OIL SPILL IN NIGERIA: ECONOMIC AND ENVIRONMENTAL IMPACT IN THE NIGER DELTA REGION

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NOVEMBER 2025

CERTIFICATION

I, **Awele-Biose OMOWHARA**, with Matriculation Number **PG/LAW2415403**, hereby certify that apart from references made to other people's works as duly acknowledged herein, this entire project is a product of my personal research, and has neither in part nor in whole been presented for another degree elsewhere.

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APPROVAL

We certify that this project work was completed and written by **Awele-Biose OMOWHARA**, with Matriculation Number **PG/LAW2415403**, in partial fulfillment of the requirements for the award of the Master of Laws (LL.M) Degree of the University of Benin.

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This project work is dedicated to God Almighty for his guidance, unfailing love, protection and divine favours given me throughout my period of study in the University of Benin.

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AG	Associated Gas
EIA	Environmental Impact Assessment
FEPA	Federal Environmental Protection Agency
GDP	Gross Domestic Product
HYPREP	Hydrocarbon Pollution Remediation Project
JIV	Joint Investigation Visits
MEND	Emancipation of the Niger Delta
NEITI	Nigerian Extractive Industry Transparency Initiative
NESREA	National Environmental Standards and Regulations Enforcement Agency
NNPC	Nigerian National Petroleum Corporation
NOSDRA	Nigeria's National Oil Spill Detection and Response Agency
MOSOP	Movement for the Survival of the Ogoni People
OPEC	Organization of Petroleum Exporting Countries
PIA	Petroleum Industry Act
SMET	Methane Emission Tracker
SPDC	Shell Petroleum Development Company
UCH	University College Hospital
UNEP	United Nations Environmental Programme
UPTH	University of Port Harcourt Teaching Hospital

ABSTRACT

After the discovery of crude oil in the Niger Delta, its exploration and exploitation has generated substantial revenue and contributed significantly to the nation's economic development; however, arising from these activities are extensive environmental degradation, social dislocation and economic hardship and marginalization of host communities. Oil spill since the 1970s have posed severe and persistent challenges to sustainable development of the region and also general well-being of its indigenes. This research paper examines the legal, economic, social and environmental impacts/implications of recurrent oil spill incidence in the Niger Delta Region. It analyses the effectiveness of Nigeria's legal and institutional framework in addressing these challenges, while focusing on the Petroleum Industry Act (PIA), 2021, the National Oil Spill Detection and Response Agency (establishment) Act (NOSDRA), 2006 and other environmental protection laws. This research also acknowledges international legislation and principles, such as polluter pays, precautionary and sustainable development doctrines to evaluate Nigeria's compliance to global environmental standards. Through a combination of statutory provisions, policy document, scholarly literature and international obligations, this research identifies the gap and deficiencies in enforcement mechanism, regulatory oversight and corporate accountability in the Nigeria's oil and gas sector. This research further explores the nexus between environmental degradation and human rights, accessing the extent to which affected communities have access to justice and effective remedies under domestic and international law. The findings reveal that despite the existence of a robust legal framework, weak institutional implementation, political interference and inadequate community participation have undermined the realization of environment justice in Nigeria. I concluded this study with the recommendation that Nigerian legal system will need substantial reform to enhance transparency, strengthen enforcement, and promote participatory governance in environmental regulation. I recommended further that Nigeria needs to establish a special environmental court, increase community participation and involvement in decision-making with regards the environment and to domesticate relevant international conventions to ensure oil exploration and production are concluded in a manner consistent with principles of environmental sustainability and corporate responsibility.

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background to the Study

Nigeria is one of the leading oil producers in the world and she continues to dominate as Africa's largest producer of crude oil, boasting proven reserves of 37.50 billion barrels and a production capacity of approximately 2.19 million barrels per day (mbpd).[1] Oil was first found in Nigeria in 1956, then a British protectorate, by a joint operation between Royal Dutch Shell and British Petroleum. The two began production in 1958, and where soon joined by a host of other foreign companies in 1960s after the gained independence.[2] The discovery of crude oil in commercial quantity at Oloibiri in 1956 was a turning point in Nigeria's economy. Petroleum has thereafter become the bedrock of the nation's economy, and is also a source of the majority of export earnings and government revenue. This has made the Niger delta region which host the bulk of Nigeria's oil reserve to assume a strategic position in the nation.

The Niger Delta region of Nigeria is a densely populated region in the sub-Saharan Africa, sitting directly on the Gulf of Guinea on the Atlantic Ocean where the Niger River drives into several tributaries[3] that makes up 7.5% of the Nigeria's landmass. The region extends over about 70,000 square kilometers comprising eight states which include Delta, Bayelsa, Rivers, Edo, Cross Rivers, Akwa-Ibom, Abia, Imo and

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1 'Nigeria: Leading Crude Oil Producer in Africa' (2024) available at https://www.nuprc.gov.ng accessed 27/09/2025

2 Adam Vaughan, 'Oil in Nigeria: a History of Spills, Fines and Fights for Rights' (2011) available at https://www.theguardian.com accessed 25/11/2025

3 Oghenewogaga Joseph Akpoghelie, UfuomaAugustinaIgbuku and EjiroghеneOsharechiren, 'Oil Spill and the Effects on the Niger Delta Vegetations: A Review' (2021) *Nigerian Research Journal of Chemical Sciences* Vol 9, Issue 1

Ondo States.[4] The Region extends along the coast from Benin River on the West to the Imo River on the East. This area has a massive amount of crude oil deposit such that exploration, exploitation and production with industrial installations like pipeline materials, flow stations, gas clusters and gas flaring sites are in place.[5] First oil operations in the region originated in 1950s and were undertaken by Multinational Corporations, which provided Nigeria with necessary technological and financial resources to extract oil. Since 1975, the region has accounted for more than 75% of Nigeria's export earnings. Together oil and natural gas extracted in oil wells in the Delta is immediately burned, or flared, into the air at a rate of approximately 70 million m^3 per day. This is equivalent to 41% of African natural gas consumption, and forms the largest single source of greenhouse gas emissions on the planet.[6] The region is seen as Africa's most important oil producing region. It is the driving force behind the economic growth in Nigeria.[7]

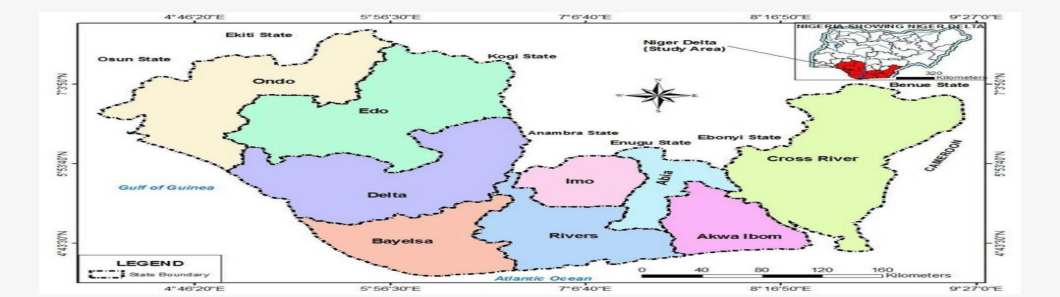

Fig 1:Map of Niger Delta[8]

The Niger Delta is an array of geographically contiguous states and convenient political nomenclature for resource allocation and distribution among the

4 'History the Niger Delta Region' available at https://www.nigerdeltabudget.org accessed 28/09/2025
5 Oghenewogaga Joseph Akpoghelie, UfuomaAugustinaIgbuku and EjirogheneOsharechiren (n3)
6 'History the Niger Delta Region' (n4)
7 Oghenewogaga Joseph Akpoghelie, UfuomaAugustinaIgbuku and EjirogheneOsharechiren (n3)
8 Map of Niger Delta: Content Uploaded by EndoroOweikeve

aforementioned states.[9]Jike[10] also described it as the engine room that drives economic growth and development in Nigeria as up to 80% of the Nigerian economic growth stems from this region. Irrespective of the immense relevance this region bears on the nation's economy, development is skewed to its disfavor owing to the public policies that are frequently in disfavor of the people. Moreover, oil spillage and environmental degradation characterize this region, obvious opposite to what is expected of an economic and development engine room.

Nigeria is Africa's largest oil producer and also among the top exporters of crude oil globally. Nigeria discovered oil (commercial viable quantity) for the first time in Oloibiri, Niger Delta region in present day Bayelsa State, by Shell-BP in 1956 after about 50 years of exploration leading to its first export in 1958.[11] This significant discovery marked a turning point for Nigeria, as Nigeria shifted from an agriculture-based country to one dependent on oil revenues. Petroleum resources has become the mainstay of Nigerian economy as it accounts for Nigeria's foreign exchange earnings and also is the major source of government revenue. The Niger Delta region which presently houses 606 oil fields, with 355 on the on-shore while the remaining 251 are off-shore. 193 of these oil fields are currently operational while 23 has been shut in or abandoned as a result of poor prospectivity or total drying up of oil wells.[12]

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9 Victor Teddy Jike, 'Environmental Degradation, Social Disequilibrium, and the Dilemma of Sustainable Development in the Niger Delta of Nigeria' *Journal of Black Studies* (2004) 686-701.

10 Ibid

11 'Our History: A Comprehensive Overview of the Ministry of Petroleum Resources, Nigeria' available at https://www.petroleumresources.gov.ng accessed 1/10/2025

12 'History of Oil and Gas in Nigeria' available at https://www.nairametrics.com accessed 01/10/2025

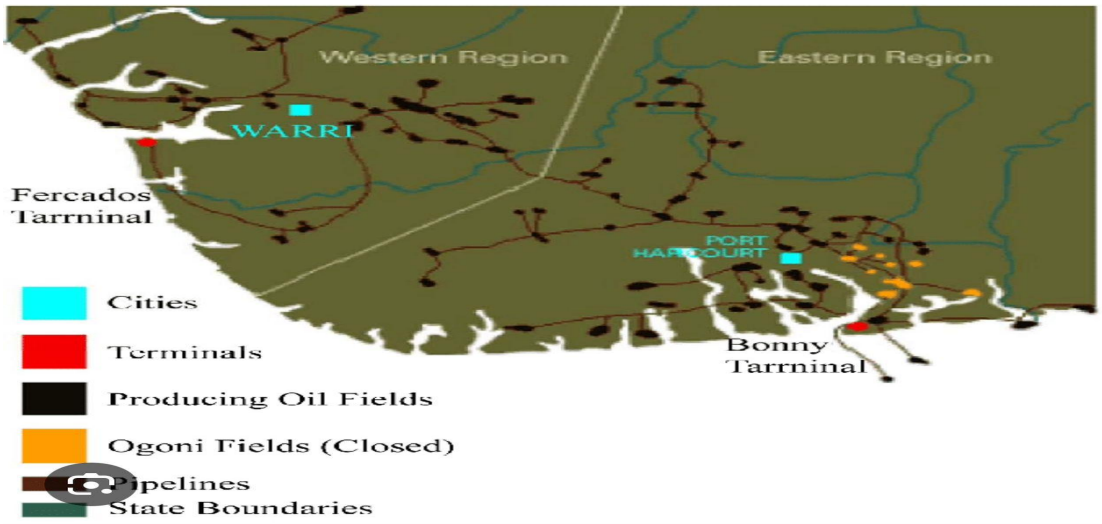

Fig 2: **Map of the Nigerian Niger Delta showing some oil field and pipelines**[13]

It can therefore be concluded that the Niger Delta Region which encompasses nine (9) states host the bulk and majority of Nigeria's oil reserves. This makes the Niger Delta a strategic economic zone and a critical ecological area. This region which sustains the Nigerian economy, industrial activities in the oil sector have been known to be associated with substantial environmental degradation and social crises, posing a potential threat to sustainable development in the Niger Delta, where the bulk of the country's petroleum resources/reserves are found. The region which host the nation's wealth has been seen to suffer environmental degradation and systemic neglect. Although most of the negative environmental consequences of oil industry activities are localized and more intense in the areas of primary activities, some of the effects have trans-boundary implications. For example, gas flaring and oil spillage which is a common feature of the Nigerian petroleum industry has been known to be a factor in the problem of global warming[14]. In the same vein, mangrove forest, swamp and river destruction as a result of oil spill activities can have long-term consequences for

[13] Figure 2 Map of the Nigerian Niger Delta showing some Oil Field and Pipelines

[14] World Bank, 'Defining an Environmental Development Strategy for the Niger Delta' Washington D.C. Industry and Energy Operations Division (1995).

economic, social, ecological and climatic balances, as millions of people's livelihood in that region are dependent on fishing and farming.

Since oil production, the Niger Delta region has been repeatedly affected by oil spills from pipeline failures, operational incidents, poor maintenance and illegal tapping (oil theft through sabotage and illegal bunkering), which creates long term contamination of the soil, surface water and ground water.[15] Thousands of spill incidents have occurred since the commencement of oil production arising from pipeline corrosion, equipment failure, operational negligence and sabotage.[16] These incidence has destroyed the regions' delicate ecosystem include mangrove forests, freshwater swamps, and arable lands, leading to loss of biodiversity, sharp decline in fishing and farming due to contamination of the water and soil.

Figure 3: Notice of ban from drinking and fishing in Bodo River in Niger Delta due to Oil Spill Pollution [17]

The United Nations Environmental Programme (UNEP) and Nigeria's National Oil Spill Detection and Response Agency (NOSDRA) has both reported and documented

[15] 'Environmental Assessment of Ogoniland' (2011) available at https://www.ejcj.orfaleacenter.ucsb.edu accessed 1/10/2025

[16] Ifeoma Christy Mba, and others, 'Causes and Terrain of Oil Spillage in Niger Delta Region of Nigeria: The Analysis of Variance Approach', *International Journal of Energy Economic and Policy* (2019) 9(2), 283-287; also available at https://www.pdfs.semanticscholar.org accessed 21/10/2025

[17] Figure 3 Notice of ban from drinking and fishing in Bodo River in Niger Delta due to oil spill pollution

hundreds of spill incidents that occur each year, releasing thousands of barrels of crude oil into the already fragile ecosystem contaminating the soil, surface water and groundwater in the Niger Delta region.[18] Although environmental policy and management strategies have come a long way in the Nigerian petroleum industry, the allegation of involvement of communities and other local interests in the destruction of oil facilities resulting in large-scale environmental hazards in the Niger Delta, particularly in the last five years or so, adds a new dimension to the resolution of the environmental question. While the local people may suffer from the constraint of incomplete scientific knowledge about the long-term welfare implications of environmental degradation, events particularly since the 1990s indicate that environmental awareness among the people in the oil-producing communities in the Niger Delta has been on the increase[19]. For example in 1991, the Ogoni Community, through a local pressure group known as Movement for the Survival of the Ogoni People (MOSOP) had sent a representation to the United Nations, demanding for the payment of US $20million from the Federal Government of Nigeria, as compensation for environmental degradation and for over 30 years of oil exploitation in the area. In the same year, they had also made a similar representation to the European Community on the same issue, particularly on the role of Shell Petroleum Development Company (SPDC – an European multinational oil corporation, operating in the Niger Delta region). In 1992, MOSOP had shown a film on the extent of environmental degradation of the Niger Delta as a result of oil industry activities to the Tenth Session of the United Nations Working Group on Indigenous Populations in Geneva.

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18 'Environmental Assessment of Ogoniland' (n15)

19 Christopher Orubu and others, 'Environmental Regulations in the Nigerian Petroleum Industry: Status of Compliance by Operators and Implications for Sustainable Development' *The Nigerian Economic and Financial Review*(2002).

The consequences of these spills are far reaching as oil pollution has destroyed farmlands, aquatic habitat and mangroves. It has crippled the livelihood of indigenes whose main source of livelihood is farming and fishing. Oil spill has also been linked to public health problems, forced migration and conflict between affected communities.[20] The unequal distribution of oil wealth turned the Niger Delta region into a virtual battle field in large-scale crises between 1995 and 2000 which saw the youths of the area pitched against the oil companies and government, shutting down oil installations, destroying oil facilities, and kidnapping employees (sometimes, expatriates) of oil companies. In 1998, youths from the oil-producing states of the Niger Delta area had threatened to declare an independent Republic, for the inability of the Federal Government to resolve the environmental question and adequately compensate the people for depriving them of their rights to land and other sources of livelihood due to oil exploration and production activities[21].

The developments highlighted above, no doubt represent dangerous currents in the political economy and history of petroleum resources in Nigeria, which since the early 1990s have drawn significant attention of the international community. These developments highly underscore the need for sustainable partnerships between the host-communities and oil companies in order to address the economic, social environmental, and other related problems. This is necessary in order to establish peace in the Niger Delta, which for now is the treasure base of the Nigerian economy. This study is therefore concerned specifically with the identification of oil spill as an environmental problem, arising from oil industry activities in the Niger Delta, with social and economic implications. It also has a view to highlighting those areas in which co-operation between oil companies and their host-communities could be

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20 Oghenewogaga Joseph Akpoghelie, UfuomaAugustinaIgbuku and EjiroghеneOsharechiren (n3)
21 Christopher Orubu and others, (n19)

essential to the significant reduction of negative environmental incidents and restoration of peace in the region.

1.2 Aim and Objective of the Research

The aim of this study is to evaluate the legal, economic, social and environmental impacts of oil spills incidents in Nigeria's Niger Delta region, with a view to evaluate the effectiveness of existing legal and institutional framework in preventing, managing, redressing oil pollution and to propose cleanup mechanisms that will be most effective and feasible in the Nigerian context.

The following are the objectives of this study:

i. Analyse the legal and regulatory frameworks governing oil spill prevention and environmental protection.
ii. Evaluate the enforcement mechanism of agencies such as National Oil Spill Detection and Response Agency (NOSDRA) and the Ministry of Environment.
iii. Assess the socio-economic and human right implications of oil spills on host communities in the Niger Delta;
iv. Identify gaps and challenges in existing laws and propose practical policy, legal and technical interventions to achieve effective remediation, restitution and future prevention.

1.3Statement of Research Problem

Notwithstanding the existence of several legal and institutional frameworks, oil spill incidents continue to occur in the Niger Delta without adequate remediation, compensation or accountability. Decades of oil production in the Niger Delta have produced frequent pipeline and well site spills, chronic contamination of soils and water, destruction of mangroves and fisheries, and adverse health outcomes for host

communities. Official and independent assessments show that contamination is both spatially extensive and long lasting in hotspots such as *Ogoniland*[22]. Remediation efforts to date have been partial, uneven, and in several cases poorly managed; this has left communities without livelihoods and created mistrust, governance gaps, and ongoing litigation and protest. The economic cost of coastal degradation (including oil pollution) is large relative to Nigeria's GDP in affected states and the national policy and enforcement architecture as struggled to translate remediation funding into sustained, verifiable restoration. Communities affected by these spills are marginalized and lacking effective access to justice, little or no participation in decision-making that impacts their environment. Also judicial processes in environmental litigation are costly and prolonged leaving the impoverish communities to fate. Corporate entities like Shell, Chevron and Texaco often exploit procedural loopholes to evade liabilities, while regulatory agencies struggles with the challenge of political interference and lack of adequate funding. Consequently, environmental degradation remains unremedied, increasing the circle of poverty, conflict and ecological decline.

The central problem is therefore the quest for the Nigerian state to continue to generate revenue from its oil rich Niger Delta region, without any formal commitment to environmental protection and the lived realities of environmental degradation. It is this gap that this research work seek to cover up.

1.4 Research Methodology

This research employs doctrinal research methods. The study relies on two primary sources of information: primary and secondary materials. Primary sources comprise

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[22] UN Environmental Programme, 'Environmental assessment of Ogoniland report' available at https://www.unep.org accessed 9/9/2025.

authoritative texts, legislation, and judicial decisions. Secondary sources include scholarly articles, textbooks, online resources, and other relevant publications that support the research objectives.

1.5 Research Questions

i. What are the key laws and policies governing oil spill management and environmental protection in Nigeria?

ii. How effective are the enforcement mechanism and institutional responses to oil spill incidence in the Niger Delta?

iii. What are the economic, social and environmental impacts of oil pollution on affected communities?

iv. What is the current frequency and geographic distribution of oil spills in Nigeria?

v. To what extent are multinational oil companies held accountable for environmental damage and remediation under Nigerian and international law?

1.6 Study Findings

Inadequacy of the Legal and Regulatory Framework With Weak Enforcement and Institutional Capacity: in this study it was found that although Nigeria has several laws and regulations on petroleum regulation and environmental protection amongst which are the Petroleum Industry Act, (PIA) 2021, the National Oil Spill Detection and Response Agency Act, (NOSDRA) 2006 and the Environmental Impact Assessment Act, (EIA) 1992, it has a challenge of poor harmonization, fragmentation and overlapping roles. These laws do not have any provision on oil spill prevention, response and remediation. They tend to prioritize revenue generation and industry governance over creating a robust sanctioning power. The challenge of weak

enforcement largely driven by underfunding, political interference, weak coordination and corruption cannot be overlooked. Also, the penalties prescribed in the subsisting laws does not match the scale of the damages done to the environment, this in turn hinders deterrence and encourages the continuation of the damages done.

Limited Corporate Responsibilities and Deficiencies in Access to Justice: another key finding in this study is the lack of political will to hold multinational oil corporations accountable for contribution to environmental degradation in the Niger Delta Region. Companies such as Shell, Chevron and other multinationals which operate in Nigeria operate under the Nigerian law and often benefit from the weak regulatory oversight and legal loopholes that has beclouded the Nigerian legal and institutional framework. The multinational oil corporations more often than not blame oil spill on sabotage or third party interference. Lack of special courts on environmental matters, poverty, expensive litigation cost and long judicial process always discourages the victims from pursuing compensations from the devastating effects of oil pollution. Also, the challenge of locus standi and enforcement of judgment when obtained continues to plague these victims. These limitations have created a cycle of continuous impunity and environmental injustice.

Socio-Economic and Human Right Implication and Weak Implementation of International Environmental Standards: during the course of the research study, it was found that oil pollution in the Niger Delta Region has socio-economic and human right consequences. Official monitoring shows hundreds of oil spill incidents recorded annually across the Niger Delta Region, NOSDRA's public oil-spill database provides incident-level records and mapping. Spill sources include pipeline corrosion, sabotage/interdiction, operational failures and well blowouts. The pattern shows recurrent hotspots where remediation remains incomplete. UNEP's Ogoniland

assessment documented extensive contamination: thousands of contaminated sites, groundwater pollution in many locations, and the need for systematic remediation and restoration. This pollution has led to loss of livelihoods, increased poverty, food insecurity and deteriorating health conditions. The study also reveals that environmental degradation in the Niger Delta Region is a violation against the right to life, dignity and healthy environment of the people of that region as guaranteed under section 33 ad 34 of the 1999 Constitution and reinforced by Articles 24 of the African Charter on Human and People's Rights (Ratification and Enforcement) Act. It was further found that Nigeria does not adhere to international environmental treaties and principles. Although Nigeria is a signatory to key instruments such as the Basel Convention, the Rio Declaration and the Stockholm Declaration, it was found that their provisions are not fully domesticated into our national laws. The principles of polluters pay and precautionary approach, recognized in theory are not entirely practiced and this has left the victims with the constraint of seek environmental justice.

