

ENVIRONMENTAL LEGAL EDUCATION AND COMPLIANCE WITH INTERNATIONAL MARINE ENVIRONMENTAL LAW IN NIGERIA

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ABSTRACT

Environmental degradation of marine ecosystems remains a persistent challenge in Nigeria despite the country's commitment to several international marine environmental law frameworks. This paper presents an opinion-based analysis of the role of environmental legal education in enhancing compliance with international marine environmental law in Nigeria. It observes that weak integration of environmental law into formal education systems, limited public awareness, and inadequate institutional capacity significantly hinder effective compliance with instruments such as the United Nations Convention on the Law of the Sea (UNCLOS) and MARPOL. The paper argues that environmental legal education is a critical but underdeveloped tool for promoting environmental responsibility among policymakers, industry operators, and coastal communities. It further highlights that compliance gaps are largely driven by insufficient legal literacy and weak enforcement structures. The discussion concludes that strengthening environmental legal education and institutional collaboration is essential for improving compliance and achieving sustainable marine environmental governance in Nigeria. The paper finally offers practical suggestions for enhancing legal education and regulatory effectiveness.

Keywords: Environmental legal education, marine environmental law, compliance, environmental governance

Introduction

The increasing deterioration of marine and coastal ecosystems in Nigeria has become a major environmental and developmental concern, particularly in oil-producing and coastal communities where extractive and industrial activities are concentrated. The study is anchored on the researcher's growing concern that despite Nigeria's participation in several international environmental agreements, marine environmental degradation continues to intensify, suggesting a persistent gap between international environmental commitments and domestic compliance practices. Activities such as crude oil exploration, pipeline vandalism, gas flaring, industrial effluents, and improper waste disposal have continued to contribute to severe pollution of marine waters, destruction of aquatic habitats, and declining fish populations. These conditions have not only undermined biodiversity but have also threatened the livelihoods and food security of coastal communities that depend heavily on marine resources.

Scholarly such like Ajao and Ugwuanyi (2019) attention has indicated that marine environmental degradation in Nigeria is closely linked to weak regulatory enforcement, limited environmental awareness, and inadequate institutional coordination. Ajao and Ugwuanyi (2019) observed that oil pollution remains one of the most significant threats to marine ecosystems in Nigeria due to persistent lapses in environmental regulation and enforcement. In a related view, Nwankwo (2021) emphasized that coastal environmental degradation has continued to worsen as a result of weak compliance structures and low levels of environmental literacy among stakeholders, including industry operators and host communities. Similarly, Eze and Okoro (2020) argued that environmental degradation in

the Niger Delta is sustained by weak governance structures and ineffective monitoring mechanisms, which allow harmful practices to persist unchecked. These observations suggest that marine environmental challenges are not only technical but also deeply connected to behavioral, institutional, and educational factors influencing compliance with environmental standards. From a critical perspective, the persistence of marine environmental degradation raises important questions about the effectiveness of environmental governance structures in Nigeria, particularly in relation to how legal awareness influences compliance behavior. In this context, environmental legal education emerges as a key independent variable that may significantly shape understanding, interpretation, and adherence to environmental obligations. The effectiveness of environmental protection laws may therefore depend not only on their existence but also on the extent to which stakeholders are educated and informed about their legal responsibilities.

International marine environmental law provides a comprehensive framework of obligations aimed at protecting and preserving the marine environment from various sources of pollution. The United Nations Convention on the Law of the Sea establishes a general obligation on states to protect and preserve the marine environment and to take all necessary measures to prevent, reduce, and control pollution. The International Convention for the Prevention of Pollution from Ships further sets out detailed regulatory standards for controlling marine pollution arising from ships, including oil discharge, sewage, and hazardous substances. In addition, the Convention on Biological Diversity emphasizes the conservation and sustainable use of marine and coastal biodiversity, requiring states to integrate environmental considerations into national development policies. Regardless of these international commitments, implementation at the national level in many developing countries remains weak. Okonkwo (2020) argued that compliance with international environmental obligations is often limited by institutional weaknesses, inadequate technical capacity, and poor enforcement mechanisms. In the same vein, Ibrahim and Musa (2022) noted that the domestication and enforcement of international environmental treaties in Nigeria remain largely ineffective due to governance challenges and limited environmental literacy. Furthermore, Oladele and Bassey (2023) emphasized that environmental governance in Nigeria suffers from fragmentation among regulatory agencies, which weakens coordinated enforcement efforts. Also, Chukwu and Edeh (2021) observed that low environmental awareness among stakeholders significantly reduces compliance levels with environmental regulations. These challenges collectively underscore the importance of environmental legal education as a potential mechanism for improving compliance and strengthening the connection between international obligations and domestic environmental governance.

