

## Environmental Policy and Sustainable Development in Nigeria's Niger Delta: A Critical Look at the National Oil Spill Detection and Response Agency (NOSDRA)

<sup>1</sup>Tokpo Coronation Edward & <sup>2</sup>Rufus, Anthony

<sup>1</sup>Department of Political Science, Federal University Otuoke, Bayelsa State

<sup>2</sup>Department of Political Science, Niger Delta University, Wilberforce Island, Bayelsa State

Article DOI: 10.48028/iiprds/ijarssesst.v9.i1.02

### Abstract

The Niger Delta is one of the most ecologically damaged deltas in the world due to a poorly regulated oil industry operating in the region. Available data indicates that there was a total of 9,107 oil spills in the region between 1976 and 2004. The reckless abandonment in which oil is exploited in the region has threatened sustainable development in the area and has made scholars to describe the region's situation as an ecocide. It is in light of the above that this study examines the environmental policy of NOSDRA and its impact on sustainable development in the region. The data utilized in this study were obtained from both primary and secondary sources and Daly's economic theory of sustainable development was adopted as a framework for theoretical analysis. The findings of the study, shows that there has been little commitment to the implementation of environmental policies that will lead to sustainable development in the Niger Delta with government's attention focused on oil exploitation in the region. Following from the above, the study recommends effective compliance monitoring of the operations of MNOCs in the region amongst others.

**Keywords:** *Environmental Policy, Sustainable Development, Niger Delta and NOSDRA*

*Corresponding Author:* Tokpo Coronation Edward

### **Background to the Study**

Since the discovery of crude at Otagi in the Oloibiri District in 1956 in present day Bayelsa State, the Niger Delta region has been the epicenter of crude oil exploration and exploitation activities in Nigeria. The region covers an area roughly estimated to be the size of about 70,000 km and makes up 7.5% of Nigeria's land mass (Kuta, 2023; Olukaejire, Ifiora, Osaro, Osuji & Hart, 2024). Oil revenues from the region has sustained the Nigerian economy for decades as it funds more than 70% of the country's budget (Oluniyi, 2017). Despite her enormous contribution to Nigeria's oil wealth, the region faces severe developmental challenges that intersects with complex environmental issues arising from oil industry activities. Consequently, scholars of development have described the share scale of environmental degradation in the area as an ecocide (Komene, 2021; Barigbon, 2023; Emamuzou, 2017; Lynch, Fegadel & Long, 2022).

An observation of littoral communities of the Niger Delta presents a very depressing picture of the region's future due to the asymmetry between the level of exploitation of crude oil and gas and the level of development in the area. All nine oil producing states – Bayelsa, Rivers, Akwa-Ibom, Cross-River, Edo, Delta, Ondo, Abia, and Imo – that have come to be defined as the Niger Delta region faces severe environmental conditions with attendant adverse livelihood impacts on communities. This is more so in the original six states that constitute the geographical Niger Delta, namely: Bayelsa, Rivers, Akwa-Ibom, Cross River, Edo ad Delta (BRACED) states. The delta has, thus, been widely identified as the most polluted globally due to a poorly regulated crude oil industry operating in the region (Ite, *et al.* 2013; Anejionu, Ahiarannunnah & Petters, 2015; Raji & Abejide, 2013; Richard, Izah & Ogwu, 2022).

Available data assessing the oil industry operations in the region indicates that there has been a total number of 13,885 publicly available spill records since 2010 (NOSDRA Spill Monitor, 2025). A total of these spills, 1162 occurred in 2023, and 589 occurred in 2024. Data also indicate that there were 822 spills that accounted for the loss of 28,003 barrels of oil between 2020 and 2021. As of the time of this research, the NOSDRA Spill monitor website specified that there has been an estimate of 630,723 barrels of spilled oil, which is equivalent to around 3154 oil tanker trucks since 2010 (NOSDRA Spill Monitor, 2025). As a result of this large-scale spills experienced in the region, a report published by the United Nations Environmental Programme (UNEP) suggests it could take Shell and other oil companies up to 30 years and about \$1billion US dollars to clean up the oil spills in the Niger Delta region (Obi, 2012 cited in Anthony, 2017).

In recognition of the extensive environmental challenges in the Niger Delta region and the broader Nigerian state, the government has, at different times, initiated policies and legislations for the protection of the environment. There have been various agencies and regulations, among which are Forestry Act 1958, Antiquities Act 1958, Territorial Waters Decree 1967, Oil in Navigablewaters Decree 1968, Petroleum Decree 1969, Quarries Decree 1969; Sea Fisheries Decree 1971, Land Use Decree 1978, National Environmental Protection (Management of Solid and Hazardous Waste) Regulations 1991, Guidelines and Standards for Environmental Pollution Control in Nigeria 1991, Environmental Impact Assessment

Decree 1992, Water Resources Act 101 of 1993, and Minerals and Mining Act 1999” (Nabegu1, Mustapha and Naibbi, 2017: 142).

