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MAINSTREAMING UNCLOS PRINCIPLES INTO THE PETROLEUM INDUSTRY ACT 2021: RETHINKING ABANDONMENT AND DECOMMISSIONING GOVERNANCE IN THE NIGERIAN PETROLEUM INDUSTRY

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Abstract

This paper examined the role of the United Nations Convention on the Law of the Sea (UNCLOS) in shaping the abandonment and decommissioning regime of Nigeria's oil and gas industry under the Petroleum Industry Act (PIA) 2021. As Nigeria's petroleum infrastructure aged and a growing number of offshore installations approached the end of their productive lifecycle, the need for a coherent and effective legal framework governing decommissioning became increasingly urgent. While the PIA introduced significant reforms by mandating decommissioning plans, environmental restoration, and financial assurance mechanisms, its effectiveness had to be assessed within the context of Nigeria's international obligations under UNCLOS. Adopting a doctrinal and comparative legal methodology, this study analysed relevant provisions of UNCLOS, particularly those relating to the removal of abandoned installations, environmental protection, and safety of navigation, and evaluated their incorporation into Nigeria's domestic legal framework. The paper found that although there was considerable alignment between UNCLOS principles and the provisions of the PIA, notable gaps remained in the explicit domestication of international standards and enforcement mechanisms. The study argued that mainstreaming UNCLOS principles into Nigeria's decommissioning regime would strengthen regulatory oversight, enhance environmental sustainability, and ensure accountability in the management of disused petroleum infrastructure. It concluded that a harmonised approach integrating international legal obligations, domestic statutory frameworks, and complementary common law principles was essential for achieving sustainable petroleum resource governance in Nigeria.

Key Words: UNCLOS, Petroleum Industry, Environmental Protection, International Best Practices

1. Introduction

The increasing maturity of Nigeria's petroleum industry has brought the issue of abandonment and decommissioning of oil and gas infrastructure to the forefront of legal and policy discourse.[2] As numerous oil fields approach the end of their productive lifecycle, the need for a coherent legal framework governing the safe removal, disposal, and environmental restoration of petroleum installations has become imperative. The enactment of the Petroleum Industry Act (PIA) 2021 represents a significant legislative intervention aimed at addressing longstanding regulatory gaps in this regard. However, the effectiveness of the PIA cannot be fully appreciated without situating it within the broader framework of international law, particularly the United Nations Convention on the Law of the Sea (UNCLOS).[3]

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[2] Eduardo G Pereira et al (eds), The Regulation of Decommissioning, Abandonment and Reuse Initiatives in the Oil and Gas Industry: From Obligation to Opportunities (Kluwer Law International 2020).

[3] United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3

UNCLOS constitutes the foundational international legal regime governing offshore activities, including the construction, operation, and eventual removal of offshore installations. Its provisions impose obligations on coastal states, including Nigeria, to regulate abandonment and decommissioning in a manner that ensures safety of navigation, environmental protection, and respect for the rights of other states.[4] This article examines how UNCLOS principles can be mainstreamed into Nigeria's domestic legal framework under the PIA to enhance regulatory effectiveness, environmental sustainability, and accountability. It argues that although the PIA introduces important reforms, it does not sufficiently incorporate UNCLOS standards, thereby creating regulatory gaps in decommissioning governance."

2. Conceptual Clarifications

2.1 Abandonment and Decommissioning

"Decommissioning" and "abandonment" are terms frequently used interchangeably. To be strictly accurate, they are related and tend to occur concurrently, but they are not exactly the same.[5]Abandonment refers to the cessation of operations and relinquishment of petroleum infrastructure, while decommissioning encompasses the broader process of dismantling installations, removing structures, and restoring the environment.[6] "Abandonment" simply means leaving behind equipment and materials in situ on the expiration of the life of the oil and gas operation. It refers to the procedures that an operator uses to secure important requirements from the regulator when the operator wishes to temporarily abandon a well, or other oil and gas facilities.[7] Decommissioning on the other hand, is the process of concluding oil and gas operations, both onshore and offshore. It involves the safe dismantling and removal of infrastructure, plugging of wells, and restoring the surrounding environment whether land(onshore), ocean, or seabed(offshore) to its pre-operations condition.[8]

The Petroleum Industry Act[9] defines decommissioning and abandonment together as *"the approved process of cessation of operations of crude oil and natural gas wells, installations, plants and structures, including shutting down an installation's operations and production, total or partial removal of installations and structures where applicable, chemicals, radioactive and all such other materials handling, removal and disposal of debris and removed items, environmental restoration of the area after removal of installations, plants and structures."*

3. The Legal Framework of UNCLOS on Decommissioning

[4] D. Rothwell and T. Stephens, The International Law of the Sea (2nd edn, Hart Publishing 2016).