Conceptualization

Environmental legal education is a critical component of environmental governance that focuses on equipping individuals, institutions, and stakeholders with knowledge of environmental laws, policies, and regulatory frameworks necessary for environmental protection and sustainable development. It is increasingly recognized as an important tool for improving environmental responsibility and strengthening compliance with environmental regulations across different sectors. Fien and Tilbury (2002) described environmental education as a process that develops awareness, knowledge, attitudes, and skills necessary for environmental stewardship and responsible decision-making. Similarly, Palmer (1998) defined environmental education as an educational process aimed at helping individuals understand the natural environment and human interactions

with it, with the goal of promoting sustainable behaviour. In a legal context, Bell and McGillivray (2008) emphasized environmental legal education as the structured teaching of environmental laws and regulatory systems designed to enhance compliance and enforcement capacity among stakeholders. From the researcher's perspective, environmental legal education refers to the structured process of imparting knowledge of environmental laws, policies, and enforcement mechanisms to individuals and institutions in order to enhance legal awareness, promote responsible environmental behaviour, and improve compliance with environmental regulations, particularly in marine and coastal environments. In the context of this study, environmental legal education is closely linked to the effectiveness of international marine environmental law because improved legal awareness among stakeholders is expected to influence compliance behaviour and reduce environmental violations.

International marine environmental law refers to the body of international rules, treaties, and conventions that regulate human activities affecting the marine environment and promote the sustainable use and protection of ocean resources. It provides the legal framework through which states are guided in preventing marine pollution and conserving marine biodiversity. Churchill and Lowe (1999) defined international law of the sea as the set of legal principles governing the rights and responsibilities of states in maritime spaces, including environmental protection obligations. Birnie, Boyle, and Redgwell (2009) described international environmental law as a framework of treaties and customary rules aimed at preventing environmental harm and ensuring sustainable resource use at the global level. Tanaka (2015) further emphasized that the United Nations Convention on the Law of the Sea establishes comprehensive obligations for states to protect and preserve the marine environment and to cooperate in controlling marine pollution. From the researcher's standpoint, international marine environmental law refers to the collection of global treaties, conventions, and legal principles such as the United Nations Convention on the Law of the Sea and the International Convention for the Prevention of Pollution from Ships, which impose binding obligations on states to prevent marine pollution, protect marine ecosystems, and ensure sustainable ocean governance. This concept is directly connected to environmental legal education, as effective compliance with international marine obligations depends largely on the extent to which stakeholders understand and are educated on these legal frameworks.

Compliance in environmental governance refers to the degree to which individuals, organizations, and states adhere to environmental laws, regulations, and international obligations aimed at protecting the environment. It is a central concept in determining the effectiveness of environmental policies and legal frameworks. Mitchell (1994) defined compliance as the extent to which actors behave in accordance with established rules and norms, particularly in international environmental agreements. Sand (2007) described compliance as the implementation of treaty obligations through domestic laws, institutions, and behavioural adjustments by relevant actors. Weiss and Jacobson (2000) further emphasized that compliance involves not only formal adherence to rules but also the practical enforcement and behavioural acceptance of environmental obligations. From the researcher's perspective, compliance in environmental governance refers to the degree to which government institutions, industries, and individuals in Nigeria adhere to both domestic environmental laws and international marine environmental obligations through proper enforcement, behavioural conformity, and institutional accountability. Compliance is closely linked to both environmental legal education and international marine environmental law, as improved legal awareness strengthens understanding of obligations,

while international frameworks provide the standards that guide compliance behaviour in marine environmental governance.

