

Assessing the Right to Sustainable Environmental Development in Nigeria

Omozue Moses Ogorugba, Ejiro Tessy Kore-Okiti*, Emmanuel Okwuokei

Faculty of Law, Delta State University, Oleh Campus, Nigeria. *Corresponding Author's Email: ejiro.okiti@delsu.edu.ng

Abstract

This paper critically evaluates the integration and effectiveness of sustainable environmental development principles within the Nigerian legal framework. Despite Nigeria's rich natural resources, the nation faces significant environmental challenges, exacerbated by industrial activities and inadequate regulatory mechanisms. This study analyses the extent to which Nigerian law recognizes and enforces the right to a sustainable environment, drawing upon national legislation, policies, and judicial decisions. It explores the balance between economic development and environmental protection, and how this impacts the rights of citizens. The research utilizes a multidisciplinary approach, incorporating legal analysis with socio-economic and environmental perspectives. The findings reveal gaps in legislation and enforcement, suggesting reforms for stronger legal protections and more effective implementation. This study contributes to the discourse on environmental law in Nigeria, offering recommendations for aligning national development goals with sustainable environmental practices.

Keywords: Environmental Law, Environmental Sustainability, Legal Reform, Sustainable Development.

Introduction

In the dynamic landscape of global environmental governance, the principle of sustainable development, especially within the sphere of environmental law, has ascended to paramount importance. This principle holds particular resonance for nations like Nigeria, a country endowed with copious natural resources yet simultaneously grappling with formidable environmental challenges. At the heart of this discourse lies a critical intersection: the harmonization of environmental sustainability with legal frameworks, a nexus vital for the preservation of long-term ecological balance and societal welfare.

Nigeria's path of swift industrialization and economic growth unfolds alongside a narrative of environmental degradation and complex challenges in managing natural resources. This juxtaposition underscores a pivotal issue – while Nigeria is equipped with an array of legal provisions and policies aimed at environmental protection, the tangible realization of sustainable development within its borders remains a formidable challenge. This study emerges from an essential need to undertake an incisive and critical examination of the degree to which Nigerian law

upholds and enforces the right to a sustainable environment. This right is not merely a legal abstraction but a fundamental cornerstone for the nation's future trajectory and overall well-being.

The importance of sustainable environmental development in Nigeria cannot be overstated. As Africa's most populous country and one of its largest economies, Nigeria's environmental policies and practices have significant regional and global implications. Effective environmental governance in Nigeria is crucial for the health and well-being of its citizens, the preservation of its rich biodiversity, and the sustainability of its natural resources. Moreover, Nigeria's environmental challenges, such as oil spills, deforestation, and desertification, have cross-border effects, impacting neighbouring countries and contributing to global environmental issues like climate change and biodiversity loss (1).

The landscape of environmental law in Nigeria has undergone significant evolution, mirroring the nation's journey through periods of resource exploitation, economic upheaval, and an emerging consciousness of environmental preservation. This evolution reflects a complex interplay between Nigeria's abundant natural resources, its

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aspirations for economic development, and the imperative of environmental stewardship. The roots of environmental law in Nigeria can be traced to the colonial era, a period characterized by laws primarily designed to facilitate the exploitation of natural resources. These laws, largely influenced by the colonial administration's economic interests, focused on resource extraction without considerable regard for environmental consequences.

In the post-independence period, particularly through the 1970s and 1980s, Nigeria witnessed a paradigm shift in its approach to environmental issues. This period marked the beginning of Nigeria's grappling with the adverse effects of rapid industrialization, particularly in the oil-rich Niger Delta region (2). The oil boom brought economic benefits but also led to environmental challenges, most notably oil spills and gas flaring, that caused severe ecological damage and social unrest in affected areas. The Niger Delta region became a focal point for environmental activism and legal reform. The environmental degradation experienced here, including widespread pollution, habitat destruction, and community displacement, underscored the urgent need for more robust and comprehensive environmental regulations (3). This period catalysed public awareness and advocacy, setting the stage for significant legal reforms. By the late 1980s and into the early 1990s, the Nigerian government began to acknowledge these environmental challenges more directly, leading to the adoption of a more comprehensive approach to environmental protection.

This era saw the introduction of new legislation and the establishment of regulatory bodies dedicated to environmental management and protection. The legislation from this period represented a more proactive and preventive approach to environmental issues, recognizing the need for a balance between economic development and environmental sustainability. The evolution of Nigeria's environmental law continued into the 21st century, marked by the introduction of more sophisticated laws and policies. These developments were influenced by international environmental treaties and agreements, reflecting a growing global consciousness about environmental issues. Nigeria's legal framework began to integrate

principles of sustainable development, environmental impact assessments, and increased public participation in environmental decision-making processes (4).

