of environmental degradation over the years. The paper adopted a qualitative/content research approach using secondary sources such as government publications, journals, newspapers, and the internet. The findings from the study revealed that; militancy in the region is a major sources of oil bunkering in the Niger delta region; illegal refining and destruction of illegal refining sites are major sources of environmental degradation. The paper suggests the need to improve security of oil pipeline in the region and in the long run replace the old cold pipelines with modern ones.

**Keywords:** *Crude oil, Bunkering, Refining, Environment and Niger delta.*

### Introduction

Crude oil Illegal bunkering has become regular economic activity in the Niger Delta region. It's an activity mainly involved pipeline vandalism and diversion of the crude oil to illegal local refining sides or direct export of the stolen crude oil to the international market. It's mostly believed to be carried out by the Niger delta militants' groups, oil commodity traders, the security personnel, and illegal indigenous oil servicing companies (Tamori, et al. 2020). The persistent successes of oil bunkering illegal business in Nigeria have been credited to the involvement of both local and national business interest due to availability of markets and huge profits from this illegal oil business. Tamori et al (2020) pointed out that, crude oil illegal bunkering has caused significant oil spillages and explosions in the Niger Delta region over the years. The Nigeria's National Petroleum Company limited (NNPCL) and its subsidiaries have spent \$360 million to clean up some of the severely affect parts of the Niger Delta over the last two years (Bodo & Gimah, 2020). Shell Petroleum Development Company (SPDC) blamed over 70% of its oil spill to Niger Delta militants and sabotage on its facilities. However, SPDC have accepted responsibility for the Bodo oil spills in 2008 and 2009; and paid a total of \$83.4 million to the people of Bodo in Ogoni-land (Bodo, 2019).

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## Literature Review

### Illegal Crude Oil Bunkering and Refining

Any activity that involves extraction and exploitation and damages to oil installations outside legal framework, is considered illegal and is termed oil bunkering under the Nigerian constitution. Equally, illegal oil bunkering may also refer to activities involving oil theft, smuggling and diversion of petroleum products (Campbell, 2015). Oil bunkering in Nigeria usually start from attacking of oil pipelines or flow stations and attacking legitimate oil cargo (Asuni, 2009; Boris, 2015). Most illegal oil refineries in the Niger Delta region of Nigeria are found in the cricks, forests, or villages. Equally, criminals burst oil pipelines that transport oil to various locations, tap and move the crude oil to tanks or containers where they are refined (Adishi, 2017). As pointed out by Asuni, (2009), Katsouris and Sayne, (2013), there are four ways to engage in illegal oil theft and bunkering. First, Condensate and petroleum products and sold in the neighborhood market. Second, hacking into pipelines or tap the oil from a wellhead with a hose. Here more sophisticated and technical tools were used. The money realized is used to buy weapons used to sustain militancy. While of the remaining are loaded onto ocean going ships for export. Third, may include unauthorized lifting of extra crude oil than legally permitted using fraudulent bills of lading for onward delivery to the international market. Forth, the use of explosives to blast the crude oil pipeline to divert the flow of crude oil illegal storage facilities. This category is responsible for major spills and environmental devastation in the Niger Delta region. After refinement, the petroleum products such as petrol (PMS, diesel, and kerosene, is sold to dealers. (Ozogu1, Olabimtan. Chukwurah, Ukpong, and Daniel, 2023) (see local refining images below)



Figure1: illegal refining site in the Niger Delta region.