Marine environmental governance in Nigeria is anchored on a multi-layered institutional and legal framework designed to regulate activities that impact the country's coastal and marine ecosystems. However, the researcher's concern is that despite the existence of these structures, marine environmental degradation continues to intensify, suggesting a gap between institutional design and practical effectiveness. This raises important questions about the capacity of existing governance arrangements to ensure compliance with both domestic environmental laws and international marine environmental obligations. The institutional framework for marine environmental protection in Nigeria is primarily coordinated through federal ministries, regulatory agencies, and supporting environmental bodies. The Federal Ministry of Environment provides overall policy direction and coordination for environmental management, including marine and coastal protection. Within this structure, agencies such as the National Oil Spill Detection and Response Agency and the National Environmental Standards and Regulations Enforcement Agency are central to pollution control, monitoring, and enforcement. The Nigerian Maritime Administration and Safety Agency also plays a key role in regulating maritime safety and preventing pollution from shipping activities. These institutions are expected to work collaboratively to ensure sustainable management of marine resources and compliance with environmental standards. Ajibade and Shuaibu (2020) observed that Nigeria's environmental governance structure is characterized by institutional overlap and weak coordination among regulatory agencies, which often results in inefficiencies in enforcement. Similarly, Eme and Emeh (2021) noted that fragmented institutional responsibilities frequently hinder timely response to environmental incidents, particularly oil spill management in coastal areas. In a related view, Ojo and Adebayo (2022) argued that while regulatory institutions exist, their effectiveness is constrained by inadequate funding, limited technical capacity, and political interference.

The role of regulatory agencies in marine environmental protection is central to ensuring compliance with environmental standards and responding to environmental violations. The National Oil Spill Detection and Response Agency is mandated to detect, monitor, and respond to oil spill incidents, while also ensuring remediation of affected sites. The National Environmental Standards and Regulations Enforcement Agency is responsible for enforcing environmental laws, conducting inspections, and prosecuting violators of environmental regulations. The Nigerian Maritime Administration and Safety Agency regulates maritime operations to ensure compliance with international safety and environmental standards, particularly those relating to marine pollution prevention. Although these mandates, scholarly assessments indicate that enforcement outcomes remain weak. Okafor and Nwosu (2021) noted that regulatory agencies often face operational challenges, including insufficient logistics and limited enforcement authority, which reduces their effectiveness. In addition, Bello and Ibrahim (2023) observed that compliance monitoring is often inconsistent, allowing repeated environmental violations in oil-producing regions. These challenges point to the need for improved coordination, capacity building, and stronger institutional accountability.

The existing legal and policy instruments guiding marine environmental governance in Nigeria include both domestic laws and international agreements. Key domestic legislation includes the Environmental Impact Assessment Act, which mandates environmental assessment of major development projects, and the National Environmental

(Sanitation and Waste Control) Regulations, which address pollution control. The National Oil Spill Detection and Response Agency Act provide the legal basis for oil spill management and response, while the Harmful Waste (Special Criminal Provisions) Act prohibits the dumping of hazardous waste. Nigeria is also a party to several international marine environmental agreements, including the United Nations Convention on the Law of the Sea and the International Convention for the Prevention of Pollution from Ships, which impose obligations to prevent marine pollution and protect marine ecosystems. However, Adeyemi and Balogun (2022) argued that the domestication of international environmental treaties in Nigeria remains weak, leading to implementation gaps. Similarly, Umeh and Chukwuka (2020) observed that policy inconsistency and weak enforcement culture continue to undermine the effectiveness of environmental laws. From a critical perspective, while Nigeria has a relatively comprehensive set of institutional structures and legal instruments for marine environmental governance, the effectiveness of these frameworks is limited by weak enforcement, institutional fragmentation, and low environmental legal awareness. This reinforces the importance of environmental legal education as a potential mechanism for improving compliance and strengthening governance outcomes.

Critical Opinion on Environmental Legal Education in Nigeria

Environmental legal education in Nigeria has increasingly become a subject of concern, particularly in relation to its effectiveness in shaping environmental behaviour and strengthening compliance with environmental laws. The researcher's critical position is that despite the growing complexity of environmental challenges, especially marine pollution and ecosystem degradation, environmental legal education remains insufficiently developed and weakly integrated into both formal education systems and professional training structures. This inadequacy raises serious questions about the extent to which legal awareness can effectively influence compliance behaviour in environmental governance. The status of environmental legal education in Nigeria shows limited institutionalisation across different levels of education and professional practice. While environmental law is taught in some faculties of law and environmental science departments, its coverage is often optional, fragmented, or treated as a specialized course rather than a core component of legal and environmental training. Agbola and Olurin (2019) observed that environmental education in Nigeria is still largely theoretical and lacks sufficient practical orientation that can influence behavioural change. Similarly, Nnaemeka and Eze (2021) noted that environmental law teaching in Nigerian universities is constrained by inadequate teaching resources, limited specialist lecturers, and outdated curriculum structures. In a related view, Aina and Adedayo (2020) argued that environmental education in Nigeria has not adequately responded to emerging environmental challenges such as marine pollution and climate change governance.