Today, Nigerian environmental law faces new challenges, such as addressing climate change, managing electronic waste, and ensuring sustainable urban development. The legal system is continually adapting to these emerging issues, reflecting both local realities and global environmental trends. This paper aims to conduct a critical evaluation of how Nigerian law integrates and facilitates the right to sustainable environmental development. It delves into an analysis of the existing legal framework, its efficacy, and the discernible gap between policy formulation and practical implementation. The significance of this inquiry lies in its potential contribution to the broader understanding of environmental law in Nigeria, offering insightful perspectives into the ways legal mechanisms could more effectively support sustainable development goals. It seeks to inform and guide policymakers, legal practitioners, and environmental activists about the prevailing state of environmental laws in Nigeria, while proposing avenues for reform and advancement. Our research encompasses a review of Nigerian environmental laws, policies, and their implementation strategies. This investigation balances the imperative of economic development with the necessity of environmental protection. While the primary focus remains on the Nigerian context, the study also draws upon relevant international legal principles and comparisons with other jurisdictions, offering a broad, comparative perspective.

Recent studies highlight the significance of sustainable development in Nigeria and its implications for global environmental policy frameworks. For instance, Awhefeada *et al.*, emphasize the need for sustainable practices to address Nigeria's environmental challenges. Ugwuokpe (5) explores the relationship between oil exploitation and environmental impacts in the Niger Delta, underscoring the need for legal reforms and also analysed the effectiveness of environmental laws and propose strategies for improvement, highlighting the importance of robust enforcement and public participation. These studies provide a foundation for understanding the current state of environmental

law in Nigeria and identifying areas for enhancement.

Methodology

This study adopts a multidisciplinary approach to evaluate the right to sustainable environmental development in Nigeria. The methodology encompasses a combination of legal analysis, policy review, and case study examination to provide a comprehensive understanding of the topic. The legal analysis involves a detailed examination of Nigerian environmental laws, policies, and their implementation strategies. This includes the evaluation of statutory provisions, judicial decisions, and administrative regulations relevant to environmental sustainability.

We modified the traditional doctrinal legal research method to incorporate socio-economic and environmental perspectives, aligning with the principles of sustainable development. This approach ensures a holistic understanding of the legal framework and its practical implications. The policy review includes an assessment of national policies and strategies related to environmental protection and sustainable development, drawing from both government and non-governmental sources.

Specific criteria for selecting case studies include:

Relevance to Key Environmental Issues: The case studies are chosen based on their relevance to critical environmental challenges in Nigeria, such as pollution, deforestation, and climate change impacts.

Significance of the Environmental Issue: The selected cases highlight significant environmental problems that have broader implications for policy and legal reforms.

Availability of Data: Preference is given to case studies where sufficient data and documentation are available to conduct a thorough analysis.

Representativeness: The cases are chosen to represent a wide range of environmental issues, geographic regions, and socio-economic contexts within Nigeria.

Analytical Framework

The analytical framework for this study is grounded in several theoretical and legal principles that guide the evaluation of the entitlement to sustainable development.

These principles include:

The Principle of Sustainable Development: This principle, articulated in the Brundtland Report, emphasizes meeting the needs of the present without compromising the ability of future generations to meet their own needs. It integrates economic growth, environmental protection, and social equity.

Environmental Justice: This principle focuses on the fair distribution of environmental benefits and burdens. It ensures that all communities, particularly marginalized ones, have access to a healthy environment and are not disproportionately affected by environmental hazards.

The Polluter Pays Principle: This principle asserts that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment. It is embedded in various international and national environmental laws.

Public Participation and Access to Information: Guided by the Aarhus Convention, this principle emphasizes the importance of public participation in environmental decision-making and access to environmental information. It ensures transparency and accountability in environmental governance.

Legal Pluralism: This framework acknowledges the coexistence of multiple legal systems within a single jurisdiction, including statutory law, customary law, and international law. It examines how these systems interact and impact environmental governance.

Human Rights-Based Approach: This principle integrates human rights norms and standards into environmental governance, emphasizing the right to a healthy environment as a fundamental human right. It is supported by international human rights treaties and declarations.

These principles provide a comprehensive foundation for analysing the legal and policy framework governing sustainable environmental development in Nigeria. They guide the evaluation of existing laws, policies, and their implementation, highlighting areas for improvement and potential reforms.

The methodology employed in this study aims to ensure a thorough and balanced assessment of sustainable environmental development in Nigeria, providing valuable insights for

policymakers, legal practitioners, and environmental advocates.

Legal Frameworks

National Environmental Standards and Regulations Enforcement Agency (NESREA) Act, 2007:

The NESREA Act, passed in 2007, established the National Environmental Standards and Regulations Enforcement Agency as the primary body responsible for the protection and development of the environment, biodiversity conservation, and sustainable development of Nigeria's natural resources. NESREA's role is crucial in monitoring and enforcing environmental standards, as well as implementing policies relating to environmental regulations. NESREA replaced the Federal Environmental Protection Agency (FEPA), which was the earlier body in charge of environmental protection. This transition marked a significant expansion in the scope of environmental oversight, giving NESREA a more comprehensive mandate to address a wider array of environmental challenges, including air and water pollution, industrial waste management, and chemical substances regulation.