1.7 Contribution to Knowledge

This study contributes to knowledge in the following ways:

(a) This study evaluates Nigeria's legal and regulatory framework like the Petroleum Industry Act, 2021, the National Oil Spill Detection and Response Agency (Establishment) Act, 2006 and other related statutes against international standards. It identified the gaps, challenges, limitations and regulatory inconsistencies such as inadequate funding, political interference and corruption as a systemic weakness exploited by the multinational oil corporation and hinders the effective management of oil spill incidents.

(b) It analysed the extent to which multinational oil corporations can be held accountable for their liability under Nigeria and international laws. Bridging the gap between environmental law and human rights and how environmental degradation in the Niger Delta Region has become a violation of the right to life, healthy environment and dignity of the people of that region as enshrined under section 33 and 34 of the 1999 Constitution and African Charter on Human and People's Rights. It made suggestions on how the legal loopholes through which these multinational oil corporations escape justice can be addressed.

CHAPTER TWO

HISTORICAL PERSPECTIVE OF OIL SPILL IN NIGERIA

2.1 The Discovery of Oil in Nigeria

In 1908, a German company named Nigerian Bitumen Corporation started exploration activities around Araromi Area, West Nigeria. The effort of the company did not see the light of day as it had to end its operations due to the outbreak of the First World War in 1914.[1] In 1937, Shell D'Arcy a predecessor of Petroleum Development Company of Nigeria resumed the search for oil and they were given the sole concessionary right to explore oil within the Nigerian territory. This exploration activity was also disrupted by the commencement of the Second World War in 1939. However, in 1947 when the war ended they resumed their exploration activities in Okitikpuka, also in West Nigeria. After so much investment and continued exploration, in January 1956, crude oil was discovered in commercial quantity for the first time by Shell British Petroleum (now Royal Dutch Shell) in Bomu Oil Field at a depth of 12,008 feet,[2]Oloibiri in the Ogbia District of Ijawland a small village in present day Bayelsa State in the Niger Delta Region of Nigeria. Shell-BP continued exploration activities and this led to more discoveries of crude oil at Afam, which is 40km East of Port Harcourt, Bomu and Ebubu (Ogoni) area of the Niger Delta Region.[3] The commercial exploration and production of crude oil in Nigeria officially began in 1958, and about 8,500 tons of crude oil that is an average of 51,000 barrels was produced and exported per day by Shell and this number doubled the following

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1 'Petroleum Industry in Nigeria' available at https://www.enwikipedia.org accessed 23/10/2025; 'History of Oil and Gas Industry in Nigeria' (2022) available at https://www.schools oftware.com.ng accessed 23/10/2025

2 Dr. Raji, Yusuf, Dr. Abejide and Samuel, 'Shell D' Arcy Exploration & the Discovery of Oil as Important Foreign Exchange Earnings in Ijawland of Niger Delta, C 1940-1970', *Arabian Journal of Business and Management Review* (Oman Chapter) (2013) Vol. 2, No. 1, pages 22-33

3 Dr. Raji, Yusuf, Dr. Abejide and Samuel, (n2)

year.[4] Several reports reveal that between 1955 to 1959, a total of 229,034feet of exploration drilling had been done, 16 wells were completed in Oloibiri and 11 started production immediately. To facilitate production and exploration of crude oil in Oloibiri in 1958, a network of pipelines had to be laid between 1956 to 1958 between Omualogu Village, Egbema Village and Obeakpu Village and the oil port at Port Harcourt where the refinery was located.

Fig4 Oloibiri oil well where oil was first discovered in commercial quantity[5]

Between 1961 to 1973, the oil industry in Nigeria began to grow and the monopolistic right of Shell was taken away in 1959 due to pressure from other foreign oil companies vying for oil exploration rights and concessionary rights was granted to non-British companies like Mobil Oil (1960); Texaco (1961); Chevron Nigeria (1961); Elf (1962); Agip (1962), American Petroleum (1963)[6] which flooded the Nigerian oil industry and joined in the exploration of crude oil both in the onshore and offshore areas of Nigeria.[7] The Mineral Ordinance of 1945 was amended in 1958 which made

4 'History of Oil and Gas in Nigeria' (n12)
5 Figure 4 is a picture of the Oloibiri oil well where oil was first discovered in commercial quantity
6 Dr. Raji, Yusuf, Dr. Abejide and Samuel, (n2)
7 Ibid (n12) https://www.nairametrics.com

it possible to grant concessionary rights to non-British owned oil companies.[8] Practical steps were taken by the Nigerian government to maximize its oil wealth, to this end some local companies like Henry Stephen Delta Oil, Niger Oil Resources and Niger Petroleum Company got registered and obtained licence for oil drilling from the petroleum ministry.[9] With the influx of new players in the Nigerian oil industry with exploration rights, the production of oil per day increased to 2.0million barrels in 1972 and in 1979 it reached a peak of 2.4million barrels per day. This number helped Nigeria attain the rank of 7th major oil producer in the world in 1972 and since then Nigeria has remained a major oil producer in the world and is now the largest oil producer in Africa and in 2023 was ranked 16th major oil producer in the world while producing an average of 1.5million barrels per day.[10] The reduction in the production of crude oil in Nigeria was as a result of its agreement with the Organization of Petroleum Exporting Countries (OPEC) after she became a member in 1971. OPEC's crude oil production quota for Nigeria for year 2024 was set at 1.5million barrels per day, this was also extended to year 2025.[11] However, due to Nigeria producing below its quota for over a year in 2023, in December 2024 OPEC extended Nigeria's production quota of 1.5million barrels per day to year 2026.[12] Nigeria's production of crude oil has in recent times continued to exceed OPECs quota of 1.5million barrels per day to Nigeria.[13]

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8 Dr. Raji, Yusuf, Dr. Abejide and Samuel, (n2)

9 Ibid

10 William Carpenter 'The Main Oil Producing Countries in Africa' (2024) available at https://www.investopedia.com accessed 13/10/2025

11 BusolaAro 'Nigeria Finally Meets OPEC's Crude Oil Production Quota of 1.5m bpd' February 13, 2025 available at https://www.thcable.ng accessed 13/10/2025

12 Ibid BusolaAro

13 Mary Izuaka 'Again, Nigeria's Oil Production Exceeds OPEC Quota' August 13, 2025 available at https://www.premiumtimesng.com accessed 13/10/2025

Fig5 Etelebou Flow Station owned by Shell in Gbarain/Ekpetiama Area of Bayelsa State [14]

Presently, there are more than 100 Oil Companies operational through their subsidiaries in Nigeria's Upstream Sector, however, only 5 IOCs (Shell, Chevron, TotalEnergies, ExxonMobil and Eni [AGIP]) operates through some of these subsidiaries and a network of 15 Joint Venture (JVs) with different activities and holding structures.[15] The Federal Government of Nigeria stated it has over 246 oil fields and operates over 188 production station/platform across the country and these companies get to work at the various oil fields,[16] a different report stated hydrocarbon in Nigeria is currently extracted from 323 developed fields which is said to be located in both onshore and offshore terrains. These fields are also said to contain Crude Oil, Condensates or Natural Gas reservoirs which are connected to 265 production processing stations after which the stabilized Oil and Gas are exported through 31

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[14] Figure 2 Etelebou Flow Station owned by Shell in Gbarain/Ekpetiama Area of Bayelsa State

[15] 'Setting the Scene: Oil in Nigeria and Bayelsa State' available on https://www.report.bayelsacommission.org accessed 14/10/2025

[16] OkechukwuNnodim 'Oil Producing Fields Rise to 246, says FG' 31st March, 2024 available at https://www.punchng.com accessed 15/10/2025

export terminals.[17] The discovery of crude oil (black gold) in the Niger Delta Region and the continuous exploration of crude oil has brought environmental, social and economic consequences to the people of that region.

2.2 Historical Perspective of Oil Spill

Oil was first found in commercial quantity in Oloibiri, Nigeria in 1956 during a joint operation between Royal Dutch Shell and British Petroleum when Nigeria was still under the British Protectorate. Production of oil in commercial quantity began in 1958. After the discovery and exploration of oil which was seen as a blessing as it became the major source of revenue for Nigeria came the negative impact (oil spill) which is seen as a curse to the people of the region where the oil is found and explored. From a report made in 2006, there 11 oil companies operating one hundred and fifty nine (159) oil fields and one thousand four hundred and eighteen (1,418) oil wells in Niger Delta.[18]

Indeed, the oil industry located in Niger Delta region of Nigeria has contributed immensely to the growth and development of the country. However, the unsustainable oil exploration practices over the years in this region of the country has rendered it as one of the five most prominent and severe petroleum damaged ecosystems on the globe.[19] This is made more obvious on considering the fact that the quantity of oil spilled over some 50 years ago in this region was more than 9–13 million barrels.[20]

Crude oil is the major source of revenue to the Nigerian government. The World Bank in 2009 estimated that the oil sector accounted for 95% of Nigerian export earning

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17 'National Liquid Hydrocarbon Production Report' available at https://www.nuprc.gov.ng accessed 15/10/2025

18 AdatiAyubaKadafa, 'Oil Exploration and Spillage in the Niger Delta of Nigeria' Civil and Environmental Research, (2012), Vol. 2, No. 2 available at https://www.scribd.com accessed 25/11/2025

19 Jim Davis, 'Ecological Devastation of the Niger Delta by Oil Extraction Should be a Concern to the Whole World' available at https://www.kairoscanada.org accessed 20/10/2025

20 AndreyKostianoy; Olga Lavrova; and Dmitry Soloviev, 'Oil Pollution in Coastal Waters of Nigeria' (2014) available at https://www.researchgate.net accessed 20/10/2025

and 85% of government revenue.[21] However, the Niger Delta region where the oil wealth is explored has been neglected since the 1970s when Nigeria became a major oil producer in the global market. The people of the Niger Delta region are farmers and they have reaped little or no harvest in recent times which is in decline to the image of more than forty years ago. One of the reasons for this change in the land yielding is that beyond growing local crops, the Niger Delta is home to a bed of oil and gas reserves.[22]

It can be said that oil spill began immediately after the commencement of production of oil in commercial quantity as early incidences where either undetected, ignored or unreported. With lack of public awareness of the environmental consequences for the pollution caused by these unreported spill and no regulatory framework for the control, prevention and management of oil spill, the multinational oil corporations did nothing to curtain and or prevent oil spillage in the Niger Delta at the time.

From the official data of the Nigerian National Petroleum Corporation (NNPC) it was recorded that between 1976 and 1996 an approximate of 4,835 oil spill incidents where recorded to have occurred, and that an estimated discharge of 2.4 million barrels of crude oil was discharged into the environment.[23] Amnesty International (2018) and other independent studies have suggested that the figures stated in the NNPC data are understated due to poor documentation and deliberate underreporting by multinational oil corporations.

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21 AdatiAyubaKadafa, 'Oil Exploration and Spillage in the Niger Delta of Nigeria' *Civil and Environmental Research*, (2012), Vol. 2, No. 2 available at https://www.scribd.com accessed 25/11/2025

22 'Oil Among the Mangrove Trees: A Portrait of Destruction in the Niger Delta, Then and Now' (2023) available at https://www.hir.harvard.edu accessed 15/10/2025

23 Peter Nwilo and OlusegunBadejo, (2005) 'Oil Spill Problems and the Management in the Niger Delta' International Oil Spill Conference Proceedings, pp 567-570; available at https://www.researchgate.net accessed 23/10/2025

United Nations Environment Programme (UNEP) in its report stated that the most affected areas include Ogoniland, Gokana, Bonny, Nembe, Brass, and Warri. The report stated that these communities depend heavily on fishing and farming activities and the recurrent oil spill have had devastating effect on their produce. The destruction of mangrove forests, contamination of surface and underground water, and loss of biodiversity have been severe and long lasting.[24] Some of the notable oil spill disasters that have been recorded are stated below:

i. **Oil Spill in the Niger Delta Region: Early Beginnings (1950s – 1960s):** after the discovery of crude oil in Oloibiri present day Bayelsa State in commercial quantity, exploration of began and was done by Shell British Petroleum. The commencement of production in 1958 in commercial quantity brought Nigeria into the global oil market, making her one of the highest oil producers in the world in the 1970s. Continuous exploration and drilling brought about small oil leaks and spills which were not recorded and overlooked by Shell. The continuous spillages did not immediately have any impact on the environment until the 1970s when the major spillage occurred.

ii. **Expansion and Rising Spillage (1970s – 1980s):** the first major recorded oil spillage in Nigeria was in Ogoniland, 261 communities spread nearly over 1,000sq kn (385sq miles)[25] in 1970. It is recorded that thousands of gallons (250 barrels) from a Shell pipeline (which has been operational for over 9 years suddenly blew) spilled into farmlands and rivers[26] in

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24 United Nations Environment Programme, (2011), 'Environmental Assessment of Ogoniland' available at https://www.unep.org accessed 23/10/2025

25 Ekpali Saint 'Timeline: Half a Century of Oil Spills in Nigeria's Ogoniland' 21st December, 2022 available at https://www.aljazeera.com accessed 15/10/2025

26 'Oil Among the Mangrove Trees: A Portrait of Destruction in the Niger Delta, Then and Now' (2023) available at https://www.hir.harvard.edu accessed 15/10/2025

Boobanabe Community as a result of a fire at Shell's Bomu ll Oil well/Kegbara Dere-Bomu[27] which impacted an estimated area of 607 hectares of land.[28] This spill was a single large release of crude oil from the Bomu ll Oil well. Unlike some other spill, it did not continue to leak for any specific number of days. Another major oil spill occurred in Ejama-Ebubu Community in the present day Rivers State in 1970 when a Shell pipeline ruptured. The exact duration of the leak is not provided, it is however described as lasting for several months. Shell maintains till date that the pipeline rupture was caused by third parties during a civil war that was raging at the time.[29] Between 1976 and 1991, more than 2 million barrels of oil polluted Ogoniland in 2,976 separate oil spills.[30] While oil production has ceased, pipelines operated by Shell still traverse the land, creeks and waterways. Leakages caused by corroded pipelines as well as bandits means that the area is still plagued by oil spills.[31] Also in 1978, the Gocon's Escravos Spill occurred were 300,000 barrels of crude oil was spilled into the coastal waters caused by a tank failure at the Nigerian National Petroleum Corporation (NNPC) facility.[32] Also in the same year, there was another oil spill in the Forcados terminal in which 580,000 barrels of crude oil was spewed into the environment caused by a tanker

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27 'Table 1 Oil Spill Incidences in Nigeria (1960-Present)' available at https://www.bnrc.springeropen.com accessed 15/10/2025

28 Odeyemi and Oladele Ogunseitan, 'Petroleum Industry and its Pollution Potential in Nigeria' *Oil and Petrochemical Pollution* 2 (1985)

29 Williams Clowes, 'Shell to Pay $111 Million to Resolve Long-Running Oil-Spill Dispute in Nigeria' (2021) Insurance Journal available at https://www.insurancejournal.com accessed 20/10/2025

30 Ekpali Saint (n14)

31 'A Journey Through the Oil Spills of Ogoniland' (2019) available at https://www.foei.org accessed 20/10/2025

32 NnimmoBassey, 'UN Report on Nigeria Oil Spills Relies too Heavily on Data from Shell' (2010) available at https://www.theguargian.com accessed 20/10/2025

failure in the Shell Petroleum Development Company (SPDC) facility.[33] This spill has been recorded to be one of Nigeria's largest oil spills.

Figure 6: Fire breaks out at the Trans Forcados Pipeline spill in Delta State[34]

In 1980, Nigeria witnessed one of the most catastrophic oil spills and fire outbreak in Texaco/Chevron Funiwa-5 Oil well blow out, where an oil well belonging to Texaco/Chevron blew out releasing about 400,000 barrels of crude oil into the marine environment from the Sedco 135C drilling rig.[35] This incidences considered one of the worst marine pollution events to have occurred in Nigeria lasted for 12 days, where the oil spilled uncontrollably and later resulted in a fire outbreak. This spill occurred as a result of a blow out at Funiwa 5 offshore station and a total of 37.0 million litres of crude oil got spilled into the environment.[36] In 1982, another pipeline churned out 18,818 barrels of crude oil into the Abudu agrarian environment.[37] This incident was caused by a pipeline failure which was a common problem in Nigeria at the time due to corrosion from old infrastructure. In 1984, an old pipeline leakage

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33 Peter Nwilo and OlusegunBadejo, 'Impacts and Management of Oil Spill Pollution along the Nigerian Coastal Areas' available at https://www.fig.net accessed 20/10/2025

34 Fig 6 picture of Fire breaks out at the Trans Forcados Pipeline spill in Delta State

35 OfoegbuObinna; MaikanoAghalino; Nsikak S, 'The Black Gold Poison: Incidence, Effect, Remedy and Control. A Case Study of Niger Delta Area of Nigeria' (2013) available at https://www.researchgate.net accessed 20/10/2025

36 OfoegbuObinna; MaikanoAghalino; Nsikak S, (n21)

37 Emmanuel Okpamen, 'Oil Spillage and Compensation in Nigeria' (2024) available at https://www.nigerianobservernews.com accessed 21/10/2025

went undiscovered for about 6 days in a Shell facility at Kutelu creeks in Otujeremi causing serious damage to economic (destroying their cassava and plantain farmland and paralyzing their marine and aquatic life), social and health conditions of the people of Otujeremi.[38]

Fig 7:Oil Spill from Frontier Oil's OML13 facility which disrupted AkwaIbom Community[39]

iii. **Environmental Awareness and Resistance (1990s)**: the 1990s saw growing non violent activism from local communities, especially the Ogoni people of Rivers State and the repressive responses of the then Nigerian military government to the Ogoni people's struggle for environmental and social justice in the Niger Delta region. This activism was led by Ken SaroWiwa, a well known Nigerian author and television producer, was president of the Movement for the Survival of Ogoni People (MOSOP), an organization set up to defend the environmental and human rights of the Ogoni people who live in the Niger Delta. This drew global

[38] Odeyemi and OladeleOgunseitan, 'Petroleum Industry and its Pollution Potential in Nigeria' *Oil and Petrochemical Pollution* 2 (1985)

[39] Figure 7 Picture of Oil Spill from Frontier Oil's OML13 facility which disrupted AkwaIbom Community

attention to the devastating effects of oil pollution in the Niger Delta. Due to their constant demand for a clean environment, Ken SaroWiwa and 8 others were hanged for fighting for a clean environment and this sparked international outrage. After the execution of the Ogoni 9 in 1995 by the then Military government, the crisis in the Niger Delta intensified, with increasing violence, sabotage and militant activities. Ogoda-Brass Pipeline oil spill occurred in 1996 with undocumented record of the quantity of barrels of oil that was spewed into the environment. The oil was however spilled into the Delta creeks, destroying aquatic life and farmlands.[40]

Fig8: Ruptured spot on the Ogoda-Brass Pipeline oil spill which is the forth oil spill recorded from Agip's Ogoda/Brss Pipeline[41]

Oil spillage continued amidst the fight for the emancipation of the Niger Delta Region. In 1998 Mobil Nigeria oil spill occurred in AkwaIbom State when a pipeline in Mobil's Idoho platform burst underwater and sending 40,000 barrels of oil spilling

[40] Environmental Rights Action, Friends of the Earth, Nigeria, (2022) 'Field Report: Fourth Oil Spill Recorded from Agip's Ogoda/Brass Pipeline' available at https://www.erafoen.org accessed 23/10/2025

[41] Figure 8 Picture of the Ruptured spot on the Ogoda-Brass Pipeline oil spill which is the forth oil spill recorded from Agip's Ogoda/Brss Pipeline

into the ocean.[42] In October 1998, a pipeline explosion occurred in the community of Jesse killing more than 1000 people[43] caused by leaking pipes.[44] Due to the intensity of the blaze, many victims were too badly burned to be identified and as a result over 300 bodies were buried in mass graves. The fire from the Jesse pipeline explosion was ignited on 17 October, 1998 and burned until a firefighting company from the United States was invited to extinguish the blaze on 23rd October, 1998 using a nitrogen-rich foam, almost a week after. Weeks after the explosion, death toll continued to rise as many of those with injuries died while in hospital.[45]

Fig9: Picture of the Jesse fire that lasted for more than 1 week[46]

iv. **Modern Era of Frequent Oil Spill (2000s – 2010)**: this period was marked by frequent devastating oil spills in the Niger Delta region which was largely due to operational failures and neglect from multinational oil industries. NOSDRA recorded 2,405 spills between 2006 and mid 2010, with an increasing trend year-on-year. 252 in 2006, 598 in 2007, 927 in

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42 'Mobil Nigeria Oil Spill' available at https://www.en.wikipedia.org accessed 21/05/2025

43 '2023-10-18 – 25 Years ago: Pipeline in Niger Delta Explodes' available at https://www.picture-alliance.com accessed 23/10/2025

44 Doifie Ola and David Eighemhenrio, Urhobo Historical Society 'Easting Lives: Official Negligence resulting in Grave Tragedy at Idjerhe, Niger Delta, Nigeria' (1998) available at https://www.waado.org accessed 23/10/2025

45 PENGloal 'Tragedy of a Nation: Remembering Jesse Pipeline Explosion, the Most Deadly in Nigeria' available at https://www.penglobalinc.com accessed 23/10/2025

46 Figure 9 Picture of the Jesse fire that lasted for more than 1 week

2008 and 628 in 2009. The figures rose again in 2010, partly because over 7000 square km of pipelines linking 606 oil wells are old and begging replacement. In 2003, a newly drilled oil well in the Uquo Field within OML13 in Akwa Ibom State faced scrutiny for oil spills originating from the newly drilled well. The crude oil seeped uncontrollably, spreading across the affected communities.[47] In 2008-2009, the Bodo West Field situated in the mangrove area of Bodo Creek experience two major oil spills from Shell pipeline and leaked over 560,000 barrels of crude oil[48], these spills were attributed to the activities of multinational oil companies and devastating to mangroves and fisheries.[49] In 2009, in K-Dere Community also known as Kegbara Dere in Ogoniland, in a Shell owned facility, there was an oil spill caused by a burst pipeline, where an undisclosed/unreported amount of crude oil was spewed. An assessment carried out by UNEP showed that the pollution was well above the government safety limits. Four year later when the assessment was done by UNEP, the soil was still soaked with crude oil outside the Bomu Manifold. Water with an oily sheen was also running down the hill into a swamp called Barabeedom, where many villagers have their farms and fishponds.[50]