Despite the existence of various environmental protection laws alongside regulatory agencies, Nabegu1, Mustapha and Naibbi, (2017 p. 143) argued that environmental benefits arising from existing legal and institutional frameworks for enforcement of regulations have been minimal in Nigeria resulting in social and environmental welfare losses. It is against this backdrop that this study has been structured to critically evaluate Nigeria's environmental policy and sustainable development in the Niger Delta with focus on the activities of NOSDRA. To this end, the study is structured to give answers to the following research questions:

1. What is the main policy thrust on environmental protection in Nigeria and how does this aid sustainable development in the country?
2. What is the impact of environmental protection laws in the country on the people?
3. What practical solutions are available to improve environmental protection and aid sustainable development in the country?

### **Significance of the Study**

The Niger Delta environment remains one of the most ecologically damaged environments in Nigeria due to a poorly regulated crude oil industry that has operated in the region for over 60 years. Despite the various laws set up to protect the environment from wanton destruction, little has been done in terms of practical steps to save the region's environment from destruction. This study thus aims to explore ways to protect the region's environment from total annihilation by examining the Nigeria's policy on environmental protection and how it supports sustainable development. To this end, this study contributes to the body of literature on environmental protection in the Niger Delta region. Consequently, the findings of this study will be of great benefit most importantly, to the Niger Delta region in particular and to the Nigerian state in general. Secondly, the significance of this work further lies in the fact that it will not only enrich the body of literature in the subject area, but also proffer workable/practical solutions distinct from those suggested before on ways to protect the Niger Delta's environment.

### **Objectives of the Study**

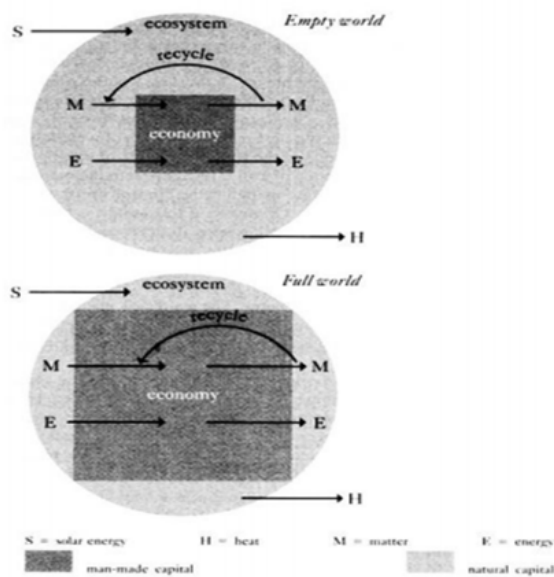
The primary objective of this study is to establish the link between Nigeria's environmental policy and sustainable development in the country if any. To this end, this study is structured to further achieve the following objectives:

1. To examine Nigeria's environmental policy thrust especially as it relates to swiftly addressing oil spills (whether sabotage or equipment failure), and how it relates to sustainable development in the Niger Delta.
2. To establish the impact of the country's environmental policy on the people.
3. To proffer practical solutions that will improve environmental protection and aid sustainable development.

### Theoretical Framework

The framework for theoretical analysis adopted for this study is the Daly's economic theory of sustainable development. In his study titled: 'Beyond Growth: The Economics of Sustainable Development', Daly argued that not only is economic growth on its own insufficient to push for or carry real sustainable development, but also negates the goals of sustainable development. In his words; “continual growth in both capacity (stock) and income (flow) is a central part of the neoclassic growth paradigm, but in a finite world continual growth is impossible” (Daly, 1996).

According to Daly et al. sustainable-growth is an oxymoron. To this end, Economic development can only be possible when the subsystem of the economy has not yet attain the maximum capacity/limit of its bounding ecosystem. However, once that ecosystem boundary is attained, true economic growth stops. Consequently, for sustainable development to occur, economic growth must be replaced by economic development, which Daly describes as qualitative improvement. His argument is that we can have sustainable-economic-development but cannot have sustainable-economic-growth because of the finite nature of natural resources (Daly, 1996). The theory is expressed in the diagram below:



Daly's central premise was built upon a combination of theories from political science, economics, sociology, ecology and physics in an attempt to prove that infinite growth is not possible in a finite world and if not addressed will lead to the ultimate destruction of the environment. The major postulation of this theory and why it is relevant to this study is that the theory shows the need for environmental protection in the face of rapid economic expansion which is the crux of this study.