Environmental Impact Assessment (EIA) Act, 1992:

The EIA Act mandates that all significant development projects undergo a thorough environmental assessment to predict and evaluate their environmental impacts before commencement. This process is essential in planning and decision-making, ensuring that potential negative environmental consequences are identified and mitigated. The EIA process is critical in ensuring that economic development projects align with environmental sustainability goals. It involves public participation, highlighting the importance of involving stakeholders in decisions that affect their environment.

Harmful Wastes (Special Criminal Provisions, etc.) Act, 1988:

This act was introduced in response to the infamous illegal dumping of toxic waste in Koko, Delta State. It criminalizes the dumping of hazardous waste in Nigeria and establishes stringent penalties for violations, reflecting a strong stance against environmental pollution. The act is significant for safeguarding Nigeria's environment and public health against the risks posed by hazardous wastes, including industrial by-products and electronic waste.

Endangered Species Act, 1985: This act provides for the conservation and management of Nigeria's

wildlife, particularly focusing on the protection of endangered species (6). It addresses issues like illegal hunting, habitat destruction, and trade in endangered species. The act is critical for preserving Nigeria's rich biodiversity, ensuring that endangered species are protected from exploitation and harm, and maintaining ecological balance.

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

Established to specifically address the frequent occurrences of oil spills in Nigeria, NOSDRA plays a pivotal role, particularly in the oil-rich Niger Delta region (7). The agency is tasked with oil spill detection, preparedness, and response, aiming to minimize the environmental impact of oil spills. NOSDRA's establishment highlighted the government's recognition of the severe environmental challenges in the Niger Delta due to oil exploration activities and its commitment to addressing these issues more effectively.

Nigerian Minerals and Mining Act, 2007:

This act provides a legal framework for the regulation of the mining sector in Nigeria. It ensures that mining activities are conducted in an environmentally sustainable manner, adhering to standards that prevent environmental degradation. The act emphasizes environmental compliance in mining activities, including the rehabilitation of mining sites, and promotes sustainable mining practices that are critical for environmental conservation and community welfare.

Water Resources Act, 1993 and the River Basins Development Authorities Act:

These acts provide the framework for the comprehensive management, conservation, allocation, and control of Nigeria's water resources. They address key issues like water pollution, river basin development, and irrigation schemes. The legislation aims to balance the utilization of water resources for various needs—such as agricultural, industrial, and domestic use—with the conservation and protection of these resources for future generations.

Each of these acts plays a crucial role in shaping Nigeria's approach to environmental management and sustainable development, reflecting the nation's commitment to addressing the complex environmental challenges it faces.

Sustainable Environmental Development

Sustainable Environmental Development, a term popularized by the Brundtland Commission in 1987, is a complex and holistic concept that addresses the intricate balance between meeting our current needs and ensuring those future generations can meet theirs. It integrates three core elements: environmental protection, economic growth, and social equity. This approach emphasizes the interconnectedness of human activities with the natural world, advocating for the responsible use and conservation of natural resources while pursuing economic development and ensuring social welfare (8).

Globally, sustainable environmental development has become a crucial goal, underscored by international agreements like the United Nations' Sustainable Development Goals (SDGs). These goals address global challenges, including poverty, inequality, climate change, environmental degradation, and peace and justice. The concept has shaped international policies and practices, promoting a holistic approach to development that recognizes the need to preserve natural resources for future generations while addressing current socio-economic challenges (9).

Locally, in the context of Nigeria, sustainable environmental development is of paramount importance due to the country's rich natural resources, biodiversity, and environmental challenges. Nigeria faces issues like deforestation, desertification, pollution, and resource depletion, exacerbated by rapid population growth and urbanization (10). Adopting sustainable environmental practices is crucial for Nigeria to ensure long-term environmental health, economic prosperity, and social well-being. This involves balancing economic development activities, particularly in sectors like oil and gas, mining, and agriculture, with the need to protect and conserve the environment for present and future generations (11).

Sustainable environmental development's relevance transcends global and local scales, calling for integrated approaches that encompass environmental stewardship, economic viability, and social equity. For countries like Nigeria, it presents an opportunity to redefine growth strategies in ways that are environmentally responsible and socially inclusive.