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47 Daniel Terungwa, 'Oil Spill From Frontier Oil's OML13 Facility Disrupt Akwa Ibom Community' (2024) available at https://www.majorwavesenergyreport.com accessed 23/10/2025

48 Bulletin of the National Research Centre, 'Table 1 Oil Spill Incidences in Nigeria (1960 – Present)', *Official International Journal of the National Research Centre of Egypt* available at https://www.bnrc.springeropen.com accessed 24/10/2025

49 Odera Chukwumaijem Okafor and Patience Afor Ibeneme, (2025) 'Impact of Oil Spill on the Inhabitants of Bodo Area of Ogoni Land, River State, Nigeria' Trends in Environmental Sciences pp 208-218 available at https://www.researchgate.net accessed 23/10/2025

50 Mike Uwemedimo, 'Slick PR can't Disguise Shell's Devastating Oil Pollution in Nigeria' (2025) available at https://www.amnesty.org.uk accessed 24/10/2025

Fig10: Contaminated land around the Bomu Manifold at K. Dere years after Spill[51]

v. **Recent Development (2010s – Present)**: oil spill incidence has continued to plague the Niger Delta Region with no hope of it stopping any time soon. UNEP in its 2011 report released a landmark report on Ogoniland and found extreme contaminated soil and water. It recommended a 30-year clean-up program. NOSDRA between 2011-2022 has recorded over 10,000 oil spills cutting across several communities in the Niger Delta Region, with a total of more than 500,000 barrels of crude oil released into the environment.[52] It was reported by ActionAidInternational, that since the discovery of oil in Ogoni territory in the 1950s Shell backed by the Nigeria government has prioritized oil extraction at the expense of both the local population and the environment leading to severe ecological and socio-economic consequences.[53] In 2012, there was an oil spill from an old pipeline operated by Shell in K-Dere community and B-Dere community both in Gokana Local Government Area of Rivers State. The volume of crude oil spewed is unreported but it had devastating effect on the

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51 Figure 10 Contaminated land around the Bomu Manifold at K. Dere years after spill

52 National Oil Spill Detection and response Agency available at https://www.nosdra.gov.ng accessed 24/10/2025

53 Samuel Ajala, 'Niger Delta Communities battle Farming Crisis and shell's Departure' (2025) available at https://www.gasoutlook.com accessed 24/10/2025

indigenes of the communities whose source of livelihood was fishing and farming.[54]

Fig11: B. Dere recent oil spill that polluted water and farmland[55]

In 2013, a devastating oil spill from a Shell facility occurred in the creeks and waterway of Bodo Community, releasing over 6000 barrels of Crude oil into the environment[56] causing extensive pollution and destroying ecosystem. In June 2023, another oil spill from Shell facility in Eleme occurred polluting waters and lands. According to NOSDRA, the spill originated in a rupture of the underground Trans-Niger Pipeline crossing Eleme, polluting Okulu River and Oke-Olebo stream.[57]

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54 Collins H. Wizor and Sunday O. Eludonyi, 'Analysis of the Socio-Economic Impact of Oil Spills in Gokana Local Government Area of Rivers State, Nigeria' (2020) *International Journal of Research and Scientific Innovation* pp 79-86 available at https://www.rsisinternational.org accessed 24/10/2025

55 Figure 11 Picture of B. Dere recent oil spill that polluted water and farmland

56 Bulletin of the National Research Centre, 'Table 1 Oil Spill Incidences in Nigeria (1960 – Present)', *Official International Journal of the National Research Centre of Egypt* available at https://www.bnrc.springeropen.com accessed 24/10/2025

57 'Shell Oil Spill in 2023 in Ogoniland, Eleme LGA, Nigeria' available at https://www.ejatlas.org accessed 24/10/2025

Fig12: Eleme Oil Spill that contaminated Water and Farmland[58]

2.3 Oil Spill Incidence in Niger-Delta (1960 – Present)

YEAR	QUALITY OF OIL SPILLED	PLACE/ INCIDENCE	COMPANY	CAUSE	IMPACT
1970	400,000 Barrels	Bomu II Oil well/KegbaraDere-Bomu	Shell	Blowout (an uncontrolled release of crude oil and gas)	It resulted in serious hydrocarbon fire and spillage of thousands of barrels of crude oil that contaminated farmland and rivers, destroying crops and aquatic life and causing long term soil infertility and pollution in Ogoniland[59]

[58] Figure 12 Eleme Oil Spill that contaminated Water and Farmland
[59] Bulletin of the National Research Centre (n48)

1970		Ejama-Ebubu Community	Shell	3rd Party during the Nigerian Civil War	Contaminated land and water for decades
1978	300,000	Gocon'sEscravos Spill	Shell	Tanker failure at the NNPC facility	Caused extensive air, soil and water pollution
1978	580,000	Forcados	Shell	Caused by tanker failure	Affected the environment, health and livelihood of the community.
1980	400,000	Funiwa-5/Sedco 137C Drilling rig	Texaco/Chevron	Blow out at Funiwa-5 Offshore station	Devastating environmental and economic impact, affecting beaches while fishes tasted like kerosene
1982	18,818	Abudu Agrarian Environment		Pipeline failure	Caused environmental degradation and social disruption
1984		Kutelu creek in Otujeremi	Shell	Pipeline failure	Serious damage to economic, social and health conditions.
1996		Ogoda-Brass	Agip	Equipment failure	Destruction of aquatic life and farmland
1998	40,000	Idoho platform	Mobil	Burst pipeline	Contamination of water and impacting fishing negatively
1998		Jesse Community	NNPC	Burst pipeline	Polluted farmland and river, fire outbreak leading to the death of more than 1,000

					people
2003		Uquo field within OML13	Frontier Oil (marginal oil field)		Caused damages to the environment
2008- 2009	560,000	Bodo-West field	Shell	Outdated pipeline	Affected mangrove and fisheries
2009		Bomu manifold, K-Dere community	Shell	Burst pipeline	Heavy pollution well above the government safety limits
2012	Unreported	B-Dere Community	Shell	Old pipeline	Affected fishing and farming, polluted water
2013	6,000	Creeks and waterway of Bodo Community	Shell		Extensive pollution destroying ecosystem
2023		Trans-Niger pipeline Eleme	Shell	Ruptured underground pipeline	PollutOkulu river and Oke-Olebo stream

Figure 9: Oil Spill incidence from 1960 till present[60]

[60] Figure 9 Table of Oil Spill incidence from 1960 till present

2.4 Literature Review

Scholarly review and institutional reported has presented the Niger Delta Region as a place with dual situations, on one hand it is central to Nigeria's economy and on the other hand it is persistently and chronically polluted by the extraction of crude oil. Since the production in commercial quantity of crude oil began in 1956, the Niger Delta Region has been continuously plagued with repeated oil spills which has been traced to be caused by corrosive nature of the pipeline, failure of the pipeline, vandalism, operational incidence and illegal tapping thereby creating a long term contamination of soil, surface water and groundwater.[61] One of the most detailed environmental survey on the Niger Delta Region is UNEP's Environmental Assessment of Ogoniland (2011), this survey documented widespread soil and underground water contamination and concluded that it would take a well-funded, multi-decade intervention to bring it close to its original state.[62] Several secondary sources were also used in this work to estimate the volumes of oil spill in past decades (details such as millions of tones has been cited in the literature), although the exact total of oil spills to have occurred cannot be ascertained due to varied methods used by the reporting agency and several small undetected and unreported spills.[63] To make verified reports accessible, the National Oil Spill Detection Agency (NOSDRA) now maintains a public spill monitor and annual report that provides incidents-level data and this spill monitor is now been used by researchers and policy makers.

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61 'Environmental Assessment of Ogoniland' available at https://www.unep.org accessed 26/11/2025. Also available at 'Nigerian Oil Spill Monitor' available at https://www.nosdra.oilspillmonitor.ng accessed 26/11/2025

62 https://www.unep.org

63 Oscar Mateos, 'Understanding Niger Delta's Violence from a World-Ecology Perspective' available at https://www.seguridadinternational.es accessed 26/11/2025

In a bid to achieve a more potent literature review, the study leans on the contamination in the Niger Delta Region caused by oil spills. However, constructive efforts are made to examine related literature's that are relevant to oil spill on both soil and water, including the ecology. Oil spills in Nigeria causes various ecological damages, which contribute to the death of plants, animals and aquatic life. It also impacts the livelihood and health of the surrounding communities. The presentation helps to understand oil spillage, and how they impact the socio-economic livelihood of the localities where crude oil is extracted. It further presents how oil spillage impacts on the surrounding environment are pertinent to this study. The direct impact of oil spill on the livelihood of the local who are farmers and engage in small scale fisheries and subsistence agriculture is severe. The economic activities of this region is highly sensitive to soil contamination, and they recorded documented decline in catches, crop yields and household income following major spill events. The losses experienced by these locals cause income shocks and long term decline in human capital and local capital stocks. It is surprising to notice that while the nation generates revenue through oil exploration, the local communities suffer resource curse caused by oil spill and economic marginalization by the government alongside environmental sacrifice.[64] It is pertinent to include the works of other scholars, who have earlier studied the environmental impact assessment, or post-impact assessment arising from oil spillage. Some academic and institutional studies have agreed on the views that oil contamination has severely degraded the Niger Delta's mangrove, wetlands and aquatic ecosystem. Field sampling and chemical analyses carried out by UNEP (UNEP 2011) revealed that the Niger Delta Region is heavily contaminated with hydrocarbon which has affected the soil, creeks and groundwater with significant

64 George Frynas, 'Oil in Nigeria: Conflict and Litigation Between Oil Companies and Village Communities' available at https://www.semanticscholar.org accessed 26/11/2025

losses noticeable in the mangrove cover and damage to fisheries habitat.[65] Other peer-reviewed ecological studies revealed oil related dieback of mangroves, reduced benthic diversity, and impaired fishing recruitment effects that has compromised the service to the ecosystem such as coastal protection and fisheries productivity.[66] Oil spill has also been linked severe public health outcome like skin disease, respiratory and gastroinstestinal problem linked to contaminated water and air and the outcome of this has forced displacement of locals from heavily contaminated sites and erosion of customary land use practice. The marginalization by government and perceived inequitable distribution of oil generated revenue to the Niger Delta Region has fueled grievances and led to mobilization of the people of that region which has in turn led to an explained cycle of militancy, pipeline vandalism, oil theft, kidnapping, insecurity and violence in the region. These highlighted issues has increased the incidence of sabotage related spills and complicated remediation efforts.[67] Environmental impact assessment gives information or a baseline data on how these environmental changes, whether beneficial or detrimental are impacted on the locality. Such environmental impact assessments include environmental impacts of oil spillage, air pollution monitoring, and soil and water pollution assessment arising from oil spillage, thermal heat assessment, greenhouse gas accumulation, other climatic effects.[68]. On the other hand, post-impact assessment determines the environmental effects of the spill. The National Oil Spill Detection Response Agency (NOSDRA) has been active in post-impact assessment; but its efforts have not helped to create effective enforcement and compliance mechanisms. Humanity cannot be so myopic as to choose a path which

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65 'Environmental Assessment of Ogoniland' available at https://www.unep.org accessed 26/11/2025

66 'Environmental Assessment of Ogoniland' available at https://www.unep.org accessed 26/11/2025

67 Cyril Obi, 'Oil and Insurgency in the Niger Delta', available at https://www.diva-portal.org accessed 26/11/2025

68 ChijokeEvoh, 'Gas Flares, Oil Companies and Politics in Nigeria' (2002) 31-35 *Urhobo Historical Society*. Available at https://www.waado.org accessed 25/10/202. Also available at https://www.ngrguardinannews.com

can only lead to the destruction of the society, as can be observed in the oil and gas-bearing communities in the Niger Delta Region. There is a human environment relationship, where the environment provides the economic system with the pertinent raw materials, such as crude oil, which are transformed into consumer products, such as energy, which in turn fuels other transformation.[69]

As said earlier, Nigerian economy for the past four decades has significantly dependent on revenues from the oil and gas industry. Crude oil is a mixture of hydrocarbon solids and gases dissolved in liquid with a mixture of derivatives of oxygen, sulphur and nitrogen, including different metals, such as cobalt, calcium, sodium, copper and silicon. It is further accompanied by ranging qualities of extraneous compounds, for example, organic materials[70]. Generally speaking, crude oil is inflammable at ambient conditions, and odorous. It can exist as light crude or heavy crude. Nigerian crude oil is mainly light crude with less sulphur. Heavy crude is associated with heavier sulphur contents than the light crude. Crude oil extraction has brought foreign earnings to Nigeria, but has at the same time brought down the livelihood of those communities where the crude oil and its associated natural gases are extracted[71]. Oil spillage and gas flaring are the most outstanding environmental degradation arising from exploration and transportation of crude oil, and they have degraded the physical environment and impacted the socio-economic life of those oil and gas-bearing communities[72]. The target of this related literature review is on oil spillage because of the reasons mentioned above. Having to present the basic facts on

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69 Thomas Tietenberg, 'Environmental and Natural Resource Economics,' 4th ed.,(Harper Collins College Publication, 1992) 18-19.

70 Ibid p.36

71 Adenuga, 'Petroleum Industry and Environmental Protection: The Nigerian Experience *CBN Bulletin* (1999) 56.

72 Casmir Zander Akaolisa and OsitaOkeke, 'Role of Geodetics in Environmental Impact Studies in the Petroleum Industry' *Journal of Advances in Geosciences* (2004) 78.

both oil spillage, on how it impact the socio-economic and health, including agriculture; it is important to present some earlier researches on the effects of oil extraction and transportation impacts on the surrounding environment. Nwaugo[73] wrote on the microbiological effects of oil pollution, where toxicity of petroleum hydrocarbon impacts and recovery processes and their effects on aquatic organisms. Other studies carried out in 2008 in some states of the Niger Delta Region presented the effects on crop yields and other agricultural productivity, and how oil spillage impacted the socio-economic well being of the local environment. Ekeh[74] researched and identified major and minor components of crude oil, and their effects on the global atmosphere, including microclimate effects on the surrounding environment, especially on health of the citizens. Similar research carried out by Chokor[75] in the Niger Delta Region presented some trace heavy metals and how they affect agricultural productivity and drinking water. From these aforementioned researches, oil spillage can be concluded as environmental degradation that are capable of affecting the socio-economic and health of localities that lie in close proximity to crude oil infrastructure. It is remarkable to note that these earlier studies present basic information on the chemical components of crude oil, including possibilities to impact on the physical environment, but come short of recommending or suggesting appropriate and effective mechanism to abate environmental degradation arising from oil extraction. Several official records has identified multiple causes of oil spill to be linked to aging infrastructure and corrosion, operational failures by operators and illegal activities such as oil theft and pipeline vandalism. There are reports to show

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73 Victor Nwaugo, Reginald.AzuOnyeagba and NdubuisiNwachukwu,'Effects of Gas Flaring on Soil Microbial Spectrum in Parts of Niger Delta Region of Southern Nigeria' *African Journal of Biotechnology* (2005) 42.Also available at https://www.internationalscholarsjournals.com accessed 26/11/2025

74 Ibid (n4) 32

75 Boyowa Anthony Chokor, *Environmental Issues and Challenges of The Niger Delta Region: Environmental Survey Process* (CIBN Press Limited , Nigeria 2003) 36.

that operational failures, vandalism and bunkering were the dominant cause of large oil spill volumes. Policy makers need to distinguish between accidental and deliberate incidence in policy responses.[76]

The survey by UNEP on Ogoniland rolled out a staged remediation plan and called for a well resourced restoration programme while criticizing past remediation attempt as technically inadequate and poorly monitored. Some NGOs like Amnesty International, Friends of the Earth and other investigative journalist have also highlighted slow or ineffective cleanup by some operators and weak enforcement by states due to lack of political will and political interference. This present study therefore has added the dimension of applying appropriate legal instruments to deal with environmental negligence that cause both physical degradation and socioeconomic impacts.

[76] 'Nigerian Oil Spill Monitor' available at https://www.nosdra.oilspillmonitor.ng accessed 26/11/2025

CHAPTER THREE

CAUSES AND EFFECTS OF OIL SPILL IN THE NIGER DELTA REGION

3.0 Causes of Oil Spill in the Niger Delta Region

Most environmental issues in the Niger Delta can be linked to petroleum extraction. This region is within wetlands formed primarily by sediments decomposition. This floodplain makes up 7.5% of Nigeria's total land mass and is Africa's largest wetland. This environment can be broken down into four ecological zones: coastal barriers islands, mangrove swamp forests, freshwater swamps, and lowland rainforests. They have fishing and farming as their major source of livelihood.[1] Before we delve into the causes and effects of oil spillage, let's look at the types of oil spillage. According to the United States Fish and Wildlife Service, oil spills can be classified into five categories, namely:

i. Category 'A' Oil - Very volatile and highly inflammable: this category of oil (light oil) when spilled has very strong odour, are extremely toxic to marine organisms but least persistent of all oil. The effect on the soil are long lasting, in water, oil disperse affects aquatic life in upper water column. This category of oil includes high quality light oils as well as refined products such as gasoline and jet fuel. Toxic components of gasoline include benzene a known carcinogen and hexane which can damage nervous systems in humans and animals.[2]

ii. **Category 'B' Oil – Diesel-Like Products/Light Crude Oils**: this category of oil is also known as non sticky oil are less toxic than category

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1 RasheedatAjibidahAbbah, 'Environmental issues in the Niger Delta', (2025) available at https://www.en.wikipedia.org accessed 28/11/2025

2 John Akpoghelie, UfuomaIgbuku and EjirogheneOsharechiren, 'Oil Spill and the Effects on the Niger Delta Vegetation: A Review', *Nigerian Research Journal of Chemical Sciences*, (2021), Vol. 9, No. 1. Also available at https://www.unn.edu.ng accessed 26/11/2025

A but more likely to adhere to surfaces and can cause long term contamination. Category B is made up of lower quality light crude oils and refined products such as kerosene and heating oil. They leave a film on surfaces, but this film will dilute and disperse if flushed vigorously with water. This category are also highly inflammable and will burn longer than category A oil.[3]

iii. **Category 'C' Oil - Medium Crude Oils/Intermediate Products**: this category of oil is heavy and sticky, they do not spread quickly or penetrate sand and soil as easily as light oil, they do not easily dilute and disperse, making it detrimental to wildlife such as fur bearing marine mammals and waterfowl. They adhere strongly to the surface and can severely contaminate intertidal zones leading to an expensive long term clean up because of their sticky nature.[4]

iv. **Category 'D' Oil - Heavy Crude Oil/Residual Products**: this category of crude oil is solid and least toxic. This category of crude when it heated and harden on the surface, it becomes nearly impossible to clean up. and very heavy oil. They are extremely detrimental to aquatic life and are less likely to evaporate.[5]

v. **Non – Petroleum Oil – Non – Floating Oils**: synthetic oils and derived oil may cause contamination if released into the environment. Non petroleum oil coats wildlife and can cause death due to suffocation or dehydration. This category of oil is slow to break down, easily penetrate the soil, thereby causing long lasting damages to the affected area. Non

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3 John Akpoghelie, UfuomaIgbuku and EjirogheneOsharechiren (n1)
4 John Akpoghelie, UfuomaIgbuku and EjirogheneOsharechiren (n1)
5 John Akpoghelie, UfuomaIgbuku and EjirogheneOsharechiren (n1)

petroleum oil products includes cooking gas and synthetic oils.[6] The last category very heavy oil have the capacity to hover and diffuse into water and affect living organism on the ocean floor. They are also extremely detrimental to aquatic life. Very heavy oil are not as toxic as the lighter oils, they are however very difficult to find and clean up. Oil spill can also be classified into the volume of oil discharged during the incident.[7]

Oil spill, a common outcome of oil exploration and exploitation in the Niger Delta has an estimated spillage incident of over 7000 over a 50-year period (UNDP, 2006). Oil spillage usually occurs from human activities and natural cause. Natural spill are those spills that comes naturally like a shift in the tectonic plates, these plates are seen beneath the ocean floor, once there is a shift, oil is released causing natural seepage and spillage is said to have occurred.[8] Oil spill through the natural forces is called oil seepage and is unknown to occur in the Niger Delta area due to the nature of the soil.[9] Oil spillage in the Niger Delta is caused by the operations of international and local oil and gas companies, sabotage/vandalization and unknown, yet to be determined causes as documented by NOSDRA in its oil spill monitor database.[10] Data from NOSDRA oil spill monitor database of 2022 shows sabotage as the consistent cause of oil spill in the Niger Delta Region. Sabotage was said to have peaked in 2013 due

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6 John Akpoghelie, UfuomaIgbuku and EjirogheneOsharechiren, (n1)

7 Rose OhiamaUgbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillages in Nigeria', *The Nigerian Law Journal*, (2017), Vol. 20, No. 1

8 Ifeoma Christy Mba, Emmanuel IkechukwuMba, Jonathan EmenikeOgbuabor and Winnie OgochukwuArazu, 'Causes and Terrain of Oil Spillage in Niger Delta Region of Nigeria: The Analysis of Variance Approach' *International Journal of Energy Economics and Policy* (2019), Vol. 9, No. 2, pages 283-287

9 Rose OhiamaUgbe and Anthony Ekpoudo (n6)

10 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

to increased militant activities in the Niger Delta Region.[11]Over the past 30 years, the Niger Delta has gained a reputation as one of the most polluted places on the planet. This notoriety is unfortunately well-deserved as the pollution suffered as a result of oil production is unprecedented in its scale and scope. It has devastated the Region's natural environment and wildlife, endangered the health of millions of people, deprived many of their livelihoods, and has fuelled the region's already endemic insecurity. The picture is clear. Oil infrastructures and pipelines in particular across the Niger Delta Region leak much more and with greater regularity than those in other countries. The question is: why? Evidence suggests that spills are often clustered, with a few high intensity leak sites 'hotspots' accounting for a disproportionate number of spills. Spills have distinctive geographical patterns and in these high-density sites known as hotspots the environmental consequences of multiple 'hotspots' are especially serious. For example, between 2014 and 2018, Eni (Agip) reported 262 spills along the 92 km stretch of the Tebidaba-Brass pipeline, leading Amnesty International[12] to dub it 'Africa's leakiest pipeline'.[13]Official government statistics issued by NOSDRA identify several primary causes:

3.1. **Oil Bunkering**: Oil bunkering is Nigeria's most profitable illegal private business in the petroleum sector. Bunkering is the destructive methods used to steal and illegally refine crude oil through pipeline vandalism and tapping. This process usually happens in the creeks of Niger Delta where oil pipeline form a grid. Illegal oil bunkering persists in the creeks of the Niger Delta, crude oil is siphoned into barges

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11 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

12 'Nigeria: Negligence in the Niger Delta: Decoding Shell and Eni's Poor Record on Oil Spill' available at https://www.amnesty.org accessed 26/11/2025

13 The causes of pollution: Understanding the evidence beyond the official statistics' available at https://www.report.bayelsacommission.org accessed 26/11/2025

hidden in the creeks and it is shipped to the high sea where they are sold.[14] Over 10% of the oil exported from Nigeria every year is illegally bunkered.[15] During illegal oil mining, bunkering, or oil vandalism, offenders utilize all methods at their disposal to get access to oil pipelines and wells in order to tap into the oil. This leads to oil spills that run into rivers and farmlands, destroy the natural habitat, and disturb the lives of locals.Illegal oil bunkering doesn't require any form of expertise to operate the equipment from the wellheads or allow access.[16]

Fig 13: Picture of an Illegal Bunkering Site in Niger Delta[17]

(a) **Sabotage**: sabotage is a significant challenge in Nigeria's oil-rich Niger Delta region. It is an illegal activity that involve the theft of crude oil and petroleum

[14] Freedom Onuoha, 'Oil Pipeline Sabotage in Nigeria: Dimensions, Actors and Implications for National security' (2008) *African Security Review* Vol. 17. No. 3 available at https://www.tandfonline.com accessed 27/11/2025

[15] AmalachukwuOkafor and AyobamiOlaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *AfeBabalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

[16] AmalachukwuOkafor and AyobamiOlaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *AfeBabalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

[17] Figure 13 shows a picture of an illegal bunkering site in Niger Delta

products from pipelines, wellheads, and oil facilities, as well as deliberate acts of vandalism that disrupt oil production and transportation. It is the unauthorized destruction of pipelines by a person or group of persons to disrupt the petroleum product supply chain or divert petroleum product to sell in the black market.[18]Data from NOSDRA oil spill monitor database of 2022 shows sabotage as a consistent cause of oil spill in the Niger Delta Region and was responsible for 59% of 13,934 oil spill incidence from 199-2022.[19] Sabotage is a combination of bunkering, pipeline vandalism/scooping and oil terrorism.[20] Sabotage was said to have peaked in 2013 due to increased militant activities in the Niger Delta Region.[21]Data generated by the Joint Investigation Visits (JIV) process reveals that 88% of leaks that occurred across the Niger Delta between 2006 and 2019 were due to third party interference. Only 5% of spills, according to the data, are due to equipment or other operational failures. More recently, 572 documented occurrences of oil spillage was recorded in 2022, 480 were caused by oil theft and sabotage and the remainder 92 by operational problems. 16,135 barrels of oil were spilled, of which 2,599 were due to operational problems, and the remaining barrels were attributed to sabotage.[22]The narrative of sabotage and third-party interference was laudably endorsed by the oil companies and supported by

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18 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

19 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

20 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

21 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

22 Mary Izuaka, 'Oil Theft is Threat to National Security' (February 22, 2023), available at https://www.premiumtimesng.com accessed 26/11/2025

many within Nigeria's oil and gas institutions, who argue that the exceptionally high level of pollution incidents is simply an unfortunate and unavoidable by-product of the operational environment. In an insecure, volatile and conflict-affected region, it is impossible to protect and secure vital oil installations and infrastructures. There is an historical narrative which justifies the belief that there is sabotage, but not to the extent that is portrayed by the IOCs.[23] Some levels of sabotage are heavily linked with the overall security situation with surges of militant activity and the electoral cycle. Sabotage can take a number of forms, some of which are more polluting than others. Pipelines may be attacked by militant or criminal groups to disrupt the operations of the companies or to extort money from them.