From a researcher's standpoint, environmental legal education in Nigeria can be described as the structured but underdeveloped process of teaching environmental laws, policies, and enforcement principles within academic institutions and professional training systems, aimed at improving environmental awareness and compliance behaviour among stakeholders. In its current form, it remains insufficiently robust to generate widespread environmental legal consciousness among key actors in marine environmental governance. The gaps in curriculum and professional training further highlight the limitations of environmental legal education in Nigeria. One major gap is the inadequate integration of environmental law into broader legal education curricula, particularly at the undergraduate level, where it is often offered as an elective rather than a compulsory course. Another gap

is the limited emphasis on practical training, case studies, and field-based environmental problem-solving approaches. Eneh (2020) noted that Nigerian environmental law curricula are largely outdated and fail to incorporate emerging international environmental standards and sustainability frameworks. Similarly, Okeke and Ugwu (2022) emphasized that professional training for environmental regulators and enforcement officers is often irregular and insufficient, leading to weak institutional capacity in environmental governance. These gaps collectively reduce the ability of environmental legal education to influence real-world compliance behaviour.

The relationship between legal awareness and compliance behaviour is central to understanding environmental governance outcomes. Legal awareness refers to the extent to which individuals and institutions understand environmental laws, obligations, and consequences of non-compliance, while compliance behaviour reflects the actual adherence to these legal requirements. Scholarly evidence suggests that higher levels of legal awareness are strongly associated with improved compliance outcomes. Olowu and Adeyemi (2021) found that environmental awareness significantly influences individuals' willingness to comply with environmental regulations, particularly in resource-dependent communities. Similarly, Yusuf and Danjuma (2022) argued that low legal literacy among stakeholders contributes directly to persistent environmental violations in oil-producing regions of Nigeria. In another perspective, Chukwuemeka and Nwankwo (2023) emphasized that compliance behaviour is not solely determined by enforcement severity but also by the level of understanding and internalisation of environmental legal norms. On or after a critical standpoint, the relationship between environmental legal education and compliance behaviour suggests that weak legal awareness undermines the effectiveness of environmental governance systems. In the context of this study, environmental legal education is therefore viewed as a key independent factor capable of shaping compliance outcomes in marine environmental governance, particularly where enforcement alone has proven insufficient.

Factors Affecting Compliance with International Marine Environmental Law

Compliance with international marine environmental law in Nigeria remains a persistent challenge despite the existence of both domestic legislation and international obligations aimed at protecting the marine environment. The researcher's concern is that non-compliance is not solely a legal issue but is deeply influenced by structural, educational, institutional, and economic factors that collectively weaken effective implementation of environmental standards.

Weak enforcement mechanisms: Weak enforcement mechanisms constitute a major factor affecting compliance. Although environmental laws exist, enforcement is often inconsistent due to limited capacity, inadequate funding, and weak sanctioning systems. Okafor and Nwosu (2021) observed that enforcement agencies in Nigeria frequently face logistical constraints and manpower shortages that reduce their ability to monitor and prosecute environmental violations. Similarly, Bello and Ibrahim (2023) noted that weak enforcement culture allows repeated violations, especially in oil-producing regions where offenders often go unpunished. From a critical perspective, weak enforcement reduces the deterrent effect of environmental laws and encourages continued non-compliance.

Low environmental literacy among stakeholders: Low environmental literacy among stakeholders significantly affects compliance levels. Environmental literacy refers to the understanding of environmental laws, responsibilities, and consequences of non-compliance. Yusuf and Danjuma (2022) found that environmental illiteracy among

stakeholders in oil-producing areas contributes to persistent environmental degradation and regulatory violations. In the same vein, Olowu and Adeyemi (2021) emphasized that awareness levels strongly influence compliance behaviour, particularly in communities that depend on natural resources. This indicates that without adequate legal knowledge, compliance becomes weak and largely accidental rather than intentional.

Institutional fragmentation: Institutional fragmentation is another key factor undermining compliance. Marine environmental governance in Nigeria involves multiple agencies with overlapping responsibilities, which often leads to duplication of roles and poor coordination. Ajibade and Shuaibu (2020) observed that institutional overlap weakens governance effectiveness due to unclear mandates and weak collaboration among agencies. Similarly, Ojo and Adebayo (2022) argued that fragmented institutional structures reduce accountability and create enforcement gaps that violators frequently exploit. As a result, environmental regulation becomes inconsistent and less effective in achieving compliance.