Results and Discussion

The State of Environmental Sustainability in Nigeria

Nigeria, Africa's most populous country, faces numerous environmental sustainability challenges, which are exacerbated by a combination of factors including rapid urbanization, industrialization, and natural resource exploitation. Key challenges include:

Pollution Challenges: Major urban cities like Lagos and Port Harcourt are at the forefront of pollution challenges (12). The rapid pace of urbanization, coupled with industrial activities, has led to significant air and water pollution. Pollution in these areas not only deteriorates air and water quality but also poses serious risks to public health and local ecosystems. The lack of adequate waste management systems further exacerbates the problem, leading to the accumulation of industrial and domestic waste.

Rampant Deforestation: Nigeria's alarming deforestation rates are primarily driven by agricultural expansion, logging for timber, and the spread of urbanization (13). These activities lead to extensive loss of forest cover. The consequences of deforestation are far-reaching, including loss of biodiversity, disruption of ecosystems, and contribution to global climate change (14). This deforestation also impacts the ecological balance and the natural carbon sink provided by forests.

Desertification in the North: Northern Nigeria is increasingly suffering from the effects of desertification (15). This phenomenon is exacerbated by factors such as climate change, overgrazing, and the ongoing deforestation. Desertification in these regions poses severe challenges for agriculture, a primary source of livelihood for rural communities. The loss of arable land to desert encroachment threatens food security and the economic stability of these areas.

Environmental Degradation in the Niger Delta: The Niger Delta, a region rich in oil and gas reserves, has been facing severe environmental degradation due to oil spillage and gas flaring (16). These activities have resulted in the contamination of water bodies and destruction of local ecosystems. The environmental damage in the Niger Delta has far-reaching implications on the health and livelihoods of local communities,

disrupting traditional occupations like fishing and farming, and leading to social unrest.

Climate Change and Its Impacts: Nigeria is experiencing the tangible impacts of climate change, with increased temperatures, changing rainfall patterns, and the occurrence of extreme weather events (17). These climatic changes affect various sectors, particularly agriculture and water resources, undermining the country's environmental sustainability and posing challenges for adaptation and mitigation (18). Coastal areas are particularly at risk from sea-level rise and coastal erosion.

Biodiversity Loss: Nigeria's rich biodiversity is under threat from habitat destruction, overexploitation of natural resources, and pollution. Endangered species, such as the Cross River gorilla and the Nigerian-Cameroon chimpanzee, face significant risks due to habitat loss and poaching (19).

Socio-Economic Determinants Impacting Environmental Policies

The effectiveness of environmental policies and the promotion of sustainable development in Nigeria are significantly influenced by various socio-economic determinants. These factors include:

Economic Dependence on Natural Resource: Nigeria's economy is heavily reliant on the extraction and export of natural resources, particularly oil and gas. This dependence creates a conflict between economic growth and environmental protection. The need for revenue from resource exploitation often leads to lenient environmental regulations and enforcement, contributing to environmental degradation (20).

Poverty and Unemployment: High levels of poverty and unemployment drive unsustainable practices such as illegal logging, poaching, and informal waste management. Poor communities often rely on natural resources for their livelihoods, leading to overexploitation and environmental harm. Additionally, limited financial resources hinder the ability of both the government and individuals to invest in sustainable practices and technologies (21).

Rapid Urbanization: Nigeria's urban population is growing rapidly, leading to increased demand for housing, infrastructure, and services. This urban expansion often occurs without adequate planning and regulation, resulting in

environmental issues such as inadequate waste management, water pollution, and deforestation (22). The strain on urban infrastructure exacerbates environmental problems and reduces the quality of life for urban residents.

Lack of Public Awareness and Education: Public awareness and education about environmental issues and sustainable practices are limited. Many Nigerians are not fully aware of the environmental impacts of their actions or the importance of sustainability. This lack of awareness hampers the effectiveness of environmental policies and initiatives, as public support and participation are crucial for successful implementation (23).

Institutional Weaknesses: Weak institutional frameworks, including inadequate funding, corruption, and lack of technical expertise, undermine the enforcement of environmental laws and policies. Effective environmental governance requires strong institutions capable of implementing and monitoring regulations, but institutional weaknesses in Nigeria hinder progress towards sustainable development (24).

Efficacy of Existing Legislation and Regulation

The findings of this study reveal significant gaps in Nigeria's environmental legal framework and its implementation. These gaps hinder the effective realization of sustainable environmental development. The following connections to current legal norms and international environmental treaties are identified:

National Environmental Standards and Regulations Enforcement Agency (NESREA) Act, 2007:

While NESREA plays a crucial role in enforcing environmental standards, the findings indicate weaknesses in enforcement, inadequate funding, insufficient personnel, and bureaucratic challenges. The agency's capacity to monitor and enforce compliance is often hindered by these constraints, leading to gaps in environmental protection. Strengthening NESREA's capabilities aligns with the principles of the Rio Declaration on Environment and Development of 1992, which emphasizes the need for effective legal and regulatory frameworks for sustainable development.