Fig 14: Picture of sabotaged pipeline in the Niger Delta[24]

[23] The causes of pollution: Understanding the evidence beyond the official statistics' available at https://www.report.bayelsacommission.org accessed 26/11/2025

[24] Figure 14 showing picture of sabotaged pipeline in the Niger Delta

(b) **Vandalism of Oil Pipelines**: vandalization is a key contributor to oil spillage in the Niger Delta Region.[25] Nigeria petroleum industry faces challenges with the pipeline system due to militancy and prevalence of pipeline vandalism in the Niger Delta Region.[26] Vandalism involves the deliberate destruction of property. The 2013 annual report of Nigerian Extractive Industry Transparency Initiative (NEITI) recorded that Nigeria lost US$10.9 billion to oil theft between 2009 and 2011.[27] In 1990s, vandals where mainly unemployed youths operating in the remote communities where pipeline pass, these vandals puncture the pipeline to create leaks and siphon fuel or other petroleum products in drum or jerry cans to sell in the black market.[28] These vandals use funnels, drilling tool and plastic hoses to siphon the petroleum products from the pipeline. Between 2010 and 2015, the NNPC reported about 18,000 cases of pipeline vandalism.[29]

[25] Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

[26] AkintundeAkinleye, "Oil Pipeline Vandalism in the Niger Delta', (2019) available at https://www.accord.orz.za accessed 27/11/2025

[27] AmalachukwuOkafor and AyobamiOlaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *AfeBabalola University Journal of Sustainability Development Law and Policy*, (2017) Vol 8, No. 2, pages 209-224

[28] AmalachukwuOkafor and AyobamiOlaniyan, (n16)

[29] OmeizaAjayi, 'Nigeria lost N51.28 billion to pipeline vandalism in 2015 – NNPC' 24 August, 2016, available at https://www.vanguardngr.com accessed 27/11/2025

Fig 15: Picture of a Vandalized Pipeline[30]

(c) **Oil Terrorism**: this is the most recent type of spill plaguing the Nigerian oil and gas industry and is mostly prevalent in the Niger Delta Region.[31] It involves intentionally blowing oil and gas infrastructures, including oil pipelines, installations and platforms using explosives, as well as the seizures of oil wells, flow stations, support vessels, barges and other oil facilities by organized militant group to disrupt the exploration and/or disruption of crude oil or its refined petroleum products.[32] In September 2005, Alhaji Asari Dokubo was arrested, after his arrest militant groups in the Delta Region instructed all multinational oil companies to leave the Region as they were preparing for war with the Nigerian government.[33] Oil terrorism was first experienced in December 2005 when the Movement for the Emancipation of the Niger Delta (MEND) blew up Shell's Opobo pipeline in Delta State.[34] After the first blow up, militants in the Region who were seeking control of a greater share of the nation's wealth adopted a terrorist strategy to impair the capacity of the petroleum industry to export crude oil. This was done in the hope that the Federal Government of Nigeria will lose substantial revenue needed to sustain the machinery of government and be forced to meet their political, economic and environmental needs/demands.[35]

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30 Figure 15 showing picture of a vandalized pipeline

31 Amalachukwu Okafor and Ayobami Olaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

32 Amalachukwu Okafor and Ayobami Olaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy*, (2017) Vol 8, No. 2, pages 209-224

33 Amalachukwu Okafor and Ayobam iOlaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

34 Freedom Onuoha, 'Oil Pipeline Sabotage in Nigeria: Dimensions, Actors and Implications for National security' (2008) African Security Review Vol. 17. No. 3 available at https://www.tandfonline.com accessed 27/11/2025

35 Amalachukwu Okafor and Ayobami Olaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

(d) **Pipeline Corrosion and Aging Infrastructure**: this is another very important challenge and a major contributor to oil spill incidence in the Niger Delta Region. Corrosion involves the rupturing or leaking of production infrastructure that is very old and lack regular inspection and maintenance.[36] Due to the small size of the oilfields and old unmaintained pipelines in the Niger Delta, corrosion tends to play a major role in spill. There is also an extensive network of pipelines between the fields as well as numerous small networks of flow lines (the narrow diameter pipes that carry oil from oil wellheads to flow stations)[37] allowing many opportunities for leaks.[38] Corrosion of pipeline infrastructure in the Niger Delta is worsened due to the salinity of the swampy and coastal environment.[39] Close of half of the oil spill that occurs in the Niger Delta region is caused by pipeline and tanker accidents.[40] Most of the pipelines and flow lines are laid above ground in onshore areas. Pipelines have an estimated life span of about 15 to 20 years, but the pipelines in the Niger Delta has been laid for more than 50 years and are thereby susceptible to corrosion. Most of the facilities Shell admitted were constructed between 1960s and early 1980s.[41] The Petroleum Industry Act, 2011 mandated for the Nigerian Upstream Petroleum

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36 Amalachukwu Okafor and Ayobami Olaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy*, (2017) Vol 8, No. 2, pages 209-224

37 Rasheedat Ajibidah Abbah, 'Environmental Issues in the Niger Delta' available at https://www.en,wikipedia.org accessed 28/11/2025

38 Amalachukwu Okafor and Ayobami Olaniyan, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

39 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

40 Robin Hinsch, 'Wahala: Trouble in the Niger Delta' available at https://www.theguardian.com accessed 28/11/2025

41 Rasheedat Ajibidah Abbah, 'Environmental Issues in the Niger Delta' available at https://www.en,wikipedia.org accessed 28/11/2025

Regulatory Commission (NUPRC) to ensure that multinational oil companies comply with the regulations that guides installation and maintenance of oil pipelines.[42]

Fig 16: Picture of an Old and Corrosive Pipeline[43]

(e)**Operational Spillage and Others/Unknown/Yet to be Determined:** this is primarily caused by the inefficiency in the operation of international and local oil and gas companies in Niger Delta Region. NOSDRA categorized operational spillage as those caused by corrosion, equipment/mechanical failure and operational/management failure.[44] Lack of maintenance of old and aging pipelines are management and operational failures and can cause spill due to stress, strain and collapse of oil pipelines.[45] NOSDRA oil spill monitor database revealed that 11% of oil spill from 1990-2022 was caused by equipment failure which results from the defect of mechanical components of pipeline infrastructure, including welding defects at joints,

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42 Regulation 40 of the Upstream Petroleum Safety Regulations. Section 11(2) Oil Pipelines Act, 1956

43 Figure 16 showing picture of an old and corrosive pipeline

44 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

45 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

pressure surge at flanges and cast deterioration.[46] Operational spillage also known as human error has become alarming and worrisome. Most multinational oil companies do not comply with international standards of laying and maintenance of pipelines.[47]

R**egulatory and Institutional Failure**: Nigeria is a nation that strives on having laws on paper without the political will to enforce compliance. The lack of political will to enforce environmental regulations by NUPRC and NOSDRA and respond to oil spills caused by the multinational oil companies that are highly influential is arguably the major cause of persistent oil spill in the Niger Delta Region.[48] UNDP report of 2006 documented that these agencies lack the technology and logistics to monitor onshore and offshore oil and gas operations and spills given that the Niger Delta Region topography is mainly swamps, creeks and deep seas, they therefore rely on multinational oil companies for logistic support to investigate degraded spill sites.[49]

3.2. Effects of Environmental Pollution in the Niger Delta

(i) Impact on the Environment

Perhaps the most saddening of all the oil spill impacts in the Niger Delta is the environmental impact. The Niger Delta is made up of diverse ecosystems of mangrove swamps, freshwater swamps, and rain forests. In fact, that is one of the largest wetlands in Africa as well as one of the ten most important wetlands in the

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46 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

47 Philip Agbonifo, 'Oil Spills Injustices in the Niger Delta Region: Reflections on Oil Industry Failure in Relation to the United Nations Environment Programme (UNEP) Report' *International Journal of Petroleum and Gas Exploration Management* (2016), Vol. 2, No. 1, pages 26-37 available at https://www.eajournals.org accessed 28/11/2025

48 Philip Agbonifo, 'Oil Spills Injustices in the Niger Delta Region: Reflections on Oil Industry Failure in Relation to the United Nations Environment Programme (UNEP) Report' I*nternational Journal of Petroleum and Gas Exploration Management* (2016), Vol. 2, No. 1, pages 26-37 available at https://www.eajournals.org accessed 28/11/2025

49 Philip Agbonifo, 'Oil Spills Injustices in the Niger Delta Region: Reflections on Oil Industry Failure in Relation to the United Nations Environment Programme (UNEP) Report' *International Journal of Petroleum and Gas Exploration Management* (2016), Vol. 2, No. 1, pages 26-37 available at https://www.eajournals.org accessed 28/11/2025

global marine ecosystems. However, the pollution due to oil spillage has gone a long way in transforming it to an inky blackness. As a matter of fact, the area is now so polluted that contaminated streams and rivers as well as loss of biodiversity and the destruction of forests characterize it.[50] The author is right to call it an ecological wasteland. Moreover, the type of the oil, the volume of the spill, duration of re-oiling, the extent of oil coverage on exposed roots along with the degree of substrate oiling all determine the damage caused by oil spillage on the mangrove. The toxicity of the oil is also an issue of concern. Light oil may be considered acutely toxic but heavier oil can smother people and could lead to death[51].

In fact, the effect of oil spillage on the Niger Delta environment can be well summarized in the word 'environmental degradation'. Some authors painted a clearer picture as they cites the effects of the Bonny Estuary spillage of 1984[52]. The data gathered from the spillage indicated that there was almost total elimination of the littoral in fauna and a highly significant oyster mortality at the spill site. Furthermore, there was a 30% oiling of mangrove prop roots and 32% oiling of seedlings within a 500 square meters area. However, the Bonny Estuary spillage described by Snowden &Ekweozor was considered minor as per the quantity of oil spill, the effect observed and the ecological significance. Nevertheless, it bears much relevance as its impact on the environment is indeed significant. Major oil spills by far affect the environment,

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50 AdatiAyuba Kadafa, 'Environmental Impacts of Oil Exploration and Exploitation in the Niger Delta of Nigeria's *Global Journal of Science Frontier Research Environment & Earth Sciences* (2012), Vol. 12, No. 3 https://globaljournals.orgaccessed 21/09/ 2025.

51 AdatiAyuba Kadafa, 'Environmental Impacts of Oil Exploration and Exploitation in the Niger Delta of Nigeria's *Global Journal of Science Frontier Research Environment & Earth Sciences* (2012), Vol. 12, No. 3 https://globaljournals.orgaccessed 21/09/ 2025.

52 John Snowden and Ikem Eloka Ekweozor, 'The impact of a minor oil spillage in the estuarine Niger delta' *Marine Pollution Bulletin*(1987) 595-599 available at https://www.sciencedirect.com accessed 28/11/2025

destroying aquatic life, degrading the environment and causing the loss of lives.[53] It should be noted that majority of oil spill from an oil spill remains in the environment, hence a spill from an operation in the ocean is different from an operation on tundra or wetland. Wetlands are considered one of the most sensitive habitats to oil spills and the most difficult to clean. Survey has revealed that oil spill on the environment in the Niger Delta Region affects the physical, ecological, psychological, social, economic, ecological and health implications on the locals.[54]

Fig 17: Picture of Dead Fishes which as a result of impact of Oil Spill on the Marine Habitat [55]

(ii)Impacts on Soil

Hydrocarbon pollution of soil can occur in several ways, from natural seepage of hydrocarbons in areas where petroleum is found in shallow reservoirs, to accidental spillage of crude oil on the ground. Regardless of the source of contamination, once hydrocarbons come into contact with the soil, they alter their physical and chemical properties. The degree of alteration depends on the soil type, the specific composition

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53 John Snowden and Ikem Eloka Ekweozor, 'The impact of a minor oil spillage in the estuarine Niger delta' *Marine Pollution Bulletin*(1987) 595-599 available at https://www.sciencedirect.com accessed 28/11/2025

54 John Akpoghelie, Ufuoma Igbuku and Ejiroghene Osharechiren, 'Oil Spill and the Effects on the Niger Delta Vegetation: A Review', *Nigerian Research Journal of Chemical Sciences*, (2021), Vol. 9, No. 1, available at https://www.unn.edu.ng accessed 26/11/2025

55 Figure 17 Showing picture of dead fishes which as a result of impact of oil spill on the marine habitat

of the hydrocarbon spilt and the quantity spilt[56]. Oil spill reduces soil fertility as well as destroying economic trees or reducing their production yield.[57] Oil from the refineries is transported through pipelines that sometimes are already corroded or rusted. The leakages from the corroded pipes usually spurt over a wide area destroying crops, fish ponds, economic trees, farmlands, and biodiversity. It has been reported that an average of one oil spill occurs every week causing grave damage to the environment in the Niger Delta[58]. According to Ugboma[59], fires occasioned by the explosion of oil tankers, oil installations, and leakages from oil pipes and pipelines explosion during oil bunkering or pipeline vandalism destroys the plants, insects, birds and also burns the organic matter content of the soil. The resultant effects of land pollution lead to a reduction in agricultural activities, water supply settlement and the ecosystem or biodiversity within the region[60]. Contaminated soil can affect the health of organisms through direct contact or via ingestion or inhalation of soil contaminants that have been vaporized. Soil also acts as a reservoir of residual pollution, releasing contaminants into groundwater or air over extended periods of time, often after the original source of pollution has been removed[61]. Oil spill reduced the quality of food crops as well as the content of ascorbic acid. The content of water leaf is said to be reduced by 36%, while crude protein content of cassava was reduced

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56 UNEP, 'Environmental assessment of Ogoniland' *Background to Environmental Degradation in Ogoni Land* (2011)52. Available at https://www.unep.org accessed 28/11/2025

57 Sule Tabita, Ibrahim Binta and others, 'The Environmental Impact of Oil Spill Pollution in Niger Delta Region, *Nigeria' Journal of Biological Sciences and Bioconservation* (2017), Vol. 9, No. 1 available at https://www.cenresinjournals.com accessed 28/11/2025

58 'Gas Flaring in Nigeria: A Human Rights, Environmental and Economic Monstrosity' (June, 2005) available at https://www.amisdelaterre.org accessed 28/11/2025

59 Gas Flaring in Nigeria: A Human Rights, Environmental and Economic Monstrosity' (June, 2005) available at https://www.amisdelaterre.org accessed 28/11/2025 Ibid

60 Tombari Bodo, Batombari Gbidum Gimah, 'The Pollution and Destruction of the Niger Delta Ecosystem in Nigeria: Who is to Blame?' *European Scientific Journal* (2020) Vol. 16, No. 5

61 Jennifer Baker, 'Guidelines on Biological impacts of Oil Pollution '*International Petroleum Industry Environmental Conservation Association* (1991)

by 40%. The food insecurity and declaim of the quantity of the food led to 24%.[62]Oil spill in the Niger Delta Region has devastating environmental damages, destroying ecosystems like mangrove forests, contaminating soil and water and impacting vegetation, leading to long term consequences both for the environment and the local population. When oil spills on land, it affects the growing conditions of plants by making it lack in essential nutrients like nitrogen and oxygen which is needed for the growth of plants. It also affects soil fertility, which in turn affects crop yield and on the long term lead to shortage of food making malnutrition inevitable.[63]

Fig 18: Picture Polluted soil in the Niger Delta 20 years after Oil Spill[64]

(iii) Impacts on Air

Air pollution is as a result of the presence of one or more contaminants in the atmosphere in a quantity above the bearable limits over time causing harm to man,

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62 Sule Tabita, Ibrahim Binta and others, 'The Environmental Impact of Oil Spill Pollution in Niger Delta Region, Nigeria' *Journal of Biological Sciences and Bioconservation* (2017), Vol. 9, No. 1 available at https://www.cenresinjournals.com accessed 28/11/2025

63 John Akpoghelie, Ufuoma Igbuku and Ejiroghene Osharechiren, 'Oil Spill and the Effects on the Niger Delta Vegetation: A Review', *Nigerian Research Journal of Chemical Sciences,* (2021), Vol. 9, No. 1. Also available at https://www.unn.edu.ng accessed 26/11/2025

64 Figure 18 shows picture polluted soil in the Niger Delta 20 years after oil spill

animal, plants and other materials exposed in the environment.[65] Oil spill can harm air quality as it contaminates the air with toxic pollutants like hydrocarbons, this in turn causes immediate and long term respiratory ill when inhaled, skin problem from too much exposure and other health issues for the locals of the region.[66] Particulates such as benzenes, toluene and other toxic hydrocarbon can penetrate the lungs and carry toxic chemicals into the body.[67] In all cases of air pollution, it was discovered that the quantities of these emissions far exceed both local and international standards, and have had various severe health consequences such as asthma, respiratory difficulties, premature deaths, cancer, and miscarriages among pregnant women.

3.3.Impact on Agriculture and Livelihood

The Niger Delta which is one of the most important wetland and coastal marine ecosystems in the world, a home to some 31 million people[68]is also the location of massive oil deposits which has generated an estimated $600 billion since 1960s. Despite this, the majority of the Niger Delta's populations live in poverty in contrast with the wealth generated by oil. According to the UNDP, more than 60 percent of the people in the Niger Delta depend on the natural environment for their livelihood[69] thus, environmental quality and sustainability are fundamental to their overall well being and development. The environmental resources base which many of them use for agriculture, fishing and collection of forest product, is their principal source of

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65 Tombari Bodo, Batombari Gbidum Gimah, 'The Pollution and Destruction of the Niger Delta Ecosystem in Nigeria: Who is to Blame?' *European Scientific Journal* (2020) Vol. 16, No. 5

66 Adewole Johnson Adesanmi, Oyetunji Babatunde Okedere and others, 'Atmospheric Particulate Fractions from Nigerian Crude Oil Spillage' (2021) available at https://www.sciencedirect.com accessed 28/11/2025

67 'Oil Spill and Air Pollution' available at https://www.ourair.org accessed 28/11/2025

68 Ndubuisi and Asia, 'Environmental Pollution in Oil Producing Areas of the Niger Delta Basin, Nigeria: Empirical Assessment of Trends and People's Perception' *Environmental Research Journal* (2007)1-4.

69 Geerd Wurthmann, 'Ways of Using the African Oil Boom for Sustainable Development' *African Development Bank, Economic Research Working Paper Series* (2006) 45 available at https://www.www.rrojasdatabank.info accessed 28/11/2025

food. The main crops grown include yam, cassava, cocoa, pumpkin and various fruits. Oil spills, waste dumping and gas flaring endemic in this area have affected the area for decades damaging the soil, water and quality. Most of the people affected are particularly the poorest and those who rely on traditional livelihoods such as fishing and agriculture. Damages from oil operations are chronic and cumulative and have acted in a severely impaired coastal ecosystem and compromised the livelihoods and health of the region's impoverished residents. Oil spills occur both on land and offshore. On land, oil spills destroy crops and damage the quality and productivity of soil that communities use for farming, while on water, damages fisheries and contaminate water use for drinking and other domestic purposes[70]. Oil spills happen frequently in the Niger Delta area as a result of the following reasons corrosion of oil pipes, poor maintenance of infrastructure, spills or leaks during processing at refineries[71], human error and vandalism or theft of oil. When oil is pumped out of the ground, the gas produced is separated and most of it is burnt as waste in massive flares in Nigeria which have been ongoing for many decades. This has long been acknowledged as extremely wasteful and environmentally damaging. This flares which continue for twenty-four hours a day in many areas, cause serious discomfort to people living near the flare sites. When this associated gas is flared, the combustion is often incomplete thus oil droplets fall on waterways, crops, house and people and also creates noise pollution in which communities may have to live with permanent light. Various harmful and toxic organic compounds introduced into the natural environment during oil extraction such as during seismic work, oil spill, gas flares and

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[70] Chinasa Agatha Ugwuanyi, Anna Garba and Shehu Bako Makarau, 'The Impacts Of Environmental Pollution On Agricultural Productivity In The Niger Delta' *Journal of Environmental Science and Resources Management* (2012)Vol. 4, available at https://www.cenresinjournals.com accessed 21/09/2025.