Daily trust (2024) pointed out that, despite efforts by successive government, to curb illegal oil bunkering, the cartel continued to take advantage of the terrain and compromised security agents, oil bunkering continued. It has been observed that, Nigeria loses between 300,000 to 400,000 barrels of oil theft daily which accounts for 15% of the 2.4 million barrels per day (bpd) production capacity. On the average 300,000bpd cost the government about \$1.7billion per month (Daily Trust, 2024). It has been observed that, illegal oil bunkering has a supply chain and supported by influential people in the society. Stolen crude was transported to illegal local refining locations, refined and sold in the parallel markets. It was also discovered that a bicycle can transport about 100 liters of crude oil daily and can generate up to N500, 000 from the sales. Some argued that, despite efforts to protect the environment in the Niger delta no meaningful effort was put in place by the people from

the region because they argued that, the system is corrupt and those not benefit them. It was also argued that, stopping the business would be difficult because of the swampy nature of the region, difficulty in curbing by the security personnel despite its environmental effects.

In addition, it has been identified that there exist different layers of bunkering which takes place in the oil rich producing region. While some are involved in stealing, refining and selling to the local markets others are exporting the stolen crude oil to the international markets. It has been argued that as long as corruption has not been contained, illegal oil bunkering may continue to flourish in Nigeria. Although it has been found that, despite the economic benefits associated with oil bunkering, some argued that they left the business due to the risk involved.

Furthermore, Punch (2024) reported that, the Nigerian army and other security agencies recovered a total of 252,000 liters of crude from various locations in Niger delta destroyed about 211 illegal refining sites, recovered 127 different equipment’s used which includes boards, machines, pipes etc and arrested 25 suspects in different locations (see table below). The refining and destruction sites constitute a major source of environmental degradation in the region. It has also been reported that, between August and September 2024, about 302 incidences of pipeline vandalism and crude oil theft were reported in various locations of the Niger delta region affecting Shell development company, Maton engineering, Oando and NNPC (Punch, 2024). See table 1 below.

**Table 1: Crude Oil Theft, and Refining**

Crude oil	Refined oil	Illegal Refining Sites	Equipment/Connections	Suspects	Location	Year
---	---	115	66 boards	22	Bayelsa/Rivers	2024
170,000litres	---	---	27 pipes	---	---	2024
---	90,000litres	---	4pump machines	---	Bayelsa	2024
7000litres	---	2	1board	---	Southern Ijaw	2024
40,000litres	---	79	59wooden boards	---	Rivers	2024
3,000litres	---	3	---	---	Ebocha	2024
2000litres	---	---	2drum pots/machines	---	Odagwa/Etche	2024
---	---	4	27 pipes	2suspects	Bayelsa/Rivers	2024
2000litres	---	7	---	---	Ogbogolo	2024
27,000litres	40sacks	1	---	1	Warri south	2024
-----	-----	254	63 connections	25	Rivers/Bayelsa	2024
234,000litres	168,000 gas and 10,800 pms	37	14 boats and 43 tanks vehicles, arms also recovered	42	---	2023
----	---	1,883	Arms also recovered	699	Niger Delta	2022

**Source:** Punch 2024; Premium times (2023); Gist9ja (2022)

Illegal refining and destructions continued to be a serious threat to the environment.

**Causes of Illegal Oil Bunkering in Nigeria and huge economic loses to Nigeria**

It has been pointed out that crude oil bunkering will continue due to underdeveloped nature of the region. Equally it has observed that the involvement of powerful people in the act also makes difficult to stop the illegal activities. Also the involvement of security agencies in the illegal activities makes it difficult to bring to an end to oil bunkering. Also the government lacks the willpower to stop such activities. It has been found that,

in 2024 alone, NNPC deactivated 7,973 illegal refineries; disconnected 5,690 illegal connections; 2640 vandalism cases reported. It has been revealed that, NNPC private security has recovered 2.3 million barrels of crude oil; 194.4 liters of AGO; 66.7 thousand liters of PMS and 1.2 million liters of PMS. equally, arrested 2274 suspects.



Figure 1. destruction of illegal refinery by security agencies.

### **Environmental Factors**

While illegal activities of oil bunkering are ongoing, the environment continued to suffer degradation this can be seen in figure 1 above. It has been argued that, the destruction of illegal refining sites by the security officials is seriously contributing to environmental degradation and pollution in the Niger Delta region of Nigeria. Although it is the alternative available for now but, it's hope that, a better way of dealing with the illegal refineries can be found.