Environmental Impact Assessment (EIA) Act, 1992:

The EIA process is a crucial tool for assessing the potential environmental impacts of development projects. However, the

implementation of EIA regulations in Nigeria faces several challenges, including inadequate public participation, lack of transparency, and insufficient enforcement. Enhancing the EIA framework is consistent with the Espoo Convention on Environmental Impact Assessment in a Transboundary Context (1991), which advocates for comprehensive EIA procedures to ensure that environmental impacts are considered in development projects. This can ensure thorough assessments and meaningful stakeholder engagement can improve its efficacy

Harmful Wastes (Special Criminal Provisions, etc.) Act, 1988: Addressing hazardous waste management issues aligns with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989). This act addresses the illegal dumping of hazardous waste but suffers from enforcement weaknesses. Instances of hazardous waste dumping persist, indicating the need for more robust monitoring and stricter penalties. Improving enforcement mechanisms and increasing public awareness about hazardous waste issues can enhance the effectiveness of this legislation.

Endangered Species Act, 1985: The conservation of endangered species is vital for maintaining biodiversity, and aligning national efforts with the Convention on Biological Diversity of 1992 can enhance conservation initiatives. However, the effectiveness of this act is limited by inadequate enforcement and insufficient resources for wildlife protection. Strengthening conservation efforts, enhancing enforcement, and involving local communities in biodiversity protection can improve the efficacy of this legislation.

National Oil Spill Detection and Response Agency (NOSDRA) Act, 2006: NOSDRA's role in managing oil spills is crucial for mitigating environmental damage in the Niger Delta. Despite its mandate, the agency faces challenges such as delayed response times, lack of equipment, and limited funding. Enhancing NOSDRA's operational capacity and ensuring timely response to oil spills can improve its effectiveness (25). Strengthening NOSDRA's response capabilities to oil spills aligns with the International Convention on Oil Pollution Preparedness, Response and Co-operation of 1990. Improving coordination and resource allocation

can mitigate the environmental impacts of oil spills in the Niger Delta.

Nigerian Minerals and Mining Act, 2007: This act regulates mining activities to ensure environmental sustainability. However, enforcement of environmental standards in the mining sector is often weak, leading to environmental degradation. Strengthening regulatory oversight, ensuring compliance with environmental standards, and promoting sustainable mining practices can enhance the efficacy of this legislation. Also, ensuring environmentally sustainable mining practices aligns with the principles of the Minamata Convention on Mercury of 2013.

These connections highlight the importance of aligning Nigeria's environmental legal framework with international treaties and conventions to enhance sustainable environmental development. By addressing the identified gaps and implementing the recommendations, Nigeria can strengthen its environmental governance and contribute to global sustainability goals.

Dynamic Relationship between Domestic and Global Legal Norms

The interplay between domestic and global legal norms significantly influences Nigeria's environmental policies. This relationship shapes the development and implementation of environmental laws and regulations in the country.

Adoption of International Environmental Treaties: Nigeria is a signatory to several international environmental treaties, including the Paris Agreement on climate change, the Convention on Biological Diversity, and the Basel Convention on hazardous wastes. These treaties set global standards and commitments that Nigeria incorporates into its domestic legal framework. For instance, the National Policy on Climate Change aligns with the objectives of the Paris Agreement, aiming to reduce greenhouse gas emissions and enhance climate resilience.

Harmonization with International Standards: Nigeria's environmental regulations often reflect international standards and best practices. For example, the Environmental Impact Assessment (EIA) Act incorporates principles from the Espoo Convention on Environmental Impact Assessment in a Transboundary Context. This harmonization ensures that Nigeria's environmental policies are

consistent with global norms, enhancing their credibility and effectiveness.

Influence of Global Environmental Governance: Global environmental governance frameworks, such as the United Nations Environment Programme (UNEP) and the Intergovernmental Panel on Climate Change (IPCC), provide guidance and technical support to Nigeria. These organizations influence policy development and implementation through capacity-building initiatives, funding, and knowledge sharing. For example, UNEP's involvement in the Ogoniland clean-up project highlights the role of international collaboration in addressing environmental issues (26).

Challenges in Implementation: Despite the alignment with global legal norms, Nigeria faces challenges in implementing these standards domestically. Factors such as inadequate funding, lack of technical expertise, and institutional weaknesses hinder the effective translation of international commitments into national actions. Strengthening institutional capacity and ensuring adequate resources are critical for bridging this implementation gap.

Impact of Global Economic Policies: Global economic policies, such as trade agreements and foreign investments, influence Nigeria's environmental policies. These policies can both support and undermine environmental sustainability. For instance, foreign investments in the oil and gas sector contribute to economic growth but also pose environmental risks. Balancing economic development with environmental protection requires integrating environmental considerations into trade and investment policies.