[71] 'Environmental Assessment Source Book' *Washington D. C. World Bank Technical paper* (1991)139. Available at https://www.documents1.worldbank.org accessed 28/11/2025

several other forms of pollution, changes the geo-chemical composition of the soil, river and other components of the environment.[72] This, however, affects agriculture and leads to a drastic decline in production output in both farming and fishing activities. Oil pipelines sometimes running through farmland, other oil infrastructures such as well heads and flow stations are often close to agricultural land. Without oil spills, the existence of such infrastructures within a relatively densely populated rural setting can cause difficulties for farmers. For example, communities in Ohaji/Egbema Local Government in Imo state cover a great deal of farmland in the area thus reducing farm activity. When oil spills occur on agricultural land, crops in the ground rarely survive and any crop that comes in contact with it is destroyed. According to Amnesty International (2009), lack of data makes it difficult to properly assess the level of impact of environmental pollution on agriculture.[73]

Fig 19: Picture of a Farmer walking on the marshy shore of a river polluted by Oil Spills at B-Dere, Ogoniland in Rivers State[74]

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72 Celestine Achi, 'Hydrocarbon Exploitation, Environmental Degradation and Poverty: Niger Delta Experience' Proceedings of the Diffuse Pollution Conference, Dublin(2003) available at https://www.ucd.ie accessed 28/11/2025

73 Celestine Achi, 'Hydrocarbon Exploitation, Environmental Degradation and Poverty: Niger Delta Experience' Proceedings of the Diffuse Pollution Conference, Dublin(2003) available at https://www.ucd.ie accessed 28/11/2025 Ibid

74 Figure 19 shows picture of a farmer walking on the marshy shore of a river polluted by oil spills at B-Dere, Ogoniland in Rivers State

3.3.1Socio-Economic Impact

To examine the socio-economic impacts of oil spills, it is imperative to consider that oil spills impact the environment and human health in many negative ways as discussed above. These effects lead to numerous socio economic impacts. It will interest one to note that the socio-economic impacts of the oil spill are really multi dimensional and contribute a lot to most of the insurgencies in the Niger Delta and Nigeria at large. Numerous socio economic impacts of oil spillage are well documented. Okonkwo[75] pointed out that these socio-economic impacts include the damage of farmlands, prostitution and rape, impacts of traditional institutions of authority on cultural values, conflicts, destruction of cultural areas and spirituality, destruction of communities as well as forced displacement, migration, and environmental refugees. In addition, it includes the vandalism of oil facility, kidnapping, and terrorism, food shortage and hunger, destruction of traditional means of livelihood and unemployment, loss of income and damage of fisheries and wildlife. Okonkwo further stressed that these socio-economic impacts are truly glaring but the law is quite ineffective in tackling them. The result is violence and remarkable negative impact on the economy in general as well as the socio well being of the people.

3.3.2. Impact on Health

Frequent and collectively substantial spills have amplified the health challenges faced in the Niger Delta Region. In 2011, a United Nations Environmental Programme (UNEP) report revealed that drinking water in Ogoniland was found to contain a

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[75] Eloamaka Okonkwo, 'Oil Spills in Nigeria: Are There Social and Economic Impacts?' *International Oil Spill Conference Proceedings* (2014) 289-300. Available at https://www.iosc.kglmeridian.com accessed 28/11/2025

known carcinogen at levels 900 times above World Health Organization guidelines[76]. In another study, it was found that oil spills reduce the ascorbic acid content of vegetables by as much as 36% and the crude protein content of cassava by 40%, which results in a 24% increase in the prevalence of childhood malnutrition in the region[77]. In the same study, it was found that animals that come in contact with crude oil could be hemotoxic (destroying red blood cells) and hepatotoxic (destroying the liver), and could suffer infertility and cancer. Gas flaring is another major source of environmental degradation resulting from oil exploration activities with serious health risk implications. Flaring of natural gas from oil stations as a byproduct of crude oil production has been a normal occurrence in Niger Delta[78]. It has been suggested that more gas is flared in the Niger Delta than anywhere else in the world. Data from two flow stations show that on average approximately 800,000 m3 /day of gas is flared[79]. Gas flares increase the risk of disease, food insecurity, and weather damage. Emissions from combustion of associated gas (AG) contain toxins, such as benzene, nitrogen oxides, dioxins, hydrogen sulphide, xylene, and toluene[80]. Oil spills and gas flares contaminate surface water, ground water, air, and crops with hydrocarbons and these can easily accumulate in aquatic organisms and food crops on which the locals depend. Respiratory problems such as asthma and bronchitis, lung disease, heart attack, miscarriage, and skin disease are just some of the reported cases becoming

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76 Josephine Adekola, Olalekan Adekola and others 'Health Risks from Environmental Degradation in the Niger Delta, Nigeria' (2017) https://www.journals.sagepub.com accessed 21/09/2025.

77 Best Ordinioha and Seiyafa Brisibe, 'The Human Health Implications of Crude Oil Spills in the Niger Delta, Nigeria: An Interpretation of Published Studies' *Journal of the Nigeria Medical Association* (2013)10. Available at https://www.pmc.ncbi.nih.gov accessed 21/09/2025

78 Opukri and Ibaba Samuel Ibaba, 'Oil Induced Environmental Degradation and Internal Population Displacement in the Nigeria's Niger Delta' *Journal of Sustainable Development in Africa* (2008)173–193. Available at https://www.jsd-africa.com accessed 28/11/2025

79 Michiko Ishisone, 'Gas Flaring in the Niger Delta: The Potential Benefits of its Reduction on the Local Economy and Environment'(2004) https://www.semanticscholar.orgaccessed 21/09/2025.

80 Gabriel Eweje, 'Environmental Costs and Responsibilities Resulting from Oil Exploitation in Developing Countries: The Case of the Niger Delta of Nigeria' *Journal of Business Ethics* (2006)27–56. Available at https://www.ideas.repec.org accessed 28/11/2025

prevalent as a result of exposure to heat from oil exploration-related activities[81]. However, the extent to which other confounding variables (e.g. economic instability and a lack of understanding of the exposure to risk) have contributed to these health problems requires further investigation.

There are also indications of emerging health problems in the region. Studies by Dendup and colleagues, revealed that of the two cancer reference centers: Ibadan in the South- west and Port Harcourt in the Niger Delta the ratio of reporting was 1:4 for University of Port Harcourt Teaching Hospital (UPTH) (904) and University college Hospital (UCH) (3521) respectively[82]. The results indicate that apart from prostate and breast cancers that were higher in Ibadan (79.1%) than in Port Harcourt (75.4%) both the lung and skin cancers were more prevalent in Port Harcourt than in Ibadan. This observation is consistent with the researchers' earlier studies, which indicated increased lung cancers in the Port Harcourt environment due likely to exposure to atmospheric insults. Similarly, the higher percentage of skin cancer in Port Harcourt above that recorded in Ibadan could be explained though with some degree of uncertainty by the increased environmental risk factors in the more industrialized Port Harcourt area[83]. Cancer prevalence is believed to be on the increase. Official documents in Nigeria have so far not addressed these health effects sufficiently, although their position as potential major contributors to the disease burden in oil-bearing communities is not in doubt.

3.4. Management Tactics and Methods for Reduction of Oil Spillages

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81 Simon Ovuakporaye, Peter Chukwuemeka Aloamaka, Anthony Ojieh and Daniel Ejebe, 'Effects of Gas Flaring on Lung Function Among Residents in Gas Flaring Community in Delta State, Nigeria' *Research Journal of the Environmental Earth Sciences* (2012)525–528. Available at https://www.semanticscholar.org accessed 28/11/2025

82 Tashi Dendup, Xiaoqi Feng, Stephanie Clingan and Thomas Astell-Burt, 'Environmental Risk Factors for Developing Type 2 Diabetes Mellitus: A Systematic Review' *Int. J. Environ. Res. Public Health* (2018) 78. https://www.pnc.ncbi.nlm.nih.gov accessed 21/09/2025.

83 Godson Ana, Sridhar Mynepalli and Elijah Afolabi Bamgboye, 'Environmental Risk Factors and Health Outcomes in Selected Communities of the Niger Delta Area, Nigeria' *Perspective in Public Health* (2009) 129, 183–191. https://www.journals.sagepub.comaccessed 21/09/2025.

The Nigerian government has taken some remarkable steps and employed different methods to mitigate spillages. Various laws and legislations have been put in place against pipeline vandalism and oil spillage by various means in order to mitigate the issue even though its success has not been significant. Moreover, offenders and conspirers have been labeled capital punishment, and laws have been passed against crude oil spillage by multinational oil companies. However, it is pertinent to take a closer look at some of the steps that were taken by the government over the years against oil spillage.

3.4.1 Technological Innovations

The government has recognized the importance of technological advancements in oil spill management. Recent initiatives include the development of the Satellite-based Methane Emission Tracker (SMET) by the National Oil Spill Detection and Response Agency (NOSDRA), which aims to improve leak detection and monitoring capabilities across the country.[84]Additionally, investments in advanced technologies for pipeline monitoring and maintenance are being prioritized to reduce incidents of equipment failure and sabotage, which are major contributors to oil spills. The application of bio-remediation and phyto-remediation techniques is also gaining traction, utilizing microorganisms and plants to restore contaminated environments effectively.[85]

3.4.2 Strengthening Regulatory Frameworks

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[84] Augusta Nkem and Susan Devine, Daprim Ogaji and Stephanie Topp, 'Economic Exclusion and the Health and Wellbeing impacts of the Oil Industry in the Niger Delta Region: A Qualitative Study of Ogoni Experiences' *International Journal for Equity in Health* (2024) 183. Available at https://www.link.springer.com accessed 28/11/2025

[85] Raphael Enaholo and Charles Adanu, 'Residents' Perception of the Impact of Crude Oil Spillage on Agricultural Production in Ibeno Community, Akwa Ibom State' *Premier Journal of Environmental Science* (2025) available at https://www.premierscience.com accessed 13/10/2025.

In response to the persistent challenges of oil spills, the Nigerian government has enacted various legal frameworks, including the Petroleum Industry Act, to address issues of transparency and accountability within the oil sector.[86]However, enforcement remains weak due to regulatory gaps and insufficient penalties for non-compliance.[87]To combat these shortcomings, there is a pressing need for legislative reforms that can impose stricter penalties on oil companies, thereby compelling them to adhere to best practices and invest in preventative measures.

3.4.3 Community Engagement and Capacity Building

Community involvement is highlighted as a crucial element in effective oil spill response strategies. The Nigerian government is actively promoting community engagement initiatives to enhance local participation in oil management decisions, thereby fostering a sense of ownership and responsibility among residents.[88]Educational programs aimed at raising awareness about the environmental and health risks associated with oil spills are being implemented, alongside efforts to empowerlocal populations with alternative livelihood opportunities in sustainable agriculture and eco-tourism.[89]Such initiatives are designed to reduce dependency on oil-related activities and enhance economic resilience in affected communities.

3.4.4 Hydrocarbon Pollution Remediation Project (HYPREP)

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86 Godspower Oke Omokaro, Shadrack Efeni, Israel Adeyanju and Justice Obomejero, 'Oil spillage in the Niger Delta: Impacts, Institutional Failures, and Policy Reforms' (2025) available at https://www.semanticchola.com accessed 13/10/2025.

87 Cornelius Ezeh and Vanessa Onyema, Chinonye Obi and Anene Moneke, 'A Systematic Review of the Impacts of Oil Spillage on Residents of Oil-Producing Communities in Nigeria' (2023) https://www.semanticscholar.org accessed 13/10/2025.

88 Enegide Chinedu and Chukwuma Chukwuemeka, 'Oil Spillage and Heavy Metals Toxicity Risk in the Niger Delta, Nigeria' *Journal of Health and Pollution* (2018) https://www.doaj.org accessed 13/10/2025.

89 Ibid

The Hydrocarbon Pollution Remediation Project (HYPREP) was established as partof the government's response to the persistent environmental degradation in theNiger Delta, particularly due to oil spills and exploration activities. It is overseen by the federal government and includes a governing council made up of senior ministers, community representatives, and non-governmental organizations (NGOs)to ensure stakeholder involvement in remediation efforts.[90] Despite its mandate, HYPREP has faced criticisms related to mismanagement and inefficiency, particularly concerning the allocation and use of funds designated for clean-up operations. Allegations of bureaucratic challenges have hindered the effectiveness of this agency, which has raised concerns about its capability to deliver expected outcomes to affected communities[91].

However, Nwoko did not mince words in asserting that one of the problems of the developing country like Nigeria is the inherent government failures in legal enforcement[92]. Moreover, he further pointed out that the petroleum companies are also not able to comply with petroleum-related legislation in the country. This is the major reason for the repeated failure by the government to effectively mitigate and drastically reduce the oil spillage in Nigeria Delta and Nigeria at large. In lieu of this, there have been an increase in armed attacks on the Nigeria oil industry and a massive expansion of oil theft which Nwajiaku-Dahou rightly called a political war[93]. It obviously cannot be argued that the apathetic attitudes of the Nigerian government in

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90 'Niger Delta: Speaker Tajudeen Inaugurates Committee to Probe Crude Oil Spill Clean-up Funds' (2025) https://www.gazettengr.com accessed 13th October 2025.

91 Mulade Sheriff and others, 'Oil Spillage in the Niger Delta: Government and Oil Companies Remediation Activities' *International Journal of Research Publication and Reviews* (2025) https://www.ijrpr.com accessed 13th October 2025.

92 Charles Nwoko, 'Assessing the Socioeconomic Impacts Arising from oil Pollutions in the Niger Delta Region of Nigeria: Including Proposals for Solution' (2014), available at https://www.aaltodoc.aalto.fi accessed 28/11/2025

93 Kathryn Nwajiaku-Dahou, 'The Political Economy of Oil and 'Rebellion' in Nigeria's Niger Delta' *Review of African Political Economy*(2012) 295-313, available at https://www.tandfonline.com accessed 28/11/2025

dealing with the oil spillage and oil management issues are the major reasons for the increased possibility of rebel participation among youths living in the Niger Delta of Nigeria. According to Okonkwo[94], the reason for the failure of the law includes corruption, conflicting roles, weak penalties, enforcement problems and so forth. Furthermore, the government should review spill response procedure, ensure independent monitoring, amend laws, improve enforcement initiatives and better clarify institutional roles.

[94] Eloamaka Okonkwo, 'Oil Spills in Nigeria: Are There Social and Economic Impacts?' *International Oil Spill Conference Proceedings* (2014) 289-300. Available at https://www.iosc.kglmeridian.com accessed 28/11/2025

CHAPTER FOUR

LEGAL AND INSTITUTIONAL FRAMEWORK FOR THE CONTROL AND MANAGEMENT OF OIL SPILL IN NIGERIA

The Federal Government is responsible for the management of oil spill pollution in Nigeria, the grundnorm in this respect is the Constitution of the Federal Republic of Nigeria.[1] The constitution provides that the government is responsible for mines and minerals including oil fields, Oil mining, geological survey and natural gas.[2] Nigeria before 1988 did not have any comprehensive legislative instrument that regulated the environment and relied heavily on several statutes to manage and protect the environment. Most of these statutes were reactive, only responding to the changing needs of the economy, industry and expanding urbanization in order to address the immediate problem of health and safety.[3] The famous Koko saga of 1988 gave birth to the Federal Environmental Protection Agency (FEPA) Act No. 58 of 1988 and the Harmful Waste (Special Criminal Provisions) Act of 1988. These Acts were however not adequate enough to deal with enforcement issues and this created a vacuum in the effective enforcement of environmental standards and regulations in Nigeria. To effectively address this deficiency, the National Environmental Standards and Regulations Enforcement Agency (NESREA) was established as a Parastatal of the federal Ministry of Environment. Sadly, the NESREA Act does not cover matters relating to oil spill.[4] The Nation Oil Spill Detection and Response Agency (NOSDRA) was later established in 2004 to administer the National Oil Spill Contingency Plan in

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1 Rose Ohiama Ugbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillage in Nigeria' *The Nigerian Law Journal* (2017), Vo. 20, No. 2

2 Rose Ohiama Ugbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillage in Nigeria' *The Nigerian Law Journal* (2017), Vo. 20, No. 2

3 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal,* (2016), Vol. 7, No. 1, pages 32-50

4 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

compliance with the International Convention on oil Pollution Preparedness, Response and Cooperation (OPRC90).[5] We shall not briefly examine statutes regulating oil spill in Nigeria.

4.1. Domestic Legal Framework

Nigeria has enacted several laws to regulate oil spillages amongst other environmental issues connected with oil and gas activities. In spite of the statutory variety in this legal/policy sphere, the vibrancy and contributions of the enabling laws are indeed questionable.

4.1.1 **The 1999 Constitution of the Federal Republic of Nigeria** (As Amended)

Chapter two and specifically Section 20 of the constitution guarantee the right to a healthy environment. All laws derive their validity from the constitution all laws derive their validity from the Constitution. The ground norm provides that '***the State shall protect and improve the environment and safeguard the water, air, land, forest and wildlife of Nigeria.***'[6] It follows that the government is under an obligation to protect the ecosystem, preservation of water, air, land, flora and fauna in Nigeria from pollution including oil spill. However, the constitutional provisions stated above falls under Chapter 2 which deals with Fundamental Objectives and Directive Principles of State Policy which are non-justiciable in the Nigerian courts. This singular point is a major setback to environmental protection efforts in general and oil spillage in particular, as the Constitution gives rights under Chapter 2 with one hand and takes the same right with another by robbing the Court of jurisdiction to hear matters

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5 Adati Ayuba Kadafa, Mohamad Pauzi Zakaria and Fadhilah Othman, 'Oil Spillage and Pollution in Nigera: Organizational Management and Institutional Framework' *Journal of Environment and Earth Science* (2012), Vol. 2, No. 4

6 Section 20 CRFN

connected therewith.[7] It is opined, that the constitution being the basic law of the land ought not to contain provisions that cannot be enforced. As the non justiciability of environmental rights as provided by the constitution is partly responsible for the pitiable and miserable plight of the people of the Niger Delta Region.[8] The dominance and continued influx of multinationals oil companies in this region is largely responsible for the pollution which is as a result of oil spillage. Due to the pollution aquatic life, plants and animals are destroyed. Fishing is affected due to the polluted water and that is the main source of livelihood of the people of that region. In spite of this ugly picture, the environmental rights of the people of this region still remains a mirage.[9]

4.1.2 **National Environmental Standards and Regulations Enforcement Agency (NESREA) Act, (2011)**

NESREA Act is the main environment legislation which provides a comprehensive framework for combating environmental degradation including pollution in Nigeria. It creates an administrative Agency called NESREA which is one of the key parastatals in the Federal Ministry of Environment. The Agency is charged with the enforcement of environmental standards, regulations, rules, laws, policies and guidelines.[10] The Agency established by the Act is given broad powers to deal with matters pertaining to environmental degradation, including the authority to enforce compliance with the provisions of international treaties in the area of oil and gas, chemicals, marine and

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7 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

8 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

9 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

10 Rose Ohiama Ugbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillage in Nigeria' *The Nigerian Law Journal* (2017), Vo. 20, No. 2

wildlife, pollution, etc.[11] It is important to note that the authority of the Agency in the oil and gas area is nominal[12] as it is prohibited from investigating and dealing in oil spillage cases.[13] The Act established a statutory body saddled with the obligations of enforcing ecological laws and regulations. However, the enforcement of environmental laws and regulations in the upstream petroleum sector is totally outside scope of the authority of the agency[14]. This constitutes an operational lacuna in the Act, as it diminishes the potential for capacity deployment which comes at a high premium in the upstream sector. Hence, requisite amendments must be made to increase the scope of the agency in this significant aspect. It further brings to the light the systemic malaise in Nigeria where parallel agencies are established to perform similar functions, ultimately escalating the culture of redundancy and resource waste.[15]

4.1.3 **National Oil Spill Detection and Response Agency, (NOSDRA) Act (2006)**

National Oil Spill Detection and Response Agency (NOSDRA) Act is another legislation which regulates issues of oil spillage, its management, responses, remediation and clean up operations in Nigeria. The Act provides for the establishment of National Oil Spill Detection and Response Agency (NOSDRA) and other related matters[16] which is responsible for the preparedness, detection and prompt response to all oil spillages in Nigeria.[17] From the provisions of section 1 of

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11 Rose Ohiama Ugbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillage in Nigeria' *The Nigerian Law Journal* (2017), Vo. 20, No. 2

12 Rose OhiamaUgbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillage in Nigeria' *The Nigerian Law Journal* (2017), Vo. 20, No. 2

13 Section 8(g) NESREA Act

14 Adekola Oyebamiji Adeyemo, 'Assessing Environmental Protection and Management Systems in West Africa: A Case Study of Nigeria' *Dissertations, Theses, Geography and Environmental Resources. Ann Arbor: Southern Illinois University at Carbondale* (2008) 20.