Herman Daly's theory of sustainable development emphasizes the need to shift from a growth-oriented economy to a development-oriented economy, prioritizing environmental

sustainability and social equity. This analysis examines the relevance of Daly's theory to a study on environmental policy and sustainable development in Nigeria's Niger Delta, with a focus on the National Oil Spill Detection and Response Agency (NOSDRA). Daly's theory highlights the limitations of economic growth as a measure of development, emphasizing the need to prioritize environmental sustainability and social equity. In the context of the Niger Delta, Daly's theory is relevant in several ways:

**Environmental Degradation:** The Niger Delta has suffered from severe environmental degradation due to oil extraction activities. Daly's theory emphasizes the need to prioritize environmental sustainability, highlighting the importance of NOSDRA's role in detecting and responding to oil spills.

**Social Equity:** The Niger Delta region has faced significant social and economic challenges, including poverty, unemployment, and lack of access to basic services. Daly's theory emphasizes the need to prioritize social equity, highlighting the importance of NOSDRA's role in ensuring that communities affected by oil spills receive fair compensation and support.

**Alternative Development Pathways:** Daly's theory suggests that alternative development pathways are needed to prioritize environmental sustainability and social equity. In the context of the Niger Delta, this could involve exploring alternative energy sources, promoting sustainable livelihoods, and supporting community-led development initiatives.

Despite the importance of NOSDRA's role in promoting sustainable development in the Niger Delta, the agency faces several challenges:

**Lack of Community Engagement:** NOSDRA's operations have been criticized for being top-down, with limited involvement of local communities in decision-making processes.

**Inadequate Transparency and Accountability:** NOSDRA's response to oil spills has been marred by allegations of corruption, inadequate compensation for affected communities, and lack of transparency in its operations.

**Ineffective Regulations:** NOSDRA's regulatory powers have been weakened by the influence of powerful oil companies and government interests, limiting its ability to effectively regulate the oil industry.

Daly's theory of sustainable development provides a valuable framework for analyzing environmental policy and sustainable development in Nigeria's Niger Delta. By prioritizing environmental sustainability and social equity, NOSDRA can play a critical role in promoting sustainable development in the region. However, addressing the challenges facing NOSDRA, including lack of community engagement, inadequate transparency and accountability, and ineffective regulations, is crucial to ensuring the agency's effectiveness in promoting sustainable development.



## **Materials and Methods**

A descriptive research design was considered ideal, and thus, adopted for this study. The term descriptive research refers essentially to research that tries to unravel the major elements and characteristics of any phenomenon or attribute. The design is considered fitting for this study because, following the line of thinking provided by Miller & Salkind (2002), it: allows for estimating the proportion of people in a specific population who holds certain views or attitudes or who behave in certain ways, is useful for discovering or testing whether certain variables are associated, enables researchers describe the structure of organizations or the major patterns of behavior in them, and can be employed to establish specific prediction such as; how many customers would leave a bank if the interest rate is adjusted upwards.

The choice of the descriptive research design was premised on the fact that it deals with what is (fact) as against mere assumptions. The descriptive research design was adopted to reveal the policy option of the Nigerian government on her environment and how this aid sustainable development in the country. Thus, as rightly noted by Best, (1970 p. 47), it helps us establish the conditions or relationships that exist; practices that prevail; beliefs, points of view or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. Descriptive research examines and interprets on-going-processes or present state of affairs in order to understand their meaning, workings, logical underpinnings and their relevance. Consequently, the study employed the use of structured data response instruments such as interview and observation in the collection of data.

In analyzing the secondary data, content analysis was used. Content analysis which also refers to document analysis is an observational analysis schedule used in gathering and analyzing information from written materials such as books and journals. As a tool, it enabled us evaluate literature on the subject matter and identifying prevailing themes. This offers insights over time through the analysis. Thematic analysis was used to analyze the primary data. The thematic analysis helped to summarize and describe the interview data for this study in a way that made it easier to understand the characteristics, similarities, variations, trends and relationships of the variables.