Consequences of Deficiencies in Laws and Policies on Communities and Natural Systems

The deficiencies in Nigeria's environmental laws and policies have significant consequences for both local communities and natural systems. These impacts are multifaceted and pervasive, affecting public health, livelihoods, and ecosystem integrity.

Public Health Impacts: Weak enforcement of environmental regulations leads to increased pollution and exposure to hazardous substances. In urban areas like Lagos and Port Harcourt, inadequate waste management and industrial emissions contribute to respiratory illnesses,

waterborne diseases, and other health problems among residents. Oil spills and gas flaring in the Niger Delta result in contaminated water and air, posing serious health risks to local communities (27).

Livelihood Disruptions: Many communities in Nigeria rely on natural resources for their livelihoods, including farming, fishing, and forestry. Environmental degradation caused by deforestation, soil erosion, and pollution directly affects these livelihoods. For example, oil spills in the Niger Delta have devastated fishing communities, reducing fish populations and contaminating water sources, which undermines food security and economic stability (28).

Ecosystem Degradation: The loss of biodiversity and ecosystem services due to deforestation, habitat destruction, and pollution has far-reaching implications. Forests provide critical ecosystem services such as carbon sequestration, soil stabilization, and water regulation. Deforestation and habitat destruction disrupt these services, contributing to climate change, increased flood risks, and reduced agricultural productivity (29).

Social and Economic Inequities: Environmental degradation often exacerbates existing social and economic inequalities. Marginalized communities, including low-income and rural populations, are disproportionately affected by environmental harm (30). They have limited access to resources and decision-making processes, making it difficult to advocate for their rights and protect their environments. This inequality hinders sustainable development and social cohesion.

Loss of Cultural Heritage: Many Nigerian communities have deep cultural and spiritual connections to their natural environments. Environmental degradation and resource exploitation threaten these cultural heritages. For example, the destruction of sacred forests and rivers due to deforestation and mining disrupts traditional practices and beliefs, leading to cultural loss and dislocation (31).

Environmental Injustice: The unequal distribution of environmental benefits and burdens constitutes a significant injustice. Powerful stakeholders, such as multinational corporations, often evade accountability for environmental damage, leaving local communities to bear the brunt of pollution and resource depletion. Strengthening legal frameworks and

enforcement mechanisms is crucial to address these injustices and protect vulnerable populations.

Case Studies on Environmental Challenges in Nigeria

Ogoniland Oil Spillage: The oil spillage in Ogoniland, Niger Delta, represents one of Nigeria's most severe environmental catastrophes. Chronic oil spills over several decades have extensively polluted the land, creeks, and waterways, causing ecological destruction. The spills have devastated local communities, affecting livelihoods, contaminating water sources, and leading to health complications among the inhabitants. Initiatives led by the Nigerian government and supported by international entities like the UNEP have been implemented for environmental clean-up and restoration (32). However, these efforts have encountered various challenges, resulting in slow progress and ongoing environmental and social issues.

Lagos Waste Management: Lagos, a megacity, struggles with managing its massive waste generation. The Olusosun dumpsite, as a microcosm of this challenge, is overwhelmed by uncontrolled dumping of waste (33). The inadequate handling of waste at Olusosun has led to serious health hazards, including air pollution from burning waste, and environmental degradation. This situation poses significant risks to nearby communities and the environment. In response, there have been efforts to improve waste management systems in Lagos, focusing on recycling and sustainable waste disposal methods to mitigate these issues.

Desertification in Northern Nigeria: Northern Nigeria is increasingly suffering from desertification, a process accelerated by factors like deforestation, overgrazing, and climate change. This environmental challenge has dire socio-economic consequences, including diminished agricultural productivity, food insecurity, and increased rural-urban migration. The loss of arable land disrupts local economies and exacerbates poverty and instability in the region.

Lake Chad Depletion: The diminishing Lake Chad, once one of Africa's largest lakes, illustrates the severe impacts of climate change and unsustainable water management practices. The reduction of Lake Chad has far-reaching

implications, affecting water availability, agricultural practices, and livelihoods for millions of people in the surrounding countries (34). It also exacerbates regional instability and conflict over dwindling resources.

These case studies provide a stark illustration of the multi-dimensional environmental challenges facing Nigeria. They highlight the critical need for comprehensive and integrated approaches to address these issues.