15 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

16 Section 1 of the Act

17 Section 5 of the Act

the Act, it is clear that the primary purpose of the Act is to ensure standardization of procedures for the detection, prompt response, recovery of oil spills, cleanup and restoration of impacted areas to their original status.[18] This is in direct adherence to the implementation of the stipulations of the 1990 Convention on Oil Pollution Preparedness, Response and Cooperation.[19] By the provisions of the Act, oil spillers are duty bound to report any incidence of oil spillage to the Agency in writing not later than 24hrs after its occurrence and failure to report same attracts a penalty of N500,000.00 only for each day the incidence of the spillage is not reported reckoning from the day of its occurrence.[20] Similarly, failure of an oil spiller to cleanup the impacted site to all practical extent including remediation attracts a further fine of N1,000,000.00 .[21] It is clear that the Act is positioned to punish spillers, protect the environment and also collaborate with other sister institutions in the event of disastrous spill.[22] The Agency administers the procedure for assessment of damage for settling compensation claims, it however did not make provisions or stipulations for the payment of compensation to victims of oil spillage rather concerned itself with the punishment of spillers and generation of revenue for the Federal Government by way of imposition of fines on oil spillers.[23] Section 39 of the Act also requires the owners of oil production facilities to comply with specific statutory obligations such as; carrying out the necessary clean-up operations and to furnish reports to the environmental agency. It is noteworthy that the agency manages the execution of Federal Government's policies on National Oil Spill Contingency plan. This outlook

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18 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

19 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

20 Section 6(2) NOSDRA Act

21 Section 6(3) NOSDRA Act

22 Section 19 Act

23 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

is consistent with that of the International Convention on Oil Pollution Preparedness Response and Cooperation. Furthermore, there are attached penalties for breach of obligations, even as such overtime does not seem to have delivered the necessary deterrent effect in the upstream sector. Thus, it has become imperative in view of the critical states of affected communities to deploy more innovative and enduring options to punish non-compliant operators. Perhaps a composite of mechanisms should be applied in ensuring application of sanctions at different levels depending on the degree of the infractions.[24] The Act created two Regulations Oil Spill and Oily Waste Management Regulations, to regulate oil facilities likely to discharge oil and pay penalties in respect of damages caused by spill during discharge. And Oil Recovery, Cleanup, Remediation and Damage Assessment Regulations which informed the polluters pay principles and ensure the mandatory compensation of victims of oil spillage.[25]

4.1.4 **Environmental Impact Assessment Act, (1992)[26]**

The Act principally provides for compulsory impact assessment of all public and private projects to be carried out at the commencement stage where the extent, nature or location of a proposed projector activity is such that it is likely to significantly affect the environment.[27] Public and Private sectors are mandated to give prior consideration to the environmental effect of any activity before it is embarked upon. An environmental impact assessment is compulsory in certain cases including oil and

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24 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

25 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

26 CAP E12 LFN 2004

27 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

gas field development and construction of oil refineries and pipelines.[28] It promotes knowledge sharing on how to address the environmental impact of projects especially as the long-term well being of community members are primal in the overall estimation. However, disregard for ethical standards, poor data collation, unsophisticated monitoring practices and assessment various categories of projects. The Ministry of Environment is culpable in this regard by not leveraging on the spread of its state counterparts to aggregate, deploy and reappraise environmental impact assessment undertakings.[29]

4.1.5 **The Petroleum Industry Act, 2021**

This Act is the most recent and comprehensive reform in Nigeria's oil and gas sector. This Act provides for the exploration of petroleum from the earthly waters and the continental projection of Nigeria and to vest the ownership of the natural resources, as well as all on-shore and off-shore revenues from petroleum resources derivable from the federal government and for all matters related.[30] This Act places ownership and control of all petroleum resources in Nigeria under the control of the Federal Government when it provided thus, '***the property and ownership of petroleum within Nigeria and its territorial waters, continental shelf and exclusive economic zones is vested in the Government of the Federation of Nigeria***[31]' meaning that lands and waters containing natural resources which were owned by individuals, communities, local governments are now vested in the Federal Government.

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28 Juliet Aimienrovbiye and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal,* (2016), Vol. 7, No. 1, pages 32-50

29 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

30 Petroleum Act, L.N 69 of 27 November 1969, Cap. P10 LFN, 2004.

31 Section 1 PIA, 2021

The Act represents a holistic legislation that provides for the rights, responsibilities and duties of the various stakeholders in the oil and gas industry, while also making express provisions for fiscal responsibilities in safeguarding the environment.[32]

Under the Act, licensees or lessee who engage in upstream and midstream petroleum operations are to submit an environmental management plan to the Nigerian Midstream and Downstream Petroleum Regulatory Authority, the regulators of the midstream and downstream sectors (the Authority) or the Nigerian Upstream Petroleum regulatory Commission, the regulator of the upstream sector (the Commission). These two new institutions where created by the Act to approve the management plans[33] in respect of projects that requires environmental impact assessment of licensee or lessee.[34] The Act went further to create the environmental remediation funds for the rehabilitation or management of negative environmental impacts arising from the operations of the licensee or lessee including oil spillage.[35] The contribution to be paid is determined by the size of the operations and the level of environmental risk that may exist. This fund is applied where the licensee or lessee fails to rehabilitate or manage negative impacts on the environment arising from its operations including oil spillage.[36]

Under the Act the license or lease of the licensee and lessee can be revoked on grounds of failure to comply with environmental obligations required by applicable laws,[37] also fair compensation is to be paid to persons and communities who has

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32 Funmilayo Odude, 'How does the Petroleum Industry Act Protect our Environment?' available at https://www.financialnigeria.com accessed 29/11/2025

33 Section 102, PIA 2021

34 Funmilayo Odude, 'How does the Petroleum Industry Act Protect our Environment?' available at https://www.financialnigeria.com accessed 29/11/2025

35 Funmilayo Odude, 'How does the Petroleum Industry Act Protect our Environment?' available at https://www.financialnigeria.com accessed 29/11/2025

36 Funmilayo Odude, 'How does the Petroleum Industry Act Protect our Environment?' available at https://www.financialnigeria.com accessed 29/11/2025

37 Section 96 (1)(i) PIA, 2021

suffered loss and injusry from the operations of the licensee and lessee.[38] It has been established that MOCs in the Niger Delta do not comply with best practices in the oil industry as some of the equipment used during the process of extraction is outdated. Best practices require that the equipment should usually have a lifespan of 15 years, but in Nigeria, the records showed that MOCs' equipment could last as long as 25 years and their operational failures and faulty equipment lead to oil spillage in the neighbouring communities, which diminishes the rights of the people to a safe and healthy environment.

It is important to emphasize as stated earlier that Section 101(3)(4)(5) of the Act, provide for necessary acquisition subject to payment of fair and adequate compensation for the infringement of apparent rights to any person who owns or is in lawful occupation of the licensed or leased land. By these provisions MOCs are liable to pay adequate compensation in the event of oil and gas pollution, although in practice these MOCs hardly pay sufficient compensation as provided by the law.[39] There Act has now provided for penalty for the license holder for any environmental damage, or for compulsory cleanup and restitution of the environment in case of acts resulting in hostile impact on the environment such as oil and gas pollution. Even with that in place, the MOCs are not committed to environmental protection, as for now they pay little or no damage for crops, economic trees and other property; they leave the environment contaminated and useless after exploration, such as in Ogoniland. The lack of political will to enforce the provisions of Petroleum Industry Act, 2021 and political interference due to vested interest of some political

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38 Section 101(3)(4)(5) of the PIA, 2021

39 Simon Warikiyei Amaduobogha, 'The Legal Regime for Petroleum activities in Nigeria' in Tina Hunter (eds), *Regulation of the Upstream Petroleum Sector: A Comparative Study of Licensing and Concession Systems* (Edward Elgar Publishing 2015) 263.

stakeholders is the reasons these MOCs neglect to operate under international best standards.[40]

4.1.6 **Oil in Navigable Waters Act, 1968**[41]

The Oil in Navigable Waters Act is a very comprehensive legislation governing the criminal liability for the pollution of waters by oil.[42] The Act was enacted to implement the terms of International Convention for the Prevention of Pollution of the Sea relative to oil product and to make provision for such prevention in the navigable waters of Nigeria.[43] A body of water is said to be navigable if it is deep, wide and slow enough for a vessel to pass through it. Navigable waters also connotes waters that provides a channel for commerce and transportation.[44] The Act was enacted to prevent marine pollution hazards in the navigable waters. The Act did not however provide for compensation, it rather made provision for penalty techniques against non compliance.[45] The Act a replica of 1968 compilation is relatively behind the times and does not mirror modern trends geared at reducing the incidence of oil spillage. Specifically, the punitive measures imposed by Act are completely insufficient because the fines imposed are exceedingly low and do not reflect the widespread and long-term cost implications associated with oil spillage. There are evident gaps in terms of provisions; compelling the liable party for oil spillage to clean up the water after the spill or to provide funds to clean up the affected areas. This omission further negates the significance and integral role of oil resources to Nigeria's social-economic

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40 Abdulsalam Abiodun, 'Strengthening Environmental Governance in Nigeria's Oil and Gas Sector: A Call to National Action for the National Assembly' (2024) available at https://www.medium.com accessed 29/11/2025

41 CAP O6 LFN 2004

42 Rose Ohiama Ugbe and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillage in Nigeria' *The Nigerian Law Journal* (2017), Vo. 20, No. 2

43 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

44 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

45 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

development. The culpable parties should thus be held accountable having been vested with the contractual latitude to explore for oil resources.[46]

3.1.7 **Oil Pipeline Act, (2004)[47]**

The Act provides for issuance of licenses for and production and maintenance of oil pipelines in Nigeria. NEITI set out the intent and objectives of the Oil Pipeline Act to include provision of licenses to be granted for the establishment and maintenance of pipelines incidental and supplementary to oil fields and oil mining and purposes ancillary to such pipelines.[48] Pipeline infrastructure is central to the transportation of crude as well as refined oil to designated locations. Hence, the applicable laws must accommodate industry processes that promote best industry practices to ensure optimal growth and sustainability of this important phase in the oil and gas value chain. Instructively, the act should be harmonized with the Petroleum Industry Act to serve an omnibus legal frame work for the oil and gas sector[49]. Undoubtedly, vandalization of pipelines in Nigeria contributes its own fair share to the significant quantities of oil spillage. Thus, it is necessary to capture this dimension in terms of pipeline design and deployment.[50]

4.1.8 **Niger Delta Development Commission (NDDC) Act**

The Act establishes the Commission[51] which among its functions is to tackle ecological and environmental problems arising from the exploration of oil and

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46 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy,* (2018), Vol. 8, No. 1, pages 220-226

47 CAP O6 LFN 2004

48 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

49 Olusola Olujobi and Olabode Oyewunmi, 'Annulment of Oil Licences in Nigeria's Upstream Petroleum Sector: A Legal Critique of the Costs and Benefits' *International Journal of Energy Economics and Policy* (2017), Vol. 7, No. 3, pages 364-369.

50 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

51 NDDC Act, Cap. N86, LFN 2004.

minerals in the Niger Delta area, to have a dialogue with the federal government and member states on the prevention and control of oil spillages, gas flaring and other environmental pollution,[52]and to interact with the various oil, mineral and gas prospecting and producing companies on all matters of environmental pollution, prevention and control.[53]

The provision of the NDDC Act is not a very impressive legal framework, and the government's lack of will to enforce environmental regulations against erring oil companies, coupled with the restricted access to justice for those who may be adversely affected by the activities of the MOCs, make effective control of these MOCs at the national level near illusion.[54]

4.1.9 **National Emergency Management Agency (NEMA) Act, (2004)**[55]

This Act was enacted to address issues of national emergencies, and an Agency known as National Emergency Management Agency was established to implement the provisions of the NEMA Act. The functions of the Agency includes disaster management, monitoring the state of preparedness of all Agencies, bodies or commissions which may contribute to disaster management in Nigeria. Oil spillage is a disaster and NEMA is only involved to the extent of the disaster caused by oil spillage by providing reliefs for people living in oil spewed environment.[56]

4.1.10 **Environmental Guidelines and Standards for the Petroleum Industry (EGASPIN)**

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52 Section 7(1)(h)

53 Ibid., s7(1)(i)NDDC Act, Cap. N86 LFN 2004.

54 Simon Warikiyei Amaduobogha, 'The Legal Regime for Petroleum activities in Nigeria' in Tina Hunter (eds), *Regulation of the Upstream Petroleum Sector: A Comparative Study of Licensing and Concession Systems* (Edward Elgar Publishing 2015) 263.

55 Cap N34 LFN, 2004

56 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

EGASPIN sets standards for environmental protection and remediation and requires oil companies to commence cleanup within 24hours of the occurrence of a spill.[57] Where a spill is on inland waters or wetland the only option for cleanup is complete containment and removal.[58] EGASPIN contains guidelines for monitoring, handling, treatment and disposal of effluents, oil spills and chemical drillings, mud and drill cuttings by lessees and oil spills.[59] EGASPIN provides for a contingency plan for the prevention, control and combating of Oil and Hazardous Substances Spills, the Oil Spill Contingency Plan is an action plan to be followed in the event of any spill.[60]

4.2 International Legal Frameworks And Nigeria's Commitments

4.2.1 International Convention for the Prevention of Pollution of the Sea by Oil (ICPPSO) (1954)

The Convention on pollution of the sea was held in London with the primary aim of taking action by primary agreement on how to prevent the pollution of the sea by oil discharge from ships. It was the view of the participants of the Convention that the best way to circumvent the pollution of the sea by ship is through the all inclusive convention that gave birth to ICPPSO. This convention prohibits any form of oily discharge on the sea by tankers and ships and in doing that penalties are imposed on contracting government and the defaulters of the provisions of the convention.[61] Nigeria as a contracting government can enforce unlawful discharge of oil or oily mixture from any ship within her territorial waters/sea.[62] ICPPSO was ratified in

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57 Part II paragraph 5.1.1 EGASPIN

58 'The Legal Framework for the Control of Pollution in the Oil and Gas Sector' available at https://www.motun911.wordpress.com accessed 29/11/2025

59 'The Legal Framework for the Control of Pollution in the Oil and Gas Sector' available at https://www.motun911.wordpress.com accessed 29/11/2025

60 'The Legal Framework for the Control of Pollution in the Oil and Gas Sector' available at https://www.motun911.wordpress.com accessed 29/11/2025

61 Article VI ICPPSO

62 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

Nigeria when the government enacted the Oil in Navigable Waters Act as a direct adherence and implementation of the aims and objectives of the Convention.[63]

4.2.2. **International Convention on Oil Pollution Civil Damage (ICOPCD) (1969)**

This convention is targeted at addressing the devastating issues of pollution on a global level. This convention was informed by the disastrous impact of the 'Torrey Canyon' Oil Spill Incident of 1967. The incident at the time it occurred highlighted the need for a new international regime in civil liability for oil pollution damage which in 1969 precipitated the International Maritime Organization to sponsor an International Legal Conference on Maritime Pollution Damage for the purpose of adopting the convention of liability for compensation and pollution.[64] The primary aim of the convention was to ensure that compensation is paid to persons who suffer damages caused by oil pollution as a result of oil discharge or escape from ships and the convention was also aimed at standardizing the international rules and procedures on oil pollution liability and compensation.[65]

4.2.3 **International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage (ICEIFCOPD) 1971**

This convention is a follow up of the 1969 Civil Liability Convention which provided a useful mechanism for ensuring the payment of compensation for oil pollution damage but did not satisfactorily deal with the legal, financial and other questions raised during the conference which includes proposal to establish an International Fund for the Compensation of Oil Pollution Damage.[66] In Nigeria, ICEIFCOPD was

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63 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

64 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

65 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

66 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

ratified and domesticated in 2006 by the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damages as Amended (Ratification and Enforcement) Act. Fund for the compensation of victims of oil pollution was established by Article 1 and 2 of ICEIFCOPDREA.[67]

4.2.4 Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) (1990)

This convention established measures for dealing with marine oil pollution incidents nationally and in cooperation with member states viz-a-viznon member states. Parties to this convention undertook to take appropriate measures towards preparing and responding to oil pollution incidents. It is in line with this undertaking that Nigeria as a member state enacted the NOSDRA Act which is the Nigerian framework for the implementation of her obligations under the OPRC Convention.[68]

4.2.5 Convention on Biological Diversity, (1993)[69]

This international agreement is very important in terms of it cross-disciplinary characteristics which covers international law, environmental law, international relations and sustainable resources development. It asserts in fundamental respects the undeniable contributions of marine life and environment to the sustenance of humanity. Hence, the corresponding obligation to protect and preserve the sanctity of the marine and aquatic environment as well as the vital resources it harbours. Subsequent to the law coming into force in 1993, it was ratified in 2000 by about 180 countries. In furtherance of the underlying significance of the issues raised by the law;

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67 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

68 Kato Gogo Kingston and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

69 AdatiAyubaKafada, 'Environmental impacts of oil exploration and exploitation in the Niger delta of Nigeria' *Global Journal of Science Frontier Research Environment and Earth Sciences*(2012) 18-28.

international sessions have been organized to mobilize the requisite scientific, technical and financial capabilities.

The implications of this law are evident for Nigeria that has awarded many oil licenses covering identifiable areas in the offshore. Importantly, the responsibility to protect the marine life and the socio-economic lifestyles of the host communities in the concerned areas is sacrosanct. The well documented ecological damage resulting from oil spillages and the attendant civil unrest in the affected localities; further attests to the inter-connectedness of human activity to the preservation of the natural environment. However, there seems to be a renewed commitment to address this anomaly. This is in the light of recent governmental actions and initiatives to commence cleaning up efforts in the Niger-delta, an aquatic region, which has since become a "basket case" for oil related environmental degradation.[70]

4.2.6 **Rio Declaration on Environment and Development, (1992)**

The Rio declaration on environment and development was adopted at Stockholm in 1972 during the United Nations Conference on Human Environment. The principles affirms amongst others the inalienable rights of people to development, whilst also stipulating corresponding obligations to protect a shared and common environment. Essentially, it restates the role of identifiable actors in developing new models and arrangements that prioritize environmental and development objectives.[71]

Specifically, it recognizes the central role of human beings in sustainable development undertakings, notes the importance of equitable balancing of environmental and development objectives taking due cognizance of present and

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[70] Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy,* (2018), Vol. 8, No. 1, pages 220-226

[71] Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

future generations; establishes the nexus between eradication of poverty and sustainable development, as well as the essence of active collaborations, affirms the fundamental role of environmental legislations and the necessary adjustments and highlights the significance of environmental protection ideals in times of warfare.[72]

The tenets of the Rio declaration are apt for the Nigerian context in many substantive respects. It is well-established that Nigeria is still heavily dependent on oil and gas revenues, which suggests that collateral environmental damage must be mitigated to the minimum. As global and domestic energy diversification efforts unfold; the aftermath of oil and gas dependency must be deliberately fashioned to usher in an era of economic sustainability and social well-being. The indicators do not bode well at this time, especially against the backdrop of weak global oil prices, widening of the poverty gap, local and global security concerns and lowering of the environmental agendas in certain forums. However, there is no alternative to this long-term project which guarantees the viability of human existence.[73]

4.3 Implementation Gaps and Challenges of Enforcement in Nigeria

Enforcing compliance of environmental and p etroleum regulations remains a challenge due to structural, legal, institutional, socio-economic and political constraint.

i. **Vandalism and Sabotage:** a significant challenge in addressing oil spills incidence in the Niger Delta region is the occurrence of vandalism and sabotage of oil infrastructure due to illicit refining, and theft of crude oil.[74] Acts of sabotage involves deliberate tampering with pipelines to siphon

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72 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

73 Olusola Olujobi, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy,* (2018), Vol. 8, No. 1, pages 220-226

74 'Oil Pipeline Vandalism and Nigeria's National Security' available at https://www.socialscienceresearch.org accessed 30/11/2025

crude oil makes it difficult for oil companies to manage and contain spills. Vandalism and sabotage often lead to massive oil spill, cause substantial damage to the environment and have negative health impact on nearby communities.[75] These activities complicate enforcement because regulators must differentiate between corporate negligence and third party interference, a task hindered by poor monitoring capacity.[76]

ii. **Regulatory Weakness and Political Interference:** Nigeria's regulatory bodies including NOSDRA face significant challenges. These agencies struggle with inadequate funding,[77] limited resources and a lack of technical expertise and low technological innovation,[78] training and equipment for inspections. Political interference and corruption within government and regulatory agencies further undermines enforcement, as bribery and collusion with oil companies often result in tax evasion allowing companies to evade accountability to spills. The interplay of political interference, inadequate resources, lack of expertise, and widespread corruption has created a regulatory landscape ill equipped to tackle the challenges of oil spillage in Nigeria as UNEP (2011) documented instances where political authorities interfered with regulatory actions, thereby undermining rule of law and due process. The absence of adequate enforcement mechanisms means that the oil sector continues to

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75 Grace Sunday-Ayegba, 'Addressing Oil Spills in Nigeria: Legal Frameworks, Enforcement Challenges, and Environmental Accountability' (2025) available at https://www.lawyard.org accessed 30/11/2025

76 Buloere Florence Ekeu-wei and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

77 Anthony Onyeama and Simple Kpea-ueBariyira, 'Legal Issues and Challenges in Effective Enforcement and Implementation of Laws Addressing Environmental Pollution in Nigeria' *AELN Journal of Environment and Natural Resources Law*, (2023), Vol. 11, No. 1

78 Anthony Onyeama and Simple Kpea-ue Bariyira, 'Legal Issues and Challenges in Effective Enforcement and Implementation of Laws Addressing Environmental Pollution in Nigeria' *AELN Journal of Environment and Natural Resources Law*, (2023), Vol. 11, No. 1

struggle with the effects of spills, which include significant environmental degradation and negative health effects on local communities. To effectively safeguard the environment and ensure accountability, it is crucial to strengthen regulatory bodies through increased funding, comprehensive training for all personnel, and transparent governance.[79]

iii. **Weak Institutional Support and Non-compliance**: the effectiveness of regulatory agencies responsible for enforcing environmental laws is limited by insufficient funding and operational challenges[80]Many oil companies operating in Nigeria are notorious for failing to comply with environmental regulations due to the backings of some top political interest which they enjoy.[81] They often delay or avoid cleanup responsibilities, leaving communities to deal with the aftermath of oil spills. The absence of strong punitive measures allows these companies to evade their obligations without facing significant legal consequences, leading to a breakdown of public trust in both regulators and the industry. Communities affected by spills frequently express frustration and anger over the perceived neglect from oil companies and the government, which can sometimes escalate into protests. To foster a more sustainable future for both the environment and the communities that depend on it, it is

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79 Grace Sunday-Ayegba, 'Addressing Oil Spills in Nigeria: Legal Frameworks, Enforcement Challenges, and Environmental Accountability' (2025) available at https://www.lawyard.org accessed 30/11/2025

80 Grace Perpetual Dafiel 'Navigating the Legal Hurdles: A Jurisprudential Analysis of Environmental Protection in Nigerian Courts' *African Journal of Law and Human Rights* (AJLHR) (2025), Vol. 9, No. 1

81 Grace Perpetual Dafiel 'Navigating the Legal Hurdles: A Jurisprudential Analysis of Environmental Protection in Nigerian Courts' *African Journal of Law and Human Rights (AJLHR)* (2025), Vol. 9, No. 1

essential to hold these companies accountable and ensure prompt cleanup of spills.[82]

iv. **Inadequate Fines and Sanctions**: The fines imposed on oil companies for oil spills are often insufficient to compel compliance or cover the full cost of environmental remediation. In many cases, the penalties are not proportional to the scale of the environmental damage, leading companies to view fines as a cost of doing business rather than a deterrent. As a result, these companies often prefer to pay the fines rather than invest in preventive measures, thereby weakening accountability. This issue contributes to recurring spills, further damaging the trust between oil companies, regulators, and affected communities. There is therefore a need for the revaluation of penalty structures to ensure they are substantial enough to ensure compliance.[83]

v. **Lack of Community Participation in Fundamental Matters:** host communities are largely excluded from decision-making processes, fuelling grievances, sabotage and mistrust. There is widespread distrust among host communities due to historical marginalization, poor remediation and inadequate compensation. Several texts shows that communities often perceive regulators as aligned with oil companies, leading to conflict, protests, and obstruction of regulatory activities.[84]