Economic and industrial pressures (oil and gas sector): Economic and industrial pressures further complicate compliance with international marine environmental law. Nigeria's heavy dependence on oil revenue creates significant pressure on regulatory systems and environmental decision-making. Adeyemi and Balogun (2022) noted that economic dependence on extractive industries often leads to regulatory compromise and weak enforcement of environmental standards. Umeh and Chukwuka (2020) also observed that political and economic interests sometimes influence environmental governance outcomes, resulting in selective enforcement of environmental laws. This tension between economic development and environmental protection weakens overall compliance with international obligations.

Weak legal and policy implementation: Weak legal and policy implementation also affects compliance with international marine environmental law in Nigeria. Although several environmental laws and international conventions have been domesticated, implementation remains inconsistent and often symbolic. Umeh and Chukwuka (2020) observed that policy inconsistency and weak enforcement culture undermine the effectiveness of environmental laws. Similarly, Adeyemi and Balogun (2022) argued that gaps in domestic implementation of international environmental treaties significantly reduce compliance outcomes. This shows that the existence of laws alone does not guarantee effective environmental protection without strong implementation mechanisms. From a critical standpoint, these factors collectively show that non-compliance with international marine environmental law in Nigeria is multidimensional. It is shaped not only by weak legal enforcement but also by limited environmental education, fragmented institutional structures, economic pressures, and weak policy implementation. This reinforces the importance of environmental legal education as a strategic mechanism for improving awareness, strengthening institutions, and enhancing compliance behaviour in marine environmental governance.

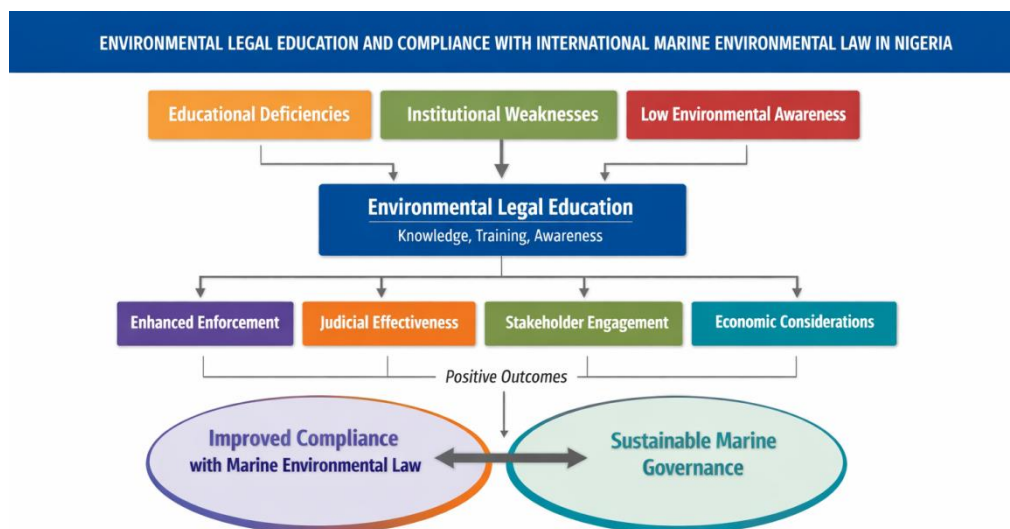


Figure 1: Conceptual Framework of Environmental Legal Education and Compliance with International Marine Environmental Law in Nigeria

This conceptual framework illustrates the relationship between educational deficiencies, institutional weaknesses, and low environmental awareness, and how enhanced environmental legal education can lead to improved compliance with international marine environmental law.

The above conceptual framework illustrates the relationship between environmental legal education (independent variable) and compliance with international marine environmental law in Nigeria (dependent variable). It shows that environmental legal education influences the level of legal awareness, environmental literacy, and behavioural orientation of stakeholders, which in turn determines the degree of compliance with international marine environmental obligations. The framework further demonstrates that the effectiveness of compliance is not direct but is mediated by factors such as institutional capacity, enforcement strength, and stakeholder participation. When environmental legal education is strong and effectively integrated into the education system and professional training, it enhances legal consciousness and promotes responsible environmental behaviour among regulators, industries, and communities. On the other hand, weak environmental legal education contributes to low awareness and poor understanding of environmental obligations, thereby increasing the likelihood of non-compliance. In essence, the framework highlights that improving environmental legal education is central to strengthening compliance with international marine environmental law and achieving sustainable marine environmental governance in Nigeria.