Gaps in Nigerian Environmental Law

Gaps in Nigerian Environmental law includes but not limited to the following:

- a. **Inadequate Enforcement Mechanisms:** One of the primary weaknesses in Nigerian environmental law is the gap between legislation and enforcement (35). Despite having a comprehensive legal framework, enforcement is often weak due to insufficient resources, lack of trained personnel, and limited monitoring and compliance mechanisms.
- b. **Fragmented Legal Framework:** Nigerian environmental laws are scattered across various legislations and agencies, leading to a lack of coherence and coordination (36). This fragmentation can result in overlapping responsibilities and gaps in regulatory coverage.
- c. **Outdated Legislation:** Some of the environmental laws in Nigeria are outdated and do not adequately address current environmental challenges such as climate change, electronic waste, and modern industrial pollutants.
- d. **Limited Public Participation:** There is often a lack of effective mechanisms for public participation in environmental decision-making processes (37). This limits community engagement and the incorporation of local knowledge and concerns into environmental governance.
- e. **Corruption and Political Influence:** Corruption and undue political influence can hinder the effective implementation of environmental laws, leading to non-compliance and lax enforcement in cases involving powerful stakeholders.
- f. **Underdeveloped Legal Infrastructure for Environmental Justice:** The legal infrastructure for addressing environmental

disputes is underdeveloped. There are challenges such as limited access to justice for affected communities, and a lack of specialized knowledge among the judiciary in handling complex environmental cases (38).

Economic Development versus Environmental Protection

The challenge of balancing economic development and environmental protection is particularly pronounced in Nigeria, a country striving to boost its economy while grappling with significant environmental issues.

Resource-Based Economy- Double-Edged Sword: The reliance on oil and gas as primary drivers of Nigeria's economy contributes significantly to its GDP, playing a pivotal role in national development. However, this dependency also creates a vulnerability to global market fluctuations and environmental risks. The environmental cost of oil extraction in the Niger Delta region includes land and water pollution, habitat destruction, and health hazards for local populations (39). This has led to growing concerns about the long-term viability and environmental sustainability of relying heavily on natural resources.

Agricultural Expansion- A Threat to Forests: The drive to boost agricultural production for economic growth often comes at the cost of extensive deforestation, significantly impacting biodiversity and ecosystem balance. Intensive farming practices contribute to soil erosion and degradation, undermining the long-term sustainability of agriculture, which is a cornerstone of Nigeria's economy and food security.

Industrialization and Urbanization- Modernization at a Cost: Nigeria's push towards industrialization and urbanization is key to its economic growth. However, this rapid development strains the environment, particularly in terms of pollution and waste management. The accelerated growth of urban areas like Lagos and Port Harcourt has led to significant environmental issues, including inadequate waste disposal systems, air and water pollution, and the overburdening of infrastructure.

For Nigeria, the path to sustainable development involves integrating environmental considerations into economic planning. This includes adopting sustainable practices in key sectors such as energy,

agriculture, and urban development. Reducing reliance on oil and gas by diversifying the economy through investments in renewable energy, sustainable agriculture, and eco-friendly industries can create new economic opportunities while minimizing environmental harm. Investing in sustainable infrastructure, particularly in urban areas, can help mitigate environmental impacts while supporting economic growth.

Comparative Analysis with other Legal Systems

Comparing Nigerian environmental law with other legal systems reveals several contrasts and potential areas for improvement.

1. Comprehensive Environmental Protection

Agencies: In light of the complex environmental challenges facing Nigeria, the establishment of a centralized environmental protection agency, modelled after the U.S. Environmental Protection Agency (EPA) and Germany's Federal Environment Agency (UBA), could be a transformative step. Such an agency in Nigeria would offer a more streamlined and efficient approach to environmental governance, unifying various environmental functions under a single authoritative body. It would have broad jurisdiction over diverse environmental concerns, from pollution control to climate change adaptation, and be vested with robust enforcement powers to ensure compliance with environmental laws. This centralization would not only enhance policy consistency across the nation but also strengthen Nigeria's capacity for research, policy development, and public engagement in environmental matters. Drawing inspiration from established global models, a centralized Nigerian environmental agency could significantly elevate the country's environmental protection capabilities, aligning it with international standards and best practices in environmental stewardship.

2. Public Participation and Transparency:

Public participation and transparency in environmental governance, exemplified by countries like Canada and New Zealand (40), are key factors that Nigeria could adopt to enhance its environmental policy effectiveness and community engagement. These countries have established frameworks that actively involve citizens in environmental decision-

making, ensuring that policies are not only transparent but also reflective of public concerns and needs. Such involvement ranges from public consultations on new projects to accessible information on environmental issues and policy decisions. Implementing similar practices in Nigeria could lead to more informed, inclusive, and effective environmental management. By encouraging public participation, Nigeria can ensure that environmental policies are more grounded in the realities and needs of its diverse communities. Additionally, fostering a culture of transparency would help build public trust in government actions, leading to greater cooperation and support in implementing environmental initiatives. This approach would not only empower citizens but also promote more accountable and responsive environmental governance.