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82 Grace Sunday-Ayegba, 'Addressing Oil Spills in Nigeria: Legal Frameworks, Enforcement Challenges, and Environmental Accountability' (2025) available at https://www.lawyard.org accessed 30/11/2025

83 Grace Sunday-Ayegba, 'Addressing Oil Spills in Nigeria: Legal Frameworks, Enforcement Challenges, and Environmental Accountability' (2025) available at https://www.lawyard.org accessed 30/11/2025

84 TamunoemiWakama, 'Examining the Nigerian Niger Delta Region's Obstacles to Environmental Law Implementation and Compliance' *AELN Journal of Multidisciplinary and Current Studies* (2024), Vol. 1, No. 1

vi. **Inadequate Monitoring and oversight**: agencies rely on oil company reports during Joint Investigation Visits (JIV) enabling manipulation of spill volume, remediation progress and spill causes, especially sabotage claims. Agency like NOSDRA lack adequate funding, insufficient technical tools, and limited manpower. UNEP's Assessment of Ogoniland (2011)[85] found that NOSDRA lacked essential spill detection equipment, laboratory facilities and surveillance technologies making it reliant on data supplied by oil companies. This limits its ability to independently verify spill volumes, causes, and remediation efforts. UNEP's report of 2011 confirms that companies often underreport spill volumes, misclassify causes and delay cleanup operations. Amnesty International (2018)[86] also conducted similar assessment and concluded that Nigeria's regulators lack the proper equipment and autonomy required for robust monitoring and enforcement. This undermines transparency and compromises environmental accountability.

vii. **Corporate Influence and Regulatory Capture**: regulatory capture is when oil companies exert undue influence on the agencies responsible for overseeing them. Most multinational oil companies in Nigeria often shape environmental governance outcomes through political connections, lobbying, and economic leverage, this in turn weakens sanctions, delays enforcement actions and encourage non-compliance. Amnesty International (2018)[87] report documented evidence found that oil

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85 UNEP, 'Environmental assessment of Ogoniland' *Background to Environmental Degradation in Ogoni Land* (2011)52. Available at https://www.unep.org accessed 28/11/2025

86 'Nigeria: Negligence in the Niger Delta: Decoding Shell and Eni's Poor Record on Oil Spill' available at https://www.amnesty.org accessed 26/11/2025

87 'Nigeria: Negligence in the Niger Delta: Decoding Shell and Eni's Poor Record on Oil Spill' available at https://www.amnesty.org accessed 26/11/2025

companies sometimes misreport spill causes, attributing incidents to sabotage to avoid liability and compensation obligations.

viii. **Overlapping Mandates and Institutional Fragmentation**: Nigeria's regulatory landscape is characterized by jurisdictional overlap among NOSDRA, NUPRC, NDDC and the Federal Ministry of Environment. Several institutions have overlapping responsibilities. These institutional fragmentation leads to conflicts, duplication of functions, and unclear lines of authority. Some authors have argued that these overlapping roles create regulatory confusion and weaken enforcement effectiveness. NUPRC and NOSDR for example both claim authority over spill certification, leading to bureaucratic delays.[88]

ix. **Inadequate penalties and slow judicial processes**: penalties for violations remain too low to deter corporate misconduct and non compliance. For example, fines by EGASPIN are outdated and insignificant relative to oil company profits. Also under NOSDRA Act, penalties for failure to report spills are minimal and easily internalize as operational cost. This in turn creates an environment where non compliance is economically rational for companies. On the other hand, the Nigerian judicial system suffer from delays, lack of technical expertise, procedural hurdles and lack of judicial expertise in environmental matters. Judgment obtained after a slow, expensive and technically demanding

[88] OlusolaOlujobi, OlabodeOyewunmi and AdebukolaOyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

litigation process experience enforcement failures due to political resistance, prolonged appeals and limited sanctions available to courts.[89]

4.4 Comparative Analysis

This comparative analysis is done to highlight other jurisdictions that have similar challenges and how they have managed and controlled it using stronger environmental safeguards and liability regimes. This paper will therefore identify potential reforms for Nigeria's legislative reforms in alignment with global best practices.

4.4.1. **United States (Strict Liability/Financial-Responsibility Model)**: the US has the Oil Pollution Act (OPA) 1990[90] as its modern revolutionary regime after the Exxon Valdez Oil Spill. The Exxon Valdez accident occurred in Alaska in 1989, and has been described as 'an ecological catastrophe of unprecedented magnitude', the worse environmental disaster to have occurred in the history of Alaska.[91] The spill occurred in a very sensitive coastal ecosystem, magnifying damage.[92] It resulted in the death of oiled wildlife and significant reduction in tourism, recreational fishing and commercial fishing.[93] Long term direct effect of the spill includes lingering oil with associated negative impacts on the ecosystem.[94] The accident was caused by human error including inadequate rest by crew members and failure to repair broken

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89 Grace Perpetual Dafiel 'Navigating the Legal Hurdles: A Jurisprudential Analysis of Environmental Protection in Nigerian Courts' *African Journal of Law and Human Rights (AJLHR)* (2025), Vol. 9, No. 1

90 Oil Pollution Act of 1990 (OPA 90), 33 U.S.C. ch. 40 § 2701

91 Dominic Obozuwa, 'Legal Consequences of Major Oil Spill' available at https://www.academia.edu accessed 30/11/2025

92 Juliet Aimienrovbiye and OmokhuduDaudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

93 Juliet Aimienrovbiye and OmokhuduDaudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal,* (2016), Vol. 7, No. 1, pages 32-50

94 Juliet Aimienrovbiye and OmokhuduDaudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal,* (2016), Vol. 7, No. 1, pages 32-50

equipment.[95] The Exxon Valex oil tanker which was grounded on Bligh Reef in Prince Williams Sound Alaska, perforating its single hull and releasing 10.1 million gallons of crude oil into the water, over the course of five hours. This incident spurred a number of regulatory checks within the oil industry and the state and to address the causes of the accident, the United States Congress passed the Oil Pollution Act of 1990. It also made regulations making it obligatory for two tug boats to escort every loaded tanker from Valex out through Prince Williams Sound to Hinchinbrook Entrance.[96]

The Oil Pollution Act establishes strict liability for responsible parties, mandatory facility and vessel response plans and access to Oil Spill Liability Trust Fund for cleanup when the responsible party cannot pay and also requires the development of Area Contingency Plans to prepare the plan for oil spill response on a regional scale.[97] The Act also makes provisions for significant civil penalties and private claims under federal law.[98] The Act also imposes long term impacts due to the potential for unlimited liability and statute's that hold insurers to serve as guarantors, which has ultimately resulted in the refusal of insurance companies to issue agreement of financial liability to vessel operators and owners. Thus, the inability to acquire proof of financial liability results in the vessels not being able to legally enter waters of the United States.[99] It is clear that the United States through its Oil Pollution Act of 1990 has aligned incentives through strict liability and predictable funds for cleanup and

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95 Juliet Aimienrovbiye and OmokhuduDaudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal,* (2016), Vol. 7, No. 1, pages 32-50

96 Juliet Aimienrovbiye and OmokhuduDaudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal*, (2016), Vol. 7, No. 1, pages 32-50

97 'Summary of the Oil Pollution Act' available at https://www.epa.gov accessed 30/11/2025

98 'Summary of the Oil Pollution Act' available at https://www.epa.gov accessed 30/11/2025

99 'The Oil Pollution Act of 1990 (OPA 90)' available at https://www.boem.gov accessed 30/11/2025

this forces operators to internalize environmental costs and provide victims with compensation.

4.4.2 **Norway (Integrated Regulation, High Institutional Capacity and Transparency)**: Norway's Petroleum Activities Act (1996) and accompanying regulations create an integrated governance model with strong health, safety and environment (HSE)[100] duties on operators, rigorous licensing and technically capable, independent regulators and inspectorates. The regime emphasizes on prevention, continuous monitoring and public transparency of safety/environmental oversight. The Act applies to petroleum activities in connection to proprietary rights of the Norwegian State to subsea petroleum deposits under Norwegian continental shelf.[101] The government of Norway invest heavily in environmental monitoring, contingency preparedness and enforces strict operational standards for offshore activities.[102] The Act has adopted strict requirements as regards the responsibilities of individual enterprises for risk identification, risk reduction, preparedness and response. Management of major accident risk is required to be an integral part of petroleum activities.[103] Licensees are strictly liable for pollution damage regardless of fault.[104] The independence of institutions, resourcing and transparent reporting reduced regulatory capture and provide early detection and rapid response.

4.4.3 Ghana (Emerging African Model for Governance and Transparency): Ghana's legal framework is the Petroleum (Exploration and Production) Act 2016.[105] Ghana

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100 'The Petroleum Act and the Licensing System' available at https://www.norskpetroleum.co accessed 30/11/2025

101 'The Petroleum Act and the Licensing System' available at https://www.norskpetroleum.co accessed 30/11/2025

102 'The Petroleum Act and the Licensing System' available at https://www.norskpetroleum.co accessed 30/11/2025

103 'The Petroleum Act and the Licensing System' available at https://www.norskpetroleum.co accessed 30/11/2025

104 'The Petroleum Act and the Licensing System' available at https://www.norskpetroleum.co accessed 30/11/2025

105 Petroleum (Exploration and Production) Act (Act 919, 2016)

operates an established National Oil Spill Contingency Plan (Ghana) (NOSCP) under which Environmental Protection Authority (EPA-Ghana) is the lead Authority for oil spill preparedness and response.[106] Under the Plan, the Ghana Maritime Authority (GMA), Ghana Ports and Harbours Authority (GPHA) and the Navy have defined roles. While the GPHA handles Tier-1/2 spills within harbor/ports areas, the Navy provides for on-scene command for marine spill incidence.[107] Ghana has a Maritime Pollution Act which was passed into law in 2016 and it provides for the prevention, regulation and control of pollution within Ghana's territorial waters.[108] EPA has recently described GPHA's spill response preparedness as impressive, highlighting availability of human and technical resources to respond to spills in ports and maritime zones.[109] The Ghanaian model emphasizes pre-planning and risk assessment. There is also institutional collaboration between EPA, GMA, GPHA, the Navy and the private industry coordinated under the contingency framework.

The above comparisons shows that oil spill governance framework of other jurisdictions are arguably more coherent, organized and better prepared for incidents of oil spill than that of Nigeria. Nigeria can learn from the practices of these jurisdictions to reduce the risk and get better prepared for oil spill incidence.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1. **Summary of Findings**

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[106] 'A Summary of Oil Spill Response Arrangements' available at https://www.itopf.org accessed 30/11/2025

[107] 'Country and Territory Profiles: A Summary of Oil Pill Response Arrangements and Resources Worldwide' available at https://www.itopf.org accessed 30/11/2025

[108] 'Country and Territory Profiles: A Summary of Oil Pill Response Arrangements and Resources Worldwide' available at https://www.itopf.org accessed 30/11/2025

[109] 'GPHA's Oil Spillage Responsiveness Preparedness Impressive – EPA' available at https://www.ghanabusinessnews.com accessed 30/11/2025

Having brought to the fore and discussed the subject matter of this work in its totality, touching on the contentious issues that arises from the incident of oil spill and its economical, social and environmental impact in the Niger Delta Region, consequences, legal framework, enforcement challenges and comparative lessons from other jurisdiction. This work will not be seen to have achieved its main objectives if the solutions to the challenges identified are not proffered.

It is very clear to the blind that oil exploration has brought joy and pains to the oil producing communities, the people of the Niger Delta Region (especially Ogoniland) which is the hub of oil production activities. Oil spill which is caused by mostly human error has brought about negative impact on the people of Niger Delta, causing environmental degradation and health hazards. From Eket in Akwa-Ibom State to Ogoniland and Okirika in Rivers State, from Nembe and Ekeremo in Bayelsa State to Ologbo in Edo State and from Izombe in Imo State to Oghara and Jesse in Delta State, the stories are the same, in fact the situation in those areas could be best described as an environmental disaster.

As long as oil exploration and production remains the preferred source of revenue generation for the Nigerian government and international oil companies alike, the issues of oil spill and environmental pollution will continue to occur. Interrelated factors such as human errors, aging and corrosive pipeline, equipment failure, illegal refining, sabotage and vandalism (UNEP 2011; UNDP 2006)[110] as well as others unknown contributes to the causes of oil spills.[111] Greed and fight for resource control has been identified as the motive that fuels saboteurs and vandals is another

[110] United Nations Environment Programme, (2011), 'Environmental Assessment of Ogoniland' available at https://www.unep.org accessed 23/10/2025

[111] Buloere Florence Ekeu-wei and Iguniwari Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available at https://www.preprints.org accessed 28/11/2025

cankerworm that continues to take the front seat in oil spill and environmental pollution. Legislations are however abounding for the protection of the environment as well as the victims who bear the brunt of after effect of oil spill incidence. While sabotage continues to complicate liability and response mechanisms.

Oil spill have resulted in extensive ecological degradation, including contamination of surface water, soil infertility, destruction of mangrove forests, loss of biodiversity and long term ecosystem decline. These environmental harm translates directly into socio-economic deprivation such as loss of fisheries, reduced agricultural productivity, deterioration of livelihoods, food insecurity and adverse health outcomes, (UNEP, 2011). This serious threat posed by the incident of oil spill to the people of Niger Delta Region has attracted the attention of the international community and ultimately the attention of the federal government. This has given rise to series of conventions and treaties which many countries including Nigeria are signatories to. It is worthy of note that the incidence of oil spill is one of international concern and must be handled with care, because in the cause of the transportation of crude oil from coast to coast, accident may occur (like the Exxon Valdex oil spill) and oil spill will result. Therefore, any country who is a signatory to any such treaties and conventions is bound to respect it. Nigeria has enacted several legislations and established several institutions as a direct response to the incidence of oil spill in the Niger Delta Region.

There are reservations expressed about the enforcement and compensation to victim and the inadequacies of these conventions and treaties in national and international legislations. The concept of strict liability and social responsibility has demonstrated the genuine concern of the world in ameliorating the effect of oil spill which occurs due to the activities of oil companies and the government, and the attitude towards achieving its desire to enhance safety and security of its citizens. The government of

Nigeria has over the years through various intervention policies taken bold steps towards bringing relief and succor to oil producing communities and in particular the people of Niger Delta Region. During the heightened stage of the fight against marginalization and resource control, the federal government introduced the Amnesty programme in 2009 and thereafter created the Niger Delta Development Commission (NDDC)[112] which is the latest efforts of government to bring relief to the people of the Niger Delta Region. The Petroleum Industry Act was enacted in 2021, NOSDRA Act 2006, Environmental Impact Assessment Act 1992 and EGASPIN. Yet the Nigerian state despite the various regulations suffer from enforcement deficits, overlapping mandates, weak sanctions, insufficient regulatory independence and chronic underfunding. NOSDRA lacks adequate technical capacity, equipment and autonomy necessary to effectively enforce compliance.

The comparative analysis done reveals that Ghana's structured National Oil Spill Contingency Plan (NOSCP),[113] clearer institutional coordination and periodic spill response drills presents stronger preparedness than Nigeria's reactive model. Other jurisdictions like the United States (OPA 1990) and Norway shows value of strict liability, robust regulatory independence and advanced monitoring systems. Nigeria can significantly strengthen its spill governance by adopting these international best practices.

5.2. Recommendations

Looking at the gaps and challenges, the existing legislations needs to be reformed and updated to meet international standards and global best practices. Government should amend the existing laws to reflect environmental protection law without further delay

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[112] NDDC Act, Cap N86, LFN 2004

[113] 'The Petroleum Act and Licensing System,' available at https://www.norskpetroleum.co accessed 30/11/2025

to protect the oil producing communities in the Niger Delta Region from the effects of oil spills during oil exploration and production. The amendment should include sufficient and adequate compensation for the victims of oil spill. Based on the findings of this research and lessons from other jurisdictions, the following recommendations are proposed to strengthen oil spill governance and promote environmental justice in the Niger Delta Region:

(a) **Enhanced Regulatory Capacity and Independence**:[114] the budgetary allocation of the regulatory agencies like NOSDRA, NDDC, NUPRC should be increased to upgrade their technical capacity, spill monitoring equipment and laboratory facilities. Institutional independence should be strengthened through statutory reforms to reduce political interference and regulatory capture.

(b) **Adopt a Strict Liability Regime for Oil Spills[115]**: strict liability should be imposed on operators and it should cover all cost of removal and damages for ecological loss and cost of restoring the natural environment to its pristine state. NOSDRA Act and the PIA should be amended to reflect the provisions of strict liability for oil spill to be consistent with the U.S. OPA, 1990. The ambiguity around sabotage should be removed by requesting independent verification and deploying sensing technologies to determine cause of spill.

(c) **Establish a National Oil Spill Compensation and Remediation Fund**: a national fund should be established to grant reliefs to communities affected by oil spillage as palliative measure to their plight. This national fund should be financed

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[114] Collins Okon Uloh and others, 'Comparative Analysis of Oil Spill Regulatory Frameworks for Environmental Sustainability in Ogoni-Land, Nigeria' *UNICROSS Journal of Science and Technology, UJOST*, (2025), Vol. 4, No. 3, pp 188-202

[115] Collins Okon Uloh and others, 'Comparative Analysis of Oil Spill Regulatory Frameworks for Environmental Sustainability in Ogoni-Land, Nigeria' *UNICROSS Journal of Science and Technology, UJOST*, (2025), Vol. 4, No. 3, pp 188-202

through industry levies similar to the U.S Oil Spill Liability Trust Fund.[116] Government should ensure that compensation and remediation payments are timely, transparent and accessible to affected communities. Government should set standards to the design, construction and equipment of oil installation on the offshore based on international standards and global best practices to avoid or minimize oil spillage.

(d) **Strengthen Monitoring, Transparency and Data Integrity**: government should provide and/or mandate real time spill detection systems like satellites, drones, fibre optic sensors across major pipelines. Oil companies should be mandated to publish spill records and remediation outcomes in a publicly accessible database. Communities should be encouraged to monitor oil spill under supervised arrangements.[117]

(e) **Improve Enforcement and Sanctions**: huge fines to reflect actual environmental damage should be recommended as penalties for oil companies who violate the provisions of the law to act as real deterrence. Stringent punitive measures[118] such as imprisonment of long term should be handed to saboteurs and vandals without an option of fine. Corporate officers who fail to prevent or report spill should be criminally liable and given long term imprisonment without any option of fine. Establish specialized environmental courts or tribunals with technical expertise to accelerate litigation process of pollution claims and ensure consistent enforcement of environmental rights.

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[116] Israel Oluwaseyi Akindipe, 'The Shoddy Legal Framework on Oil Spill in Nigeria, A Call for a Potent Approach', *Journal of Environmental Law and Policy'* (2023), Vol. 3, No. 2, pp 27-54

[117] Israel Oluwaseyi Akindipe, 'The Shoddy Legal Framework on Oil Spill in Nigeria, A Call for a Potent Approach', *Journal of Environmental Law and Policy'* (2023), Vol. 3, No. 2, pp 27-54

[118] Israel Oluwaseyi Akindipe, 'The Shoddy Legal Framework on Oil Spill in Nigeria, A Call for a Potent Approach', *Journal of Environmental Law and Policy'* (2023), Vol. 3, No. 2, pp 27-54

5.2.6. **Strengthen Community Participation[119] and Benefit-Sharing**: host community development trust under the PIA should be reformed to reflect and ensure community elected trustees, independent audits and transparent decision making. Awareness campaigns should be done to create awareness about the effect of monitoring, early detection and prompt reporting of oil spill.

5.2.7. **Improve Inter Agency Coordination**: coordinate emergency response among NOSDRA, NUPRC, FMEnv, the Military and local authorities by developing a unified national incident command system, drawing lessons from Ghana's NOSCP.

5.2.8. **Implement Post Remediation Environmental Audits[120]**: long term soil and water quality monitoring following cleanup operations should be done. Third party environmental audit reports should be published annually for transparency and scientific accountability

5.3. Conclusion

The Niger Delta is the hub of oil and gas activities in Nigeria. The exploitation and exploration of crude oil in the Niger Delta has been the funnel through which Nigeria generates her revenue and has contributed significantly to the growth and development of the nation, placing Nigeria among the top oil producing countries in the world. Since the discovery and production of crude oil in the Niger Delta in commercial quantity in 1956, the Niger Delta has experience series of oil spills both recorded and unrecorded. The first major recorded oil spill was in 1970 at the Bomu II oil well, a field operated by Shell in Boobanabe Community, Ogoniland, Rivers State.

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[119] Collins Okon Uloh and others, 'Comparative Analysis of Oil Spill Regulatory Frameworks for Environmental Sustainability in Ogoni-Land, Nigeria' *UNICROSS Journal of Science and Technology, UJOST*, (2025), Vol. 4, No. 3, pp 188-202

[120] Collins Okon Uloh and others, 'Comparative Analysis of Oil Spill Regulatory Frameworks for Environmental Sustainability in Ogoni-Land, Nigeria' *UNICROSS Journal of Science and Technology, UJOST*, (2025), Vol. 4, No. 3, pp 188-202

This spill was caused by a corrosion and operational failures leading to a blowout that resulted in a fire and uncontrolled spillage of thousands of barrels of crude oil. No document till date has the record of the number of days the spill and fire lasted. It is to be noted however that the impact of that spill 55years later is still felt in the community due to inadequate cleanup. From the findings of this paper it can be seen that the Niger Delta Region has suffered series of crude oil spillage which has posed severe and persistent challenges to sustainable development of the Region and the general wellbeing of its indigenes.

This paper demonstrates that oil spill in the Niger Delta are as a result of the products of complex interactions between aging infrastructure, operational failures, sabotage and governance weaknesses. While Nigeria possesses an extensive set of legal and regulatory instruments, enforcement capacity of these laws remain hampered by institutional fragmentation, weak sanctions, and pervasive mistrust between regulators, companies and host communities.

Nigeria with laws, regulations, policies and institutional bodies established to curb and manage oil pollutions such as the Petroleum Industry Act 2021, the NOSDRA Act 2006, the Environmental Impact Assessment Act 1992 and the EGASPIN still wallow in the struggles of effective protection of the environments in the Niger Delta Region and or protect the rights and livelihood of the indigenes of that Region. The environmental, social and economic consequences of oil spills continues to undermine sustainable development and human well being in the Niger Delta. Stronger enforcement mechanisms, transparent governance, improved regulatory independence and community centered approaches are urgently needed to reverse decades of degradation. The overall conclusion of this work is that the governance of oil spill in Nigeria and extensively the Niger Delta Region is deficient as it faces the challenge of

weak enforcement mechanism and lack of trust by the community, which in turn results in unabated environmental degradation, government marginalization of the people of that Region and prolonged conflict.