Illegal crude oil refining is very common in the Niger delta region of Nigeria. it is a common practice by militant's groups and other oil thief's. For decades', communities close to refining areas in the region were affected especially farmers and fishermen who lost their sources of livelihood as a result of pollution (Global Citizen, 2024). It has been found out that, Niger delta is one of the environmentally impacted regions of the world mainly as a result of poor regulations and illegal refining.

Igbani, Ronald, and Weapngong, (2024) the researchers observed that, illegal refineries have significantly damaged the biodiversity of the Niger delta region killing fishes, and aquatic wildlife. They further pointed out that, illegal refineries pollute the ecosystem; air, water and land resulting to health problems, food shortages due to land damaged. They equally, pointed out that, the strategy of destruction of the illegal refining sites by the security agencies have worsen the environmental situation in the region.

Business day (2024) reported that, in 2024 alone NNPC deactivated 6,409 illegal refineries; disconnected 4,845 illegal connections out of 5,543 connections. However, it has been reported that, as the company disconnect one illegal connection another one comes up. It has been observed that this does not happen anywhere in the world except in Nigeria. the illegal pipes are not invisible rather they very much visible big pipes that require some level of expertise to be put in place. That has lowered the production of crude oil in the region and promotes environmental pollution (Business day, 2024).

Emodi, Okereke and Diemuodeke (2022) equally observe that, about 10% of the 200,000 barrels per day of crude production is lost to illegal activities worth an average of \$21 million per day. In 2019 it has been estimated that, Nigeria lost up to \$2.8 billion annually. The activities of illegal refineries contribute to air



pollution, green house effects and promotes global warming and climate change. Waste from illegal refining results in affecting wildlife habitats, water, growth of trees.

## **Methodology**

The paper adopted a qualitative/content research approach using secondary sources such as government publications, journals, newspapers, and the internet to analyze the effects of crude oil bunkering and refining on the environment.

## **Findings and Discussions**

The study found out from the empirical evidences that, there is a significant increase in crude oil bunkering and refining in the Niger Delta region of Nigeria. It may be attributed to worsening economic conditions in the country due to current deregulation policy of the government and the economic hardship that accompanied deregulation in the country. Although efforts were being made by government through the security agencies to curb activities of illegal oil bunkering and refining however, these activities are still on the increase in recent years. This is evident from the high figures of crude oil bunkering and refining (Punch, 2024; Daily trust, 20024; Premium Times, 2024). On the other hand, there are also high economic loses which run into billions of dollars to Nigeria (Emodi et al, 2022; Ibani et al, 2024 and Business day, 2024). It has also been found that, there are serious environmental degradation in the region as a result of illegal bunkering, refining and destruction of refining sites by the security agencies. A number of studies have found that, while illegal crude oil bunkering is ongoing, the impact can be noticed from environment which continued to suffer degradation. A significant number of the local communities close to refining areas were affected especially farmers and fishermen (Global Citizen, 2024). Niger delta has also been found to be one of the world most impacted region. With significant damaged the biodiversity of the Niger delta region killing fishes, and aquatic wildlife, ecosystem, air and water pollution which have resulted to health problems and food shortages (Igbani, et al. 2024).

## **Conclusion and Recommendations**

The paper concludes that the activities of crude oil bunkering and illegal refining are among major contributors to environmental degradation in many parts of the Niger delta region of Nigeria. in addition, the destruction of the illegal refineries is also a contributing factor to environmental degradation. Although significant were made to bring an end to the illegal activities unfortunately much needs to be done for the situation to improve.

The paper recommends the need to improve remediation of the affected areas in the region. Also there is need to promote environmental awareness to the local communities so that they can be involve in protecting the environment.

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