## **Environmental Policy in the Niger Delta**

Environmental issues in Nigeria are not new. They have been a part of the Nigerian state since independence as has oil exploration and exploitation. The global concerns with environmental sustainability that followed the Brundtland Commission Report of 1987 was reflected in the adoption of a National Policy on the Environment in 1991. This policy was subsequently revised in 1999 and further revised in 2016. The adoption of the national policy on the environment is informed by several factors including concerns with environmental degradation, the need for environmental sustainability, the responsibility to adopt and ratify international treaties and agreements, public health concerns associated with the environment, and the need to integrate environmental costs into economic decision/policies. It is thus, unsurprising that the National Policy on Environment has the following as its policy goals:

#### Box I: Policy Objectives of the National Policy on Environment

- a. secure a quality of environment adequate for good health and well-being;
- b. conserve and use the environment and natural resources for the benefit of present and future generations;
- c. restore, maintain and enhance the ecosystems and ecological processes essential for the functioning of the biosphere to preserve biological diversity and the principle of optimum sustainable yield in the use of living natural resources and ecosystems;
- d. raise public awareness and promote understanding of the essential linkages between the environment, resources and development, and encourage individual and community participation in environmental improvement efforts; and
- e. co-operate in good faith with other countries, international organisations and agencies to achieve optimal use of transboundary natural resources and effective prevention or abatement of transboundary environmental degradation.

**Source:** National Policy on Environment (2016)

Beyond the national policy, the broad framework regulating the Nigerian environment entails a gamut of laws, including the Constitution of the Federal Republic of Nigeria (1999 as amended), the National Environmental Standards and Regulations Enforcement Agency (NESREA), the Environmental Impact Assessment Act (1992), and the Harmful Waste (Criminal Provision) Act (1988), among others. These body of legal instruments regulate different aspects of the Nigerian environment. For the oil sector, the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN), developed by the Department of Petroleum Resources (DPR) is a key document guiding environmental management in the oil sector. It outlines standards for oil spill prevention, response, and remediation, providing a regulatory basis for addressing environmental risks associated with petroleum operations.

Other significant legal instruments include the National Oil Spill Detection and Response Act (2006), which established NOSDRA, and the Environmental Impact Assessment (EIA) Act (1992), which mandates comprehensive assessments of potential environmental impacts before commencing any oil-related project. These frameworks are complemented by Nigeria's obligations under international conventions, such as the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) and the African Charter on Human and Peoples' Rights, which underscore the rights of communities to a clean and healthy environment. Table 1 below details some of the environmental legislations that are relevant to the oil and gas sector and their purpose:

**Table 1:** Environmental Decrees and Regulations in the Oil and Gas Sector in Nigeria

Decree/Regulation	Year Introduced	Purpose
Forestry Act	1958	Protects forests and wildlife to maintain biodiversity.
Quarries Decree	1969	Regulates quarrying activities to mitigate environmental impacts.
Petroleum Decree	1969	Governs petroleum exploration and production, ensuring sustainable practices.
Sea Fisheries Decree	1971	Protects marine life and regulates fishing practices to prevent ecological harm.
Land Use Decree, later changed to Act.	1978	Addresses land ownership and use, impacting oil exploration versus conservation efforts.
National Environmental Protection (Management of Solid and Hazardous Waste) Regulations	1991	Provides guidelines for managing solid and hazardous waste to prevent pollution.
Guidelines and Standards for Environmental Pollution Control in Nigeria	1991	Sets standards for pollution control measures industries must adhere to.
Environmental Impact Assessment Decree	1992	Mandates environmental impact assessments for projects with significant environmental effects.
Water Resources Act	1993	Regulates management and use of water resources to protect against pollution.
National Oil Spill Detection and Response Agency (NOSDRA)	2006	To detect, manage, and mitigate the impact of oil spills in the Niger Delta.

**Source:** Author's Compilation, 2024

From the above, it is clear that there is an extensive policy and legal framework for regulating the Nigerian environment. As such, it becomes reasonable to assess the effectiveness of existing policy instruments in meeting the set goals. This study however acknowledges the limitations of providing an exhaustive treatment of all policies identified, and thus, focuses on the National Oil Spill Detection and Response Agency (NOSDREA).

### **Overview of NOSDRA and Its Mandate**

NOSDRA was established on October 18, 2006 as an agency under the Federal Ministry of Environment through an Act of the National Assembly, Act No. 15. The legislative framework underpinning NOSDRA's establishment was influenced by Nigeria's need to align its environmental governance with international conventions, particularly the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) of 1990. As stipulated by the Act, NOSDRA's primary responsibility is to detect, manage, and mitigate the impact of oil spills. The agency's creation signified a governmental acknowledgment of the urgency to institutionalise mechanisms for addressing oil spills, especially in a region where such incidents are not only frequent but also devastating. This point was made by a civil society actor who lauded the introduction of NOSDRA as a positive step towards protecting



the Niger Delta region from the menace of spills. Making his point, he asserted that “the law provided a basis for concerted efforts to be directed at identifying and responding to spills to ensure that environmental issues do not go undetected.” This observation appears to be implicit in the NOSDRA Act as evidenced in the provisions summarized below:

**Table 2:** Provisions of the NOSDRA Act (2006)

<b>Provision</b>	<b>Description</b>
<b>Establishment of the Agency</b>	The National Oil Spill Detection and Response Agency is established to manage oil spill preparedness, detection, and response in Nigeria. It is a corporate body with perpetual succession and can sue or be sued.
<b>Governing Board</b>	A Governing Board is formed to oversee the Agency's policies, consisting of a Chairman, representatives from various Federal Ministries, and the Director-General as a member/secretary.
<b>Tenure of Office</b>	Members of the Governing Board serve four-year terms with the possibility of reappointment for one additional term.
<b>Cessation of Membership</b>	Membership can be terminated by the President for reasons such as inability to perform duties or misconduct.
<b>Objectives of the Agency</b>	The Agency aims to coordinate and implement the National Oil Spill Contingency Plan, ensuring effective response to oil pollution, monitoring high-risk areas, and providing training for preparedness.
<b>Functions of the Agency</b>	Responsibilities include surveillance for compliance with environmental laws, coordinating spill response activities, and implementing government plans related to hazardous substances.
<b>Penalties for Non-Compliance</b>	Failure to report an oil spill within 24 hours incurs a fine of N500,000 per day; failure to clean up incurs a fine of N1,000,000.
<b>Special Functions</b>	The Agency promotes regional cooperation in oil spill response and facilitates the movement of resources needed for effective response efforts.
<b>Director-General Appointment</b>	The Director-General is appointed by the President and must have at least ten years of experience in environmental matters.
<b>Financial Provisions</b>	The Agency maintains a fund from various sources including government grants and loans. Expenditures cover administration costs, salaries, and operational functions.
<b>Annual Estimates and Reports</b>	The Agency must submit annual financial estimates and reports on activities to the President and Federal Executive Council within specified timeframes.
<b>Power to Accept Gifts &amp; Borrow</b>	The Agency can accept gifts under specified conditions and borrow funds with Governing Board approval for its functions.
<b>Investment Powers</b>	The Agency may invest its funds in approved securities as per regulations outlined in the Act.

**Source:** Extrapolated from the NOSDRA Act

The operational framework of NOSDRA is built on its core mandate of oil spill detection, response, and mitigation. One of its primary functions is the prompt identification and reporting of oil spills. Leveraging tools such as satellite imagery, aerial surveillance, and community reports, the agency strives to detect spills early, recognizing that swift intervention is essential to minimizing environmental and economic harm. This point was made by a staff of the Agency who asserted thus:

*Oil spillages and the environmental impacts are issues that have been widely reiterated across the Niger Delta region. The major problem before now was that there was no mechanism for the swift identification of spills, verification of their causes, and mobilisation of resources for action. What NOSDRA does is to fill that gap.*

NOSDRA operates under the supervision of the Federal Ministry of Environment, with its headquarters in Abuja and zonal offices strategically located in key oil-producing areas of the Niger Delta. This decentralized structure allows the agency to maintain proximity to high-risk zones, enabling quicker responses to incidents. At its helm is a Director-General, appointed by the President, who oversees strategic planning and operations. Supporting the leadership are technical experts and administrative staff addressing various aspects of the agency's work, including oil spill detection, regulatory enforcement, and community engagement. There are also specialised units focusing on research, environmental impact assessments, and data analysis. Once a spill is detected, NOSDRA coordinates multi-stakeholder responses, ensuring collaboration among oil companies, local authorities, and relevant agencies. This centralised coordination helps maintain coherence in response efforts, which are often resource-intensive and logistically complex. A Respondent clarified this role thus:

*The Agency (NOSDRA) brings all parties to the table and ensure that the response is both effective and timely. It's not an easy task, but it has to be done to ensure that the environment is protected and there are no disruptions in oil production.*

Tacitly implied in the quote above is that NOSDRA plays a critical role in enforcing compliance with environmental regulations. The agency mandates that oil operators prepare and implement Oil Spill Contingency Plans (OSCPs), conduct periodic risk assessments, and adhere to safety standards designed to prevent spills. Through these measures, NOSDRA seeks to instil a culture of corporate responsibility. The agency is also actively involved in remediation and restoration efforts. It oversees long-term cleanup activities to ensure that affected areas are rehabilitated, aiming to restore them to their original state where possible. This role is particularly critical as oil spills leave enduring scars on the environment and local livelihoods in the Niger Delta.