In the course of the study, the root cause of the prevalence of oil spill in the Niger Delta Region was established to both technological, human error and socio-political. Some of the identified causes are pipeline corrosion and ageing infrastructure, lack of maintenance of pipeline, operational negligence and poor adherence to global best practices. These technical failures are worsened by some socio-economic drivers such as oil theft, sabotage and vandalism, illegal refining and militant activities, these events are as a result of poverty, unemployment and marginalization which created a perception of injustice. To curb and/or minimize oil spill incidence in the Niger Deltta Region, the government must integrate technological improvement with socio-economic development and conflict resolution measures to avoid a repeat of the avoidable execution of Ken Saro Wiwa and the Ogoni 9.

Next, the study examined the socio-economic and environmental impact of oil spill in the Niger Delta, identifying contamination of water bodies, destruction of mangrove forest, decline in fish population, soil infertility and long term ecosystem disruption, which in turn has affected the livelihood of the people of that Region. The study also discussed the health impact caused by oil spill and identified the extent of harm caused by the spill to include lungs and skin cancer, while the drinking water was reported to contain a known carcinogen at a level 900 times above World Health Organization guidelines. This study confirms that oil spill is not just an environmental issue but also flagrant disregard of the right to life, dignity, health and clean environment of the people of that Region.

The study went further to reveal that institutional weaknesses remain at the fore that hinder effective spill governance. Most of the regulatory bodies such as NOSDRA and NUPRC suffer from inadequate funding, political interference, lack of technical capacity, overlapping mandates and lack of autonomy which in turn results in inconsistent enforcement actions, slow or poorly executed remediation efforts and fines been too low to deter misconduct. Courts are also faced with limited technical expertise, procedural delays and enforcement challenge, these deficiencies creates an environment where polluters exploit to evade responsibilities to the affected communities.

Comparative experiences from the United States, Norway and Ghana highlights the importance of strict liability, robust preparedness, transparent monitoring and effective institutional coordination, if Nigeria adopts these elements and implement the above outlined recommendation, its petroleum governance system can evolve into a more accountable, resilient, and environmentally just framework capable of protecting the Niger Delta Region and its people.

Finally this study reinforces the fact that the crisis of oil spill in the Niger Delta Region is one of environmental injustice caused by decades of marginalization, inadequate compensation and unfulfilled promises of remediation which has in turn eroded trust between the host community and the government and the oil companies. A reformed legal framework that goes beyond technical regulations and engage in issues of accountability, community participation, equity and transparency, prioritizing the rights and welfare of the people of the Niger Delta Region is recommended. This can in turn reverse the environmental degradation of the region, restore community livelihood and uphold international commitments to protection of the environment, preservation of natural marine habitat restoration of human rights.

The findings of this study therefore contribute immensely to the ongoing debate on environmental protection, resource governance and sustainable development of Nigeria.

BIBLIOGRAPHY

Books

Amaduobogha Simon Warikiyei, 'The Legal Regime for Petroleum activities in Nigeria' in Tina Hunter (eds), *Regulation of the Upstream Petroleum Sector: A Comparative Study of Licensing and Concession Systems* (Edward Elgar Publishing 2015).

Chokor Boyowa Anthony, *Environmental Issues and Challenges of The Niger Delta Region: Environmental Survey Process* (CIBN Press Limited, Nigeria 2003).

Tietenberg Thomas, 'Environmental and Natural Resource Economics,' 4th ed., (Harper Collins College Publication, 1992).

Journals

Adenuga, 'Petroleum Industry and Environmental Protection: The Nigerian Experience *CBN Bulletin* (1999) 56.

Adeyemo Adekola Oyebamiji, 'Assessing Environmental Protection and Management Systems in West Africa: A Case Study of Nigeria' *Dissertations, Theses, Geography and Environmental Resources. Ann Arbor: Southern Illinois University at Carbondale* (2008) 20.

Aimienrovbiye Juliet and Omokhudu Daudu, 'Oil Spills and the Efficacy of Legislative and Institutional Framework in the Niger Delta: A Tang of the Bonga Spill' *Ebonyi State University Law Journal,* (2016),7 (1),

Akaolisa Casmir Zander and Osita Okeke, 'Role of Geodetics in Environmental Impact Studies in the Petroleum Industry' *Journal of Advances in Geosciences* (2004) 78.

Akpoghelie Oghenewogaga Joseph, Ufuoma Augustina Igbuku and Ejiroghene Osharechiren, 'Oil Spill and the Effects on the Niger Delta Vegetations: A Review' (2021) *Nigerian Research Journal of Chemical Sciences* Vol 9, Issue 1

Baker Jennifer, 'Guidelines on Biological impacts of Oil Pollution '*International Petroleum Industry Environmental Conservation Association* (1991)

Bodo Tombari, Batombari Gbidum Gimah, 'The Pollution and Destruction of the Niger Delta Ecosystem in Nigeria: Who is to Blame?' *European Scientific Journal* (2020) Vol. 16, No. 5

Dafiel Grace Perpetual 'Navigating the Legal Hurdles: A Jurisprudential Analysis of Environmental Protection in Nigerian Courts' *African Journal of Law and Human Rights (AJLHR)* (2025), Vol. 9, No. 1

Jike Victor Teddy, 'Environmental Degradation, Social Disequilibrium, and the Dilemma of Sustainable Development in the Niger Delta of Nigeria' *Journal of Black Studies* (2004) 686-701.

Kingston Kato Gogo and Nweke Prince Nweke, 'A Critical Evaluation of the Legal Framework of Oil Spills and Compensation in Nigeria' *African Journal of Social Sciences* (2018), Vol. 8, No. 2

Mba Ifeoma Christy, Emmanuel Ikechukwu Mba, Jonathan Emenike Ogbuabor and Winnie Ogochukwu Arazu, 'Causes and Terrain of Oil Spillage in Niger Delta Region of Nigeria: The Analysis of Variance Approach' *International Journal of Energy Economics and Policy* (2019), Vol. 9, No. 2, pages 283-287

Ndubuisi and Asia, 'Environmental Pollution in Oil Producing Areas of the Niger Delta Basin, Nigeria: Empirical Assessment of Trends and People's Perception' *Environmental Research Journal* (2007)1-4.

Odeyemi and Oladele Ogunseitan, 'Petroleum Industry and its Pollution Potential in Nigeria' *Oil and Petrochemical Pollution* 2 (1985)

Odeyemi and Oladele Ogunseitan, 'Petroleum Industry and its Pollution Potential in Nigeria' *Oil and Petrochemical Pollution* 2 (1985)

Okafor Amalachukwu and Olaniyan Ayobami, 'Legal and Institutional Framework for Promoting Oil Pipeline Security in Nigeria' *Afe Babalola University Journal of Sustainability Development Law and Policy,* (2017) Vol 8, No. 2, pages 209-224

Olujobi Olusola, Olabode Oyewunmi and Adebukola Oyewunmi, 'Oil Spillage in Nigeria's Upstream Petroleum Sector: Beyond the Legal Frameworks' *International Journal of Energy Economic and Policy*, (2018), Vol. 8, No. 1, pages 220-226

Onyeama Anthony and Simple Kpea-ue Bariyira, 'Legal Issues and Challenges in Effective Enforcement and Implementation of Laws Addressing Environmental Pollution in Nigeria' *AELN Journal of Environment and Natural Resources Law*, (2023), Vol. 11, No. 1

Orubu Christopher and others, 'Environmental Regulations in the Nigerian Petroleum Industry: Status of Compliance by Operators and Implications for Sustainable Development' *The Nigerian Economic and Financial Review*(2002).

Ugbe Rose Ohiama and Anthony Ekpoudo, 'Legal Approach to Causes and Consequences of Oil Spillages in Nigeria', *The Nigerian Law Journal*, (2017), Vol. 20, No. 1

Wakama Tamunoemi, 'Examining the Nigerian Niger Delta Region's Obstacles to Environmental Law Implementation and Compliance' *AELN Journal of Multidisciplinary and Current Studies* (2024), Vol. 1, No. 1

Yusuf Raji, Dr. Abejide and Samuel, 'Shell D' Arcy Exploration & the Discovery of Oil as Important Foreign Exchange Earnings in Ijawland of Niger Delta, C 1940-1970', *Arabian Journal of Business and Management Review* (Oman Chapter) (2013) Vol. 2, No. 1, pages 22-33

Online Sources

Abbah Rasheedat Ajibidah, 'Environmental issues in the Niger Delta', (2025) available at https://www.en.wikipedia.org accessed 28/11/2025

Abiodun Abdulsalam, 'Strengthening Environmental Governance in Nigeria's Oil and Gas Sector: A Call to National Action for the National Assembly' (2024) available at https://www.medium.com accessed 29/11/2025

Achi Celestine, 'Hydrocarbon Exploitation, Environmental Degradation and Poverty: Niger Delta Experience' Proceedings of the Diffuse Pollution Conference, Dublin(2003) available at https://www.ucd.ie accessed 28/11/2025

Adekola Josephine, OlalekanAdekola and others 'Health Risks from Environmental Degradation in the Niger Delta, Nigeria' (2017) https://www.journals.sagepub.com accessed 21/09/2025.

Adewole Johnson Adesanmi, Oyetunji Babatunde Okedere and others, 'Atmospheric Particulate Fractions from Nigerian Crude Oil Spillage' (2021) available at https://www.sciencedirect.com accessed 28/11/2025

Agbonifo Philip, 'Oil Spills Injustices in the Niger Delta Region: Reflections on Oil Industry Failure in Relation to the United Nations Environment Programme (UNEP) Report' *International Journal of Petroleum and Gas Exploration Management* (2016), Vol. 2, No. 1, pages 26-37 available at https://www.eajournals.org accessed 28/11/2025

Ajala Samuel, 'Niger Delta Communities battle Farming Crisis and shell's Departure' (2025) available at https://www.gasoutlook.com accessed 24/10/2025

Ajayi Omeiza, 'Nigeria lost N51.28 billion to pipeline vandalism in 2015 – NNPC' 24 August, 2016, available at https://www.vanguardngr.com accessed 27/11/2025

Akinleye Akintunde, "Oil Pipeline Vandalism in the Niger Delta', (2019) available at https://www.accord.orz.za accessed 27/11/2025

Akpoghelie John, Ufuoma Igbuku and Ejiroghene Osharechiren, 'Oil Spill and the Effects on the Niger Delta Vegetation: A Review', *Nigerian Research Journal of Chemical Sciences*, (2021), Vol. 9, No. 1. Also available at https://www.unn.edu.ng accessed 26/11/2025

Ana Godson, Sridhar Mynepalli and Elijah Afolabi Bamgboye, 'Environmental Risk Factors and Health Outcomes in Selected Communities of the Niger Delta Area, Nigeria' *Perspective in Public Health* (2009) 129, 183–191. https://www.journals.sagepub.comaccessed 21/09/2025.

Aro Busola 'Nigeria Finally Meets OPEC's Crude Oil Production Quota of 1.5m bpd' February 13, 2025 available at https://www.thcable.ng accessed 13/10/2025

Bassey Nnimmo, 'UN Report on Nigeria Oil Spills Relies too Heavily on Data from Shell' (2010) available at https://www.theguargian.com accessed 20/10/2025

Bulletin of the National Research Centre, 'Table 1 Oil Spill Incidences in Nigeria (1960 – Present)', *Official International Journal of the National Research Centre of Egypt* available at https://www.bnrc.springeropen.com accessed 24/10/2025

Chinedu Enegide and Chukwuma Chukwuemeka, 'Oil Spillage and Heavy Metals Toxicity Risk in the Niger Delta, Nigeria' *Journal of Health and Pollution* (2018) https://www.doaj.org accessed 13/10/2025.

Clowes Williams, 'Shell to Pay $111 Million to Resolve Long-Running Oil-Spill Dispute in Nigeria' (2021) Insurance Journal available at https://www.insurancejournal.com accessed 20/10/2025

Davis Jim, 'Ecological Devastation of the Niger Delta by Oil Extraction Should be a Concern to the Whole World' available at https://www.kairoscanada.org accessed 20/10/2025

Dendup Tashi, Xiaoqi Feng, Stephanie Clingan and Thomas Astell-Burt, 'Environmental Risk Factors for Developing Type 2 Diabetes Mellitus: A Systematic Review' *Int. J. Environ. Res. Public Health* (2018) 78. https://www.pnc.ncbi.nlm.nih.gov accessed 21/09/2025.

Ekeu-wei Buloere Florence and Iguniwari Thomas Ekeu-wei, 'Crude Oil Spillage in the Niger Delta – Causes, Impact and Detection Approaches' (2024) available https://www.preprints.org accessed 28/11/2025

Ekpali Saint 'Timeline: Half a Century of Oil Spills in Nigeria's Ogoniland' 21st December, 2022 available at https://www.aljazeera.com accessed 15/10/2025

Enaholo Raphael and Charles Adanu, 'Residents' Perception of the Impact of Crude Oil Spillage on Agricultural Production in Ibeno Community, AkwaIbom State' *Premier Journal of Environmental Science* (2025) available at https://www.premierscience.com accessed 13/10/2025.

Evoh Chijoke, 'Gas Flares, Oil Companies and Politics in Nigeria' (2002) 31-35 *Urhobo Historical Society*. Available at https://www.waado.org accessed 25/10/202. Also available at https://www.ngrguardinannews.com

Eweje Gabriel, 'Environmental Costs and Responsibilities Resulting from Oil Exploitation in Developing Countries: The Case of the Niger Delta of Nigeria' *Journal of Business Ethics* (2006)27–56. Available at https://www.ideas.repec.org accessed 28/11/2025

Ezeh Cornelius and Vanessa Onyema, Chinonye Obi and Anene Moneke, 'A Systematic Review of the Impacts of Oil Spillage on Residents of Oil-Producing Communities in Nigeria' (2023) https://www.semanticscholar.org accessed 13/10/2025.

Frynas George, 'Oil in Nigeria: Conflict and Litigation Between Oil Companies and Village Communities' available at https://www.semanticscholar.org accessed 26/11/2025

Hinsch Robin, 'Wahala: Trouble in the Niger Delta' available at https://www.theguardian.com accessed 28/11/2025

Ishisone Michiko, 'Gas Flaring in the Niger Delta: The Potential Benefits of its Reduction on the Local Economy and Environment'(2004) https://www.semanticscholar.orgaccessed 21/09/2025.

Izuaka Mary, 'Oil Theft is Threat to National Security' (February 22, 2023), available at https://www.premiumtimesng.com accessed 26/11/2025

Kadafa Adati Ayuba, 'Environmental Impacts of Oil Exploration and Exploitation in the Niger Delta of Nigeria's *Global Journal of Science Frontier Research Environment & Earth Sciences* (2012), Vol. 12, No. 3 https://globaljournals.orgaccessed 21/09/ 2025.

Kadafa Adati Ayuba, 'Oil Exploration and Spillage in the Niger Delta of Nigeria' Civil and Environmental Research, (2012), Vol. 2, No. 2 available at https://www.scribd.com accessed 25/11/2025

Kostianoy Andrey; Olga Lavrova; and Dmitry Soloviev, 'Oil Pollution in Coastal Waters of Nigeria' (2014) available at https://www.researchgate.net accessed 20/10/2025

Mateos Oscar, 'Understanding Niger Delta's Violence from a World-Ecology Perspective' available at https://www.seguridadinternational.es accessed 26/11/2025

Mba Ifeoma Christy, and others, 'Causes and Terrain of Oil Spillage in Niger Delta Region of Nigeria: The Analysis of Variance Approach', *International Journal*

of Energy Economic and Policy (2019) 9(2), 283-287; also available at https://www.pdfs.semanticscholar.org accessed 21/10/2025

Nkem Augusta and Susan Devine, Daprim Ogaji and Stephanie Topp, 'Economic Exclusion and the Health and Wellbeing impacts of the Oil Industry in the Niger Delta Region: A Qualitative Study of Ogoni Experiences' *International Journal for Equity in Health* (2024) 183. Available at https://www.link.springer.com accessed 28/11/2025

Nnodim Okechukwu 'Oil Producing Fields Rise to 246, says FG' 31st March, 2024 available at https://www.punchng.com accessed 15/10/2025

Nwajiaku-Dahou Kathryn, 'The Political Economy of Oil and 'Rebellion' in Nigeria's Niger Delta' *Review of African Political Economy*(2012) 295-313, available at https://www.tandfonline.com accessed 28/11/2025

Nwaugo Victor, Reginald .Azu Onyeagba and Ndubuisi Nwachukwu, 'Effects of Gas Flaring on Soil Microbial Spectrum in Parts of Niger Delta Region of Southern Nigeria' *African Journal of Biotechnology* (2005) 42. Also available at https://www.internationalscholarsjournals.com accessed 26/11/2025

Nwilo Peter and Olusegun Badejo, (2005) 'Oil Spill Problems and the Management in the Niger Delta' International Oil Spill Conference Proceedings, pp 567-570; available at https://www.researchgate.net accessed 23/10/2025

Nwoko Charles, 'Assessing the Socioeconomic Impacts Arising from oil Pollutions in the Niger Delta Region of Nigeria: Including Proposals for Solution' (2014), available at https://www.aaltodoc.aalto.fi accessed 28/11/2025

Obinna Ofoegbu; Maikano Aghalino; Nsikak S, 'The Black Gold Poison: Incidence, Effect, Remedy and Control. A Case Study of Niger Delta Area of Nigeria' (2013) available at https://www.researchgate.net accessed 20/10/2025

Obozuwa Dominic, 'Legal Consequences of Major Oil Spill' available at https://www.academia.edu accessed 30/11/2025

Odude Funmilayo, 'How does the Petroleum Industry Act Protect our Environment?' available at https://www.financialnigeria.com accessed 29/11/2025

Okafor Odera Chukwumaijem and Patience Afor Ibeneme, (2025) 'Impact of Oil Spill on the Inhabitants of Bodo Area of Ogoni Land, River State, Nigeria' Trends in Environmental Sciences pp 208-218 available at https://www.researchgate.net accessed 23/10/2025

Okonkwo Eloamaka, 'Oil Spills in Nigeria: Are There Social and Economic Impacts?'*International Oil Spill Conference Proceedings* (2014) 289-300. Available at https://www.iosc.kglmeridian.com accessed 28/11/2025

Okonkwo Eloamaka, 'Oil Spills in Nigeria: Are There Social and Economic Impacts?'*International Oil Spill Conference Proceedings* (2014) 289-300. Available at https://www.iosc.kglmeridian.com accessed 28/11/2025

Okpamen Emmanuel, ‘Oil Spillage and Compensation in Nigeria’ (2024) available at https://www.nigerianobservernews.com accessed 21/10/2025

Ola Doifie and David Eighemhenrio, Urhobo Historical Society ‘Easting Lives: Official Negligence resulting in Grave Tragedy at Idjerhe, Niger Delta, Nigeria’ (1998) available at https://www.waado.org accessed 23/10/2025

Omokaro Godspower Oke, Shadrack Efeni, Israel Adeyanju and Justice Obomejero, 'Oil spillage in the Niger Delta: Impacts, Institutional Failures, and Policy Reforms' (2025) available at https://www.semanticchola.com accessed 13/10/2025.

Onuoha Freedom, ‘Oil Pipeline Sabotage in Nigeria: Dimensions, Actors and Implications for National security’ (2008) *African Security Review* Vol. 17. No. 3 available at https://www.tandfonline.com accessed 27/11/2025

Opukri and Ibaba Samuel Ibaba, ‘Oil Induced Environmental Degradation and Internal Population Displacement in the Nigeria’s Niger Delta’ *Journal of Sustainable Development in Africa* (2008)173–193. Available at https://www.jsd-africa.com accessed 28/11/2025

Ordiniohaand Best and Seiyafa Brisibe, ‘The Human Health Implications of Crude Oil Spills in the Niger Delta, Nigeria: An Interpretation of Published Studies’ *Journal of the Nigeria Medical Association* (2013)10. Available at https://www.pmc.ncbi.nih.gov accessed 21/09/2025

Ovuakporaye Simon, Peter Chukwuemeka Aloamaka, Anthony Ojieh and Daniel Ejebe, ‘Effects of Gas Flaring on Lung Function Among Residents in Gas Flaring Community in Delta State, Nigeria’ *Research Journal of the Environmental Earth Sciences* (2012)525–528. Available at https://www.semanticscholar.org accessed 28/11/2025

Sheriff Mulade and others, 'Oil Spillage in the Niger Delta: Government and Oil Companies Remediation Activities' *International Journal of Research Publication and Reviews* (2025) https://www.ijrpr.com accessed 13th October 2025.

Snowden John and Ikem Eloka Ekweozor, ‘The impact of a minor oil spillage in the estuarine Niger delta’ *Marine Pollution Bulletin*(1987) 595-599 available at https://www.sciencedirect.com accessed 28/11/2025

Sunday-Ayegba Grace, ‘Addressing Oil Spills in Nigeria: Legal Frameworks, Enforcement Challenges, and Environmental Accountability’ (2025) available at https://www.lawyard.org accessed 30/11/2025

Tabita Sule, Ibrahim Binta and others, ‘The Environmental Impact of Oil Spill Pollution in Niger Delta Region, *Nigeria’ Journal of Biological Sciences and Bioconservation* (2017), Vol. 9, No. 1 available at https://www.cenresinjournals.com accessed 28/11/2025

Terungwa Daniel, ‘Oil Spill From Frontier Oil’s OML13 Facility Disrupt Akwa Ibom Community’ (2024) available at https://www.majorwavesenergyreport.com accessed 23/10/2025

Ugwuanyi Chinasa Agatha, Anna Garba and Shehu Bako Makarau, 'The Impacts Of Environmental Pollution On Agricultural Productivity In The Niger Delta' *Journal of Environmental Science and Resources Management* (2012)Vol. 4, available at https://www.cenresinjournals.com accessed 21/09/2025.

Uwemedimo Mike, 'Slick PR can't Disguise Shell's Devastating Oil Pollution in Nigeria' (2025) available at https://www.amnesty.org.uk accessed 24/10/2025

VaughanAdam, 'Oil in Nigeria: a History of Spills, Fines and Fights for Rights' (2011) available at https://www.theguardian.com accessed 25/11/2025

William Carpenter 'The Main Oil Producing Countries in Africa' (2024) available at https://www.investopedia.com accessed 13/10/2025

Wizor Collins H. and Sunday O. Eludonyi, 'Analysis of the Socio-Economic Impact of Oil Spills in Gokana Local Government Area of Rivers State, Nigeria' (2020) *International Journal of Research and Scientific Innovation* pp 79-86 available at https://www.rsisinternational.org accessed 24/10/2025

Wurthmann Geerd, 'Ways of Using the African Oil Boom for Sustainable Development' *African Development Bank, Economic Research Working Paper Series* (2006) 45 available at https://www.www.rrojasdatabank.info accessed 28/11/2025