[5] Samuel Dunmade , Iyanuoluwa Adeyemo and Justice Uka-Ofor, Decommissioning and Abandonment: Nigeria's Experience in a Global Context, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4649437>, accessed on 30/4/2026

[6] P. D. Cameron, Oil and Gas Decommissioning: Law, Policy and Comparative Practice (Oxford University Press 2020).

[7] Samuel Dunmade , Iyanuoluwa Adeyemo and Justice Uka-Ofor, Decommissioning and Abandonment: Nigeria's Experience in a Global Context, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4649437>, accessed on 30/4/2026.

[8] 'Ozioma Agu, Kalojo Onasoga, David Olajide, Rebecca Sojonu, Michael Afuye**,** Complexities Of Decommissioning and Abandonment In Nigeria's Oil And Gas Sector: Strategic Insights And Risk Management For Indigenous Companies and IOCs' , < https://www.mondaq.com/nigeria/oil-gas-electricity/1566220/complexities-of-decommissioning-and-abandonment-in-nigerias-oil-and-gas-sector-strategic-insights-and-risk-management-for-indigenous-companies-and-iocs>, accessed on 30/4/2026.

[9] Section 318 of Petroleum Industry Act 2021 (PIA)

UNCLOS is a comprehensive treaty governing ocean space, including resource exploitation and environmental protection. It establishes the rights and duties of coastal states within their Exclusive Economic Zones (EEZ) and continental shelf.[10]

3.1 Jurisdiction of Coastal States

The legal framework of the United Nations Convention on the Law of the Sea (UNCLOS) establishes a comprehensive regime governing the rights and responsibilities of coastal states in relation to offshore petroleum activities, including the decommissioning of installations.[11] Central to this framework are provisions which delineate the scope of jurisdiction and regulatory authority exercised by coastal states within their Exclusive Economic Zone (EEZ) and continental shelf.[12]

UNCLOS confers upon coastal states sovereign rights for the purpose of exploring and exploiting, conserving, and managing natural resources within the EEZ.[13] These rights are functional rather than territorial, meaning they are limited to resource-related activities but nonetheless exclusive in nature.[14] This provision empowers states such as Nigeria to regulate all petroleum-related operations, including the establishment, operation, and eventual cessation of offshore installations. In this regard, decommissioning falls squarely within the continuum of resource exploitation activities, thereby bringing it within the regulatory competence of the coastal state.

Article 60 further elaborates this authority by granting coastal states the exclusive right to construct, authorize, and regulate artificial islands, installations, and structures within the EEZ.[15] Importantly, Article 60(3) imposes a legal obligation on states to ensure that abandoned or disused installations are removed to guarantee the safety of navigation, taking into account generally accepted international standards. This provision underscores that decommissioning is not merely a domestic regulatory issue but an international legal obligation tied to maritime safety and environmental protection.[16]

The combined effect of Articles 56 and 60 is the establishment of a dual responsibility: the right to exploit offshore resources and the duty to manage the lifecycle of installations, including their safe removal. This creates a legal nexus between resource sovereignty and environmental

[10] R. Churchill and A. Lowe, The Law of the Sea (3rd edn, Manchester University Press 1999).

[11] Jung, Dawoon, The 1982 Law of the Sea Convention and the Regulation of Offshore Renewable Energy Activities within National Jurisdiction (Brill, 2023)., Arbievich, Khalidov I and Milovidov, Konstantin N, 'The Development of International Law in Case of Oil and Gas Facilities Decommissioning' (2021) (1) Environmental Protection in Oil and Gas Complex 46–53.accessed 14 April, 2026 https://www.researchgate.net/publication/353407721_Decommissioning_of_oil_and_gas_assets_industrial_and_environmental_security_management_international_experience_and_Russian_practice

[12] UNCLOS, arts 56 and 60.

[13] UNCLOS, arts 56

[14] Vallega, A. (1986 The exclusive economic zone. *Political Geography Quarterly*, (1986) 5(1), 9–11. https://www.sciencedirect.com/science/article/abs/pii/0260982786900042 accessed 14 April, 2026.