Challenges Affecting Environmental Legal Education and Compliance with International Marine Environmental Law

Notwithstanding the existence of international marine environmental obligations and domestic environmental laws, Nigeria continues to experience weak compliance outcomes. The researcher's concern is that these challenges are not isolated but are structurally embedded in educational, institutional, judicial, and participatory systems that collectively weaken environmental governance effectiveness.

Limited integration of environmental law in education systems: Limited integration of environmental law in education systems remains a major challenge to effective compliance. Environmental legal education is still not fully embedded across primary, secondary, and tertiary institutions in Nigeria, where it is often treated as an optional or specialized subject. Eneh (2020) observed that environmental law curricula in Nigeria are

outdated and insufficiently aligned with contemporary global environmental governance standards. Similarly, Nnaemeka and Eze (2021) noted that inadequate curriculum design and shortage of qualified personnel limit the effective teaching of environmental law in Nigerian universities. Aina and Adedayo (2020) further emphasized that environmental education has not adequately responded to emerging environmental challenges such as marine pollution and climate change. This weak integration reduces environmental legal awareness and negatively affects compliance behaviour.

Poor public awareness of marine environmental regulations: Poor public awareness of marine environmental regulations also significantly undermines compliance. Many stakeholders, including coastal communities and small-scale industry operators, are often unaware of existing environmental laws and their obligations. Yusuf and Danjuma (2022) found that low environmental literacy among stakeholders contributes to persistent environmental violations in oil-producing regions. In a similar view, Olowu and Adeyemi (2021) emphasized that awareness levels strongly influence compliance behaviour, particularly in communities dependent on natural resources. This indicates that without adequate dissemination of environmental legal knowledge, compliance remains weak and largely accidental.

Inadequate capacity of enforcement agencies: Inadequate capacity of enforcement agencies is another critical challenge affecting compliance. Environmental regulatory bodies often face constraints such as insufficient funding, lack of modern equipment, and limited technical expertise. Okafor and Nwosu (2021) observed that enforcement agencies in Nigeria struggle with operational inefficiencies that reduce their ability to monitor and sanction environmental offenders. Bello and Ibrahim (2023) also noted that weak institutional capacity leads to inconsistent enforcement, especially in environmentally sensitive regions such as the Niger Delta. These limitations significantly weaken regulatory effectiveness and encourage non-compliance.

Weak judicial interpretation and prosecution of environmental cases: Weak judicial interpretation and prosecution of environmental cases further hinder compliance with international marine environmental law. The judiciary plays a crucial role in interpreting environmental laws and ensuring accountability for violations. However, environmental cases are often delayed, weakly prosecuted, or poorly adjudicated. Ojo and Adebayo (2022) noted that weak judicial capacity and limited environmental expertise among legal actors reduce the effectiveness of environmental litigation. Similarly, Chukwumeka and Nwankwo (2023) emphasized that inadequate legal interpretation of environmental statutes undermines deterrence and weakens enforcement outcomes. This judicial gap reduces confidence in the legal system and encourages environmental violations.

Limited stakeholder participation: Limited stakeholder participation also constitutes a major challenge to effective environmental governance. Effective marine environmental protection requires the involvement of government agencies, private sector actors, and local communities. However, participation is often minimal or symbolic, with limited inclusion of coastal communities in decision-making processes. Adeyemi and Balogun (2022) observed that weak stakeholder engagement reduces the effectiveness of environmental policies and limits compliance outcomes. In addition, Umeh and Chukwuka (2020) argued that exclusion of key stakeholders from environmental governance processes undermines accountability and weakens policy implementation. This lack of participatory governance reduces shared responsibility for environmental protection. From

a critical standpoint, these challenges demonstrate that weak compliance with international marine environmental law in Nigeria is rooted in systemic deficiencies across education, awareness, enforcement, judiciary, and participation structures. Addressing these challenges therefore requires a holistic strengthening of environmental legal education, institutional capacity, and inclusive governance mechanisms.