Despite its mandate, NOSDRA faces systemic barriers that hinder its ability to fulfil its potential. As with many other agencies in Nigeria, limitations arising from corruption, inadequate funding, outdated equipment, and a shortage of skilled personnel significantly limit its operational capacity. An interviewee acknowledged this limitation by asserting thus:

*We are often working with minimal resources. Imagine responding to a major spill without the necessary resources—it's like fighting a fire without water. Carrying out our responsibilities requires that we are adequately funded. This allows for site visits and even allow staffs to resist attempts to compromise them by oil industry actors.*

Overall, NOSDRA represents a significant step forward in Nigeria's quest to improve environmental governance in the Niger Delta. Its establishment reflects a recognition of the need for institutional mechanisms to manage the risks associated with oil exploration and production. Nevertheless, achieving its mandate requires addressing institutional inefficiencies, fostering stronger partnerships with stakeholders, and ensuring sustained political will. These challenges notwithstanding, NOSDRA's role remains indispensable in the pursuit of a cleaner, more sustainable Niger Delta. As the analysis in subsequent sections will reveal, the agency's effectiveness is a critical determinant of Nigeria's ability to balance economic development with environmental sustainability.

### **Role of NOSDRA in Policy Implementation**

From the preceding discourse, it is clear that NOSDRA plays a pivotal role in the implementation of environmental policies, especially in the Niger Delta where the oil industry activities pose environmental risks requiring vigilance and response. The agency is mandated to ensure that oil companies adhere to the provisions of EGASPIN and other regulatory instruments, including the preparation and implementation of Oil Spill Contingency Plans (OSCPs). Through its monitoring and enforcement activities, NOSDRA seeks to ensure compliance with national environmental standards and foster accountability among oil operators.

NOSDRA also collaborates with other regulatory bodies, including the Nigerian Upstream Petroleum Regulatory Commission (NUPRC), state ministries of environment, and international organisations, to achieve its objectives. These partnerships are crucial for addressing the multidimensional challenges of oil spill management, which require technical expertise, adequate funding, and coordination across multiple sectors. Additionally, NOSDRA engages local communities to enhance the reporting of oil spills and build public awareness of environmental policies. Despite these efforts, gaps in the agency's operational capacity and enforcement mechanisms have significantly hindered the effectiveness of its interventions.

### **Challenges in Environmental Policy Implementation**

The potency of the agency to serve as an institution for environmental policy implementation is limited by several factors. One major challenge is the inadequacy of institutional capacity among regulatory agencies, including NOSDRA. Limited financial resources, outdated technology, and a shortage of skilled personnel undermine the ability of these institutions to monitor compliance, detect violations, and respond promptly to environmental incidents. A related issue is the lack of political will to enforce environmental regulations, particularly when violations involve powerful multinational oil companies. The influence of these

corporations on the Nigerian economy often translates to regulatory leniency, allowing them to evade accountability for oil spills and other environmental infractions. This dynamic not only weakens the credibility of environmental policies but also exacerbates public distrust in regulatory institutions.

Moreover, the fragmented nature of Nigeria's environmental governance system complicates policy implementation. Overlapping mandates and jurisdictional conflicts among agencies, such as NOSDRA, NESREA, NUPRC, and state governments, result in inefficiencies and duplication of efforts. The absence of a harmonized framework for environmental governance has further impeded the coordination required to address complex environmental challenges effectively. Community resistance and social conflicts also pose significant barriers to policy implementation. Many communities in the Niger Delta perceive environmental policies as instruments that serve the interests of oil companies rather than protecting their rights and livelihoods. This perception, often rooted in decades of neglect and exploitation, fuels mistrust and obstructs collaborative efforts to implement policies. Additionally, the prevalence of sabotage and artisanal refining exacerbates environmental degradation, complicating the enforcement of regulations and the mitigation of oil spill impacts.

The implementation of environmental policies in the Niger Delta is heavily influenced by the interplay among key stakeholders, including government agencies, oil companies, local communities, and civil society organisations. While NOSDRA and other regulators are tasked with enforcing compliance, oil companies bear the primary responsibility for preventing spills and undertaking remediation efforts. However, their commitment to these obligations often falls short, particularly in the absence of stringent enforcement. Local communities, on the other hand, are critical stakeholders in environmental governance, as they bear the brunt of oil-related pollution. Their active involvement in policy implementation, through mechanisms such as community monitoring and reporting is essential for achieving sustainable outcomes. Civil Society Organisations and international bodies also play a vital role in advocating for stronger environmental standards and holding stakeholders accountable. The failure to integrate these diverse perspectives into a cohesive policy framework undermines the prospects for effective implementation and sustainable development in the region.