[15] Myron H. Nordquist, Satya N. Nandan and Shabtai Rosenne (eds), United Nations Convention on the Law of the Sea 1982: A Commentary, Volume II (Martinus Nijhoff 1993) https://www.wildy.com/system/media/175/original/UNCLOS_Commentary_ToC_Volume_II.pdf accessed 13 April, 2026.

[16] Dawoon Jung, The 1982 Law of the Sea Convention and the Regulation of Offshore Renewable Energy Activities Within National Jurisdiction (Brill Nijhoff 2022).

stewardship.[17] For Nigeria, this implies that its domestic framework under the Petroleum Industry Act must not only regulate petroleum operations but must also align with UNCLOS obligations by ensuring that decommissioning processes meet international standards, protect the marine environment, and prevent hazards to navigation.[18]

3.2 Obligation to Remove Disused Installations

Article 60(3) of the United Nations Convention on the Law of the Sea (UNCLOS) constitutes a pivotal provision in the regulation of abandonment and decommissioning of offshore installations. It imposes a clear obligation on coastal States to ensure that "any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation," while also requiring due regard to environmental considerations and the rights and duties of other States. This provision reflects a careful balancing of competing interests—namely, navigational safety, environmental protection, and economic practicality.

From a legal standpoint, Article 60(3) establishes removal as a qualified obligation, not an absolute one. While the wording "shall be removed" suggests a mandatory duty, this obligation is tempered by the requirement to consider "generally accepted international standards." This introduces flexibility into the regime, allowing States to depart from full removal where partial removal or in situ decommissioning may be justified on environmental, technical, or economic grounds. Consequently, the provision does not impose a rigid "total removal" rule but rather a context-sensitive standard of compliance.[19] The reference to "generally accepted international standards" is particularly significant, as it effectively incorporates external normative frameworks into UNCLOS. In practice, this has led to reliance on the guidelines developed by the International Maritime Organization (IMO), especially the 1989 IMO Guidelines and Standards for the Removal of Offshore Installations. These guidelines elaborate criteria such as water depth, size of installations, and potential environmental impacts, thereby operationalising the otherwise broad obligations under UNCLOS.[20] This interpretative linkage demonstrates how UNCLOS functions as a framework convention, dependent on subsidiary instruments for detailed implementation.

Furthermore, Article 60(3) reflects an emerging principle of sustainable use of marine resources, requiring that decommissioning activities minimize environmental harm while maintaining maritime safety. It implicitly aligns with broader obligations under UNCLOS, particularly Articles 192 and 194, which mandate the protection and preservation of the marine environment. In the Nigerian context, Article 60(3) has important implications for the implementation of the Petroleum Industry Act (PIA) 2021. While the PIA mandates decommissioning plans and environmental restoration, it does not explicitly incorporate IMO standards or fully articulate the

[17] Trevisanut, Seline.
"Decommissioning of Offshore Installations: A Fragmented and Ineffective International Regulatory Framework" in The Law of the Seabed (Leiden: Brill, 2020) 431–453., Hamzah, B.A., 'International Rules on Decommissioning of Offshore Installations: Some Observations' Marine Policy (2003) 27(4) 339–348. https://www.sciencedirect.com/science/article/abs/pii/S0308597X0300040X accessed 14 April, 2026.

[18] Tanaka, Y., The International Law of the Sea (3rd edn, Cambridge University Press 2019).

[19] National Research Council, An Assessment of Techniques for Removing Offshore Structures (Washington, DC: National Academies Press, 1996). https://www.nationalacademies.org/read/9072/chapter/1 accessed 11 April, 2026.

[20] IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone (1989), 3-5.

criteria for partial versus total removal. As such, there is a normative gap that could be bridged by expressly domesticating UNCLOS standards within Nigeria's regulatory framework.

In conclusion, Article 60(3) represents a cornerstone of the international legal regime on decommissioning, combining mandatory removal obligations with flexible, standards-based implementation. Its effective application depends on the integration of international guidelines and domestic legislation, making it highly relevant for strengthening Nigeria's decommissioning framework under the PIA.