Conclusion

The central argument of this study is that compliance with international marine environmental law in Nigeria is significantly influenced by the level of environmental legal education, institutional effectiveness, and stakeholder awareness. Despite Nigeria's participation in key international environmental agreements and the existence of domestic legal frameworks, marine environmental degradation continues to persist due to weak enforcement, limited environmental literacy, institutional fragmentation, and socio-economic pressures. These challenges demonstrate that the problem of non-compliance is not merely a legal deficiency but a broader governance and educational gap that affects how environmental obligations are understood and implemented. A critical emphasis of this paper is that environmental legal education serves as a vital compliance tool in strengthening adherence to international marine environmental obligations. When individuals, institutions, and communities are adequately informed about environmental laws and their implications, there is a higher likelihood of voluntary compliance and responsible environmental behaviour. Environmental legal education therefore functions not only as an academic component but also as a practical instrument for promoting environmental accountability, enhancing regulatory effectiveness, and supporting sustainable marine resource management.

In view of the foregoing, there is a need for strengthened educational and institutional reforms in Nigeria's environmental governance system. Environmental legal education should be fully integrated into all levels of learning, while regulatory institutions require improved capacity, coordination, and enforcement mechanisms. Furthermore, continuous public awareness and stakeholder engagement should be prioritized to bridge the gap between international environmental obligations and domestic compliance practices. Strengthening these areas will contribute significantly to improving Nigeria's capacity to protect its marine environment and achieve sustainable environmental governance outcomes.

Suggestions for Improving Environmental Legal Education and Compliance with International Marine Environmental Law in Nigeria

In addressing the persistent challenges affecting compliance with international marine environmental law in Nigeria, the researcher maintains that practical and policy-oriented measures are necessary to strengthen environmental governance outcomes. These suggestions are premised on the need to enhance legal awareness, institutional efficiency, and stakeholder participation in environmental protection processes.

Integration of environmental legal education at all levels of learning: Integration of environmental legal education at all levels of learning is essential for building long-term environmental consciousness and compliance behaviour. Environmental law should be embedded in primary, secondary, and tertiary education curricula to ensure early exposure to environmental responsibilities. Eneh (2020) emphasized that curriculum reform is necessary to align environmental education with global sustainability standards. Similarly, Nnaemeka and Eze (2021) argued that strengthening environmental law teaching in universities would improve professional competence and environmental governance

capacity. Aina and Adedayo (2020) further noted that environmental education must be made more practical and responsive to emerging environmental challenges such as marine pollution.

Capacity building for regulators, judges, and policymakers: Capacity building for regulators, judges, and policymakers is critical for improving enforcement and adjudication of environmental laws. Continuous professional training will enhance technical competence and improve decision-making in environmental governance. Okafor and Nwosu (2021) observed that regulatory effectiveness is strongly dependent on institutional capacity and technical expertise. In a related view, Ojo and Adebayo (2022) emphasized that strengthening institutional capacity reduces enforcement gaps and improves regulatory compliance. This suggests that well-trained actors are more likely to ensure effective implementation of environmental laws.

Strengthening environmental awareness campaigns: Strengthening environmental awareness campaigns is necessary to improve public understanding of marine environmental regulations and obligations. Awareness initiatives targeting coastal communities, industries, and schools can significantly improve compliance behaviour. Yusuf and Danjuma (2022) found that environmental literacy plays a crucial role in reducing regulatory violations in oil-producing regions. Similarly, Olowu and Adeyemi (2021) emphasized that awareness significantly influences environmental behaviour and compliance levels. Therefore, sustained public education is essential for promoting environmental responsibility.

Improved inter-agency coordination: Improved inter-agency coordination is essential for addressing institutional fragmentation and enhancing enforcement effectiveness. Effective collaboration among environmental regulatory bodies will reduce duplication of roles and improve response to environmental incidents. Ajibade and Shuaibu (2020) observed that weak coordination among agencies undermines environmental governance effectiveness. In the same vein, Bello and Ibrahim (2023) noted that improved institutional synergy enhances monitoring and enforcement outcomes. Strengthening coordination mechanisms will therefore enhance compliance with environmental regulations.

Collaboration with international environmental bodies: Collaboration with international environmental bodies is important for technical support, capacity building, and knowledge exchange. Engagement with global environmental institutions can enhance Nigeria's ability to implement international marine environmental obligations effectively. Adeyemi and Balogun (2022) emphasized that international cooperation strengthens domestic implementation of environmental treaties. Similarly, Umeh and Chukwuka (2020) noted that external partnerships can improve policy consistency and enforcement effectiveness. Such collaborations can also provide technical and financial support for marine environmental protection initiatives. From a critical standpoint, these suggestions collectively highlight the need for a holistic approach that combines education, institutional strengthening, awareness creation, and international cooperation to improve compliance with international marine environmental law in Nigeria.