3. **Adaptive Legislation:** In the realms of environmental legislation, the Netherlands and Japan serve as prime examples with their adaptive legal frameworks. These countries have established laws that are flexible and responsive to emerging environmental challenges and advancements in scientific understanding. This approach ensures that their legal systems remain effective and relevant over time. Incorporating such dynamism into Nigerian environmental law could significantly enhance its effectiveness. This would involve creating mechanisms within the legal framework that allow for regular reviews and updates in response to new environmental challenges and scientific developments. For example, as new information on climate change or pollution emerges, the legal system could rapidly integrate this knowledge, adjusting regulations and policies accordingly. Such an approach ensures that the legal framework remains at the forefront of environmental protection, adequately addressing both current and future challenges. It also promotes a proactive rather than reactive approach to environmental governance, preparing the nation to handle emerging issues more effectively. Implementing dynamic and adaptive legislation in Nigeria could lead to more resilient and

sustainable environmental management, aligned with global best practices.

4. **Strong Enforcement and Compliance Mechanisms:** Singapore's approach to environmental law enforcement serves as a notable example for countries seeking to enhance compliance and achieve better environmental outcomes. In Singapore, environmental regulations are enforced stringently, accompanied by substantial penalties for non-compliance. This strict enforcement regime ensures high levels of compliance, contributing significantly to the country's environmental management success. Adopting a similar approach in Nigeria could lead to marked improvements in environmental outcomes. Strengthening enforcement mechanisms would involve not only imposing significant penalties for non-compliance but also ensuring that these penalties are consistently applied. This could act as a deterrent against environmental violations, encouraging industries, businesses, and individuals to adhere to environmental regulations.

By learning from other legal systems, Nigeria can identify areas for improvement in its own environmental law framework, particularly in terms of enforcement, coherence, public participation, and adapting to new environmental challenges.

Recommendations

To enhance Nigeria's approach to sustainable environmental development, several strategies are proposed.

- a) Updating and integrating environmental laws and policies to address modern challenges such as climate change and pollution is crucial. Establishing a mechanism for periodic review of these laws can ensure they remain relevant and effective. Strengthening the enforcement and compliance capacities of regulatory bodies like NESREA and NOSDRA is essential. This includes increasing funding, providing technical training, and improving monitoring and compliance systems. Implementing stringent penalties and incentives for adhering to environmental regulations can promote better compliance.
- b) Encouraging public and community engagement in environmental matters through

the creation of participatory platforms, community-led initiatives, and awareness campaigns can enhance transparency and accountability. Addressing specific environmental challenges such as deforestation, pollution, and desertification requires targeted programs and initiatives. Large-scale restoration projects, sustainable urban planning, and the promotion of eco-friendly technologies can mitigate these issues. Promoting economic diversification away from oil by fostering renewable energy and sustainable practices in industries and agriculture can create new economic opportunities while minimizing environmental harm. Providing incentives for investments in renewable energy, green technologies, and sustainable agriculture can drive this transition.

- c) Developing comprehensive climate change policies that encompass mitigation and adaptation strategies is essential. These policies should be supported by research, data collection, and international collaboration. Integrating climate resilience into national development plans can enhance the country's ability to cope with climate impacts. Incorporating environmental education at all levels of the national curriculum and developing training programs in environmental law and management for professionals can raise awareness and build capacity. Educating the public and professionals about sustainable practices and environmental stewardship is crucial for long-term change.
- d) Formulating local and regional disaster risk reduction plans and implementing measures to protect and restore ecosystems, while incorporating traditional ecological knowledge alongside scientific methods, can enhance disaster resilience. Developing local and regional plans for disaster risk reduction can help communities prepare for and respond to environmental hazards effectively. By adopting these approaches, Nigeria can strengthen its legal frameworks and promote sustainable development, ensuring a healthier environment and improved quality of life for its citizens.

Conclusion

This study has critically evaluated the integration and effectiveness of sustainable environmental development principles within the Nigerian legal framework. Despite Nigeria's wealth of natural resources, the country faces significant environmental challenges exacerbated by industrial activities and inadequate regulatory mechanisms. The analysis reveals substantial gaps in legislation and enforcement, underscoring the need for comprehensive legal reforms and more effective implementation strategies. Strengthening the capacity of regulatory bodies, enhancing public participation, and aligning national policies with international environmental standards are pivotal for advancing sustainable development. By addressing these deficiencies and promoting a balanced approach to economic growth and environmental protection, Nigeria can achieve a more sustainable and equitable future, contributing to global environmental goals and improving the well-being of its citizens.

Abbreviations

There are no abbreviations used in this research.

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Author Contributions

Omozue Moses Ogorugba conceptualized and designed the study, prepared, developed, and edited the manuscript. Ejoro Tessy Kore-Okiti conceived the idea, gathered and analyzed the data, contributed to its interpretation, formulated the framework, and provided critical revisions. Emmanuel Okwuokei structured the manuscript, developed part of the arguments, contributed to the study design, interpreted the data, and reviewed the manuscript for intellectual content.

Conflict of Interest

The authors report no conflicts of interest associated with this research.

Ethics Approval

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