### **How has NOSDRA Performed thus Far?**

Since its inception in 2006, the National Oil Spill Detection and Response Agency (NOSDRA) has been at the forefront of Nigeria's efforts to manage oil spill incidents, particularly in the environmentally sensitive Niger Delta region. Tasked with the detection, reporting, and coordination of responses to oil spills, NOSDRA's role is pivotal in mitigating the environmental and socio-economic impacts of oil pollution. This section critically appraises NOSDRA's performance, examining its achievements, challenges, and areas necessitating improvement. NOSDRA has recorded several notable achievements in its mandate, reflecting efforts to enhance oil spill management in Nigeria. One of its most significant contributions is the establishment of the Nigerian Oil Spill Monitor, an online platform that provides real-time data on oil spill incidents across the country. The platform,

which reported over 1,300 oil spills between 2020 and 2023, has become a vital resource for stakeholders, including government agencies, civil society organisations, and local communities. A Respondent stated:

*The Oil Spill Monitor has introduced transparency and accountability for oil spillages. Before the agency was established, it was not strange to see disagreements on the occurrence and cause of spills between multinationals local communities. With NOSDRA, this is largely settled as incidents of spills are documented and their responses tracked.*

Additionally, NOSDRA has developed and enforced regulatory frameworks aimed at improving oil spill prevention and response. The agency mandates the preparation of Oil Spill Contingency Plans (OSCPs) by oil operators, ensuring that companies have predefined strategies for handling spill incidents. A Respondent alluded to this point by noting that the “insistence on OSCP has forced many operators to adopt better preparedness practices, which is a significant step forward.”

The agency has also been instrumental in coordinating responses to several high-profile oil spills in the Niger Delta, such as the Bonga spill of 2011 and the more recent Santa Barbara spill in 2021. The agency facilitated multi-stakeholder collaborations that mitigated the environmental damage caused by these incidents. Furthermore, NOSDRA has pushed for the adoption of international best practices. The agency has facilitated Nigeria's compliance with global conventions such as the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC). This alignment has not only strengthened Nigeria's regulatory framework but also attracted international partnerships that provide technical and financial support for NOSDRA's operations.

Despite these achievements, NOSDRA faces significant challenges that hinder its effectiveness. A pervasive issue is the frequency of oil spills which underscores persistent gaps in regulatory compliance and enforcement. In 2022 alone, NOSDRA recorded over 600 oil spill incidents, with 80% attributed to equipment failure and operational lapses by oil companies. Pointing to the compliance gap, an interviewee simply alluded that although progress is being made, there remains gaps in compliance by operators. This gap in compliance stems from several factors, including enforcement limitations.

## **Conclusion**

The exploration and exploitation of crude oil in Nigeria's Niger Delta region has led to significant environmental degradation, despite the area's critical role in the nation's economy. This study highlights the urgent need for effective environmental policies and practices, particularly focusing on the National Oil Spill Detection and Response Agency (NOSDRA) and its efforts to mitigate the impacts of oil spills. While various laws and regulations have been established to protect the environment, their enforcement has proven inadequate, resulting in continued ecological damage. The research underscores the necessity for a paradigm shift from mere economic growth to sustainable development, as articulated by Daly's economic theory. This approach emphasizes that true progress must prioritize environmental health alongside economic activities.



Finally, addressing the environmental challenges in the Niger Delta requires concerted efforts by all stakeholders, including government agencies, oil companies, and local communities. Practical solutions must be implemented to enhance compliance with environmental regulations and promote sustainable practices. By fostering a culture of accountability and community engagement, it is possible to restore the ecological balance in the Niger Delta, ensuring that its resources can sustain future generations while preserving the livelihoods of its inhabitants.

### **Recommendations for Improvement**

To enhance its effectiveness, NOSDRA must address several key areas:

- 1. Strengthening Enforcement Mechanisms:** The agency should bolster its enforcement capacity by securing adequate funding, enhancing staff training, and minimizing political interference. Implementing stringent penalties for non-compliance and ensuring their consistent application would deter environmental violations by oil companies.
- 2. Enhancing Community Engagement:** Involving local communities in monitoring and reporting oil spill incidents can improve response time and ensure that remediation efforts align with the needs of affected populations. Building trust with communities through transparent communication and inclusive decision-making processes is essential.
- 3. Leveraging Technology:** Investing in advanced technologies for spill detection and response can enhance NOSDRA's operational efficiency. Utilizing satellite imagery, drones, and real-time monitoring systems would enable quicker identification and assessment of spill incidents.
- 4. Inter-Agency Collaboration:** Fostering collaboration with other regulatory bodies, such as the Nigerian Upstream Petroleum Regulatory Commission (NUPRC), and international partners can provide additional resources and expertise. A coordinated approach is vital for addressing the multifaceted challenges of oil spill management.
- 5. Regular Performance Audits:** Conducting periodic independent audits of NOSDRA's operations can identify areas for improvement and ensure accountability. These audits should assess the agency's compliance with its mandate, the effectiveness of its response strategies, and its overall impact on environmental protection.