REFERENCES

- Adeyemi, K. O., & Balogun, T. A. (2022). Domestic implementation of international environmental treaties in Nigeria. *Nigerian Journal of Environmental Law and Policy*.
- Aina, O. E., & Adedayo, M. O. (2020). Environmental education and sustainability challenges in Nigeria. *African Journal of Education and Development*.
- Agbola, T., & Olurin, T. A. (2019). Environmental education and behavioural change in Nigeria. *Journal of Environmental Studies*.
- Ajibade, A. O., & Shuaibu, M. A. (2020). Institutional coordination and environmental governance in Nigeria. *Journal of Public Administration and Governance*.
- Bello, R. A., & Ibrahim, S. K. (2023). Environmental compliance monitoring in oil-producing regions of Nigeria. *African Journal of Environmental Regulation*.
- Bell, S., & McGillivray, D. (2008). *Environmental law* (7th ed.). Oxford University Press.
- Birnie, P., Boyle, A., & Redgwell, C. (2009). *International law and the environment* (3rd ed.). Oxford University Press.
- Chukwu, L. C., & Edeh, J. O. (2021). Environmental awareness and regulatory compliance in developing economies. *International Journal of Environmental Sustainability*.
- Chukwuemeka, E., & Nwankwo, C. (2023). Legal awareness and environmental compliance behaviour in developing economies. *International Journal of Environmental Governance*.
- Churchill, R. R., & Lowe, A. V. (1999). *The law of the sea* (3rd ed.). Manchester University Press.
- Eme, O. I., & Emeh, I. E. J. (2021). Environmental management institutions and oil spill response in Nigeria. *Journal of Environmental Management Studies*.
- Eneh, O. C. (2020). Curriculum development and environmental law education in Nigeria. *Nigerian Journal of Legal Studies*.
- Eze, C. M., & Okoro, A. N. (2020). Governance challenges and environmental degradation in the Niger Delta region. *African Journal of Environmental Governance*.
- Fien, J., & Tilbury, D. (2002). The global challenge of sustainability and environmental education. In D. Tilbury, R. Stevenson, J. Fien, & D. Schreuder (Eds.), *Education and sustainability: Responding to the global challenge*. IUCN.
- Ibrahim, A., & Musa, H. (2022). Domestic implementation of international environmental treaties in West Africa. *International Journal of Environmental Law and Policy*.
- Mitchell, R. B. (1994). Regime design matters: Intentional oil pollution and treaty compliance. *International Organization*, 48(3), 425–458.
- Nnaemeka, U., & Eze, J. (2021). Teaching environmental law in Nigerian universities: Challenges and prospects. *Journal of Legal Education in Africa*.
- Nwankwo, C. U. (2021). Environmental governance and coastal resource management in Nigeria. *African Journal of Environmental Science*.
- Okafor, C. U., & Nwosu, I. C. (2021). Regulatory capacity and environmental enforcement in Nigeria. *International Journal of Environmental Governance*.
- Okeke, C. C., & Ugwu, L. O. (2022). Professional training and environmental regulatory effectiveness in Nigeria. *Environmental Policy Review*.
- Okonkwo, R. C. (2020). International environmental law and compliance challenges in developing states. *Journal of Global Environmental Governance*.

- Ojo, T. A., & Adebayo, F. O. (2022). Challenges of environmental regulation in developing economies. *Environmental Policy and Law Review*.
- Oladele, T. O., & Basse, E. F. (2023). Institutional fragmentation and environmental regulation in Nigeria. *Journal of Public Policy and Environmental Management*.
- Olowu, D., & Adeyemi, K. (2021). Environmental awareness and compliance behaviour in coastal communities. *Journal of Environmental Management and Policy*.
- Palmer, J. A. (1998). *Environmental education in the 21st century: Theory, practice, progress and promise*. Routledge.
- Sand, P. H. (2007). *Environmental law in a nutshell*. West Academic Publishing.
- Tanaka, Y. (2015). *The international law of the sea* (2nd ed.). Cambridge University Press.
- Umeh, P. O., & Chukwuka, C. C. (2020). Environmental policy inconsistency and regulatory failure in Nigeria. *Journal of Sustainable Development Studies*.
- Weiss, E. B., & Jacobson, H. K. (2000). *Engaging countries: Strengthening compliance with international environmental accords*. MIT Press.
- Yusuf, M., & Danjuma, A. (2022). Environmental literacy and regulatory compliance in oil-producing regions of Nigeria. *African Journal of Environmental Governance*.