## References

- Anejionu, O. C., Ahiarammunnah, P. A. N., & Nri-ezedi, C. J. (2015). Hydrocarbon pollution in the Niger Delta: Geographies of impacts and appraisal of lapses in extant legal framework, *Resources Policy*, 45, 65-77.
- Barigbon, C. B. (2023). State-Corporate environmental crime and human security in the Niger Delta, Nigeria, *Journal of Global Social Sciences*, 4(14), 21-43.
- Daly, H. E. (1996). *Beyond growth: The economics of sustainable development*, Beacon Press.
- Emamuzou, O. G. (2017). Environmental pollution in the Niger Delta of Nigeria: Human rights Vis a Vis Ecocide Law—which way out? *Ajayi Crowther University Law Journal*, 1(1).
- Ite, A. E., Ibok, U. J., Ite, M. U., & Petters, S. W. (2013). Petroleum exploration and production: Past and present environmental issues in the Nigeria's Niger Delta, *American Journal of Environmental Protection*, 1(4), 78-90.
- Komene, G. L. (2021). Ecocide activities and oil firms' ecological marketing practice: A focus on agricultural-economic sustainability in Niger Delta, *World Journal of Business and Management*, 7(2), 18-48.
- Kuta, A. A. (2023). *Characterizing land cover changes in the Niger Delta caused by oil production (Doctoral dissertation, University of Nottingham)*.
- Lynch, M. J., Fegadel, A., & Long, M. A. (2022). Green criminology and state-corporate crime: The ecocide-genocide nexus with examples from Nigeria. *In the Genocide-Ecocide Nexus* (81-101). Routledge.
- Miller, D. C., & Salkind, N. J. (2002). *Handbook of research design and social measurement*, Sage.
- NOSDRA (2025). *Nigerian oil spill monitor*. <https://nosdra.oilspillmonitor.ng>
- Olukaajire, S. J., Ifiora, C. C., Osaro, P. A., Osuji, L. C., & Hart, A. I. (2024). Petroleum exploration in the Niger Delta region and implications for the environment: A review, *Journal of Energy Research and Reviews*, 16(5), 19-29.
- Oluniyi, A. E. (2017). Nigeria's oil and gas production and Niger Delta militant: The need of oil resources to stop oil reliance for sustainable development. *Global Journal of Human Social Science*, 17(5), 22-34.
- Raji, A. O. Y., & Abejide, T. S. (2013). An assessment of environmental problems associated with oil pollution and gas flaring in the Niger Delta region Nigeria, C. 1960s-2000. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 3(3), 48.

Richard, G., Izah, S. C., & Ogwu, M. C. (2022). Implications of artisanal crude oil refining on sustainable food production in The Niger Delta region of Nigeria, *Journal of Environmental Bioremediation and Toxicology*, 5(2), 69-77.

## Appendix

### **Basic Interview Questions for NOSDRA (NATIONAL OIL SPILL DETECTION AND RESPONSE AGENCY) STAFF**

1. Number of spills in Nigeria. How many of these are as a result of outdated pipes, and how many are the result of vandalism?
2. What are the major and minor challenges in attending to these spills in terms of your role of detection and response?
3. Do you have the required machinery and skilled staff to carry out your mandate?
4. Have the oil companies and the government been responsive enough in oil spill matters?
5. Have affected communities been partners or stumbling blocks to NOSDRA operations

### **Basic Interview Questions for Experts**

1. Has NOSDRA been effective in meeting its mandate of oil spill detection and response in the Niger Delta region?
2. What do you consider the stumbling blocks to improved services by NOSDRA (**NATIONAL OIL SPILL DETECTION AND RESPONSE AGENCY**) . How can these be circumvented to enable the agency meet its goal?
3. Does Nigeria's reliance on Oil Companies for data and majority of services in the oil sector affect NOSDRAs performance?
4. Do you think the agency has the necessary machinery and manpower to meet its mandate? Can the situation be better?
5. How can NOSDRA facilitate speedy government intervention and community participation in its activities?
6. Would you advocate timelines for cleaning up spills and monitoring the rehabilitation of the environment?

### **Basic Questions in Community Questionnaire**

1. For how long have oil spills been in your community?
2. For how long has NOSDRA been in your community?
3. What is the relationship between your community and NOSDRA? i.e. Good, Bad, Not sure
4. Has NOSDRA been responsive and effective in your community? If YES, please give details.
5. Would you want NOSDRAs operations to be done differently? If YES give details

**Acknowledgement**

The authors gratefully acknowledge the financial support provided by the Tertiary Education Trust Fund (TETFUND) for this research project. The funding enabled us to conduct this study, and we appreciate TETFUND's commitment to promoting research and development in Nigeria's tertiary education sector.