3.3 Environmental Protection Obligations

UNCLOS imposes a general obligation on states to adopt measures to prevent, reduce, and control pollution arising from seabed activities.[21]

The environmental protection obligations imposed under the United Nations Convention on the Law of the Sea (UNCLOS) constitute a cornerstone of the international legal regime governing offshore petroleum activities, including abandonment and decommissioning. Central to this framework is the general obligation placed on States to "prevent, reduce and control pollution of the marine environment," particularly from seabed activities subject to their jurisdiction. This obligation, articulated primarily in Article 194 of UNCLOS, reflects a broad and proactive duty that extends beyond mere reactive measures, requiring States to adopt comprehensive legislative, administrative, and regulatory mechanisms to safeguard marine ecosystems.[22]

In the context of offshore oil and gas operations, including abandonment and decommissioning, this obligation has significant implications. It mandates that coastal States such as Nigeria ensure that petroleum activities within their Exclusive Economic Zone (EEZ) and continental shelf are conducted in a manner that minimizes environmental harm. This includes the obligation to regulate the installation, operation, and eventual removal of offshore infrastructure in a way that prevents pollution from disused or abandoned facilities. The duty is not limited to active operations but extends to post-operational phases, thereby directly implicating decommissioning processes.[23]

Furthermore, UNCLOS adopts a precautionary and preventive approach to environmental protection. States are required to take "all measures necessary" to ensure that activities under their jurisdiction do not cause damage to other States or to the marine environment. This includes addressing risks such as oil spills, leakages from abandoned wells, and structural degradation of offshore installations. The obligation is also complemented by Article 208, which specifically requires States to adopt laws and regulations to prevent pollution arising from seabed activities, taking into account internationally agreed rules, standards, and recommended practices.[24]

Importantly, UNCLOS encourages the harmonisation of domestic laws with international standards, particularly those developed by bodies such as the International Maritime Organization (IMO).[25] This creates a normative expectation that States will align their decommissioning

[21] UNCLOS, art 194.
[22] RR Churchill and AV Lowe, *The Law of the Sea* (3rd edn, Manchester University Press 1999).
[23] Catherine Redgwell, 'Ocean Energy and the Law of the Sea' 7 International Energy Law Review 1(2012)
[24] (n14)
[25] UNCLOS, art 208(3), art. 211(2), art.194(1)

frameworks with global best practices, including the safe removal or disposal of offshore installations and the restoration of affected environments.[26]

In the Nigerian context, these obligations underscore the need for robust implementation of the Petroleum Industry Act (PIA) 2021. While the PIA introduces significant provisions on environmental management and decommissioning, the effectiveness of these provisions depends on their alignment with UNCLOS principles. Mainstreaming of these UNCLOS obligations into domestic law is essential for achieving sustainable environmental governance, protecting marine ecosystems, and fulfilling international legal commitments. This includes ensuring that environmental impact assessments are rigorously conducted, that decommissioning plans adequately address pollution risks, and that regulatory institutions possess the capacity to enforce compliance.[27]

3.4 Flexibility: Partial Removal

UNCLOS allows for partial removal of installations where justified, provided that such decisions do not compromise navigational safety or environmental integrity.[28]

The legal justification for partial removal is rooted in the recognition that complete removal of offshore installations may, in certain circumstances, produce greater environmental harm than leaving parts of the structure in situ.[29] For example, the removal of large offshore jackets or sub-sea structures may disturb marine ecosystems, release trapped pollutants, or create additional risks to marine biodiversity. Consequently, UNCLOS adopts a functional rather than absolute approach, focusing on outcomes namely, the preservation of navigation safety and environmental integrity—rather than mandating a rigid rule of total removal.

This flexibility is further reinforced by international standards, particularly the guidelines developed by the International Maritime Organization, which provide that partial removal may be permissible where structures do not pose hazards to navigation and where environmental considerations justify their retention. Similarly, regional frameworks such as the OSPAR Convention adopt a more restrictive stance but still allow derogations under exceptional circumstances, thereby confirming that partial removal is an accepted, albeit carefully regulated, practice in international law. From a legal standpoint, the discretion afforded by UNCLOS places a corresponding obligation on coastal states, including Nigeria, to develop clear domestic criteria governing when partial removal is permissible. This includes the requirement to conduct environmental impact assessments, risk analyses, and stakeholder consultations before approving any decision to leave installations wholly or partly in place. Failure to apply such standards rigorously may expose the state to international responsibility for breach of its obligations to protect the marine environment under UNCLOS.

In the context of Nigeria's Petroleum Industry Act, the concept of partial removal is not expressly elaborated, but it is implicitly accommodated within the broader framework of decommissioning plans and regulatory approvals. The Act requires operators to submit detailed decommissioning programmes subject to approval by regulatory authorities, thereby creating an avenue through

[26] UNCLOS, art.60(3), art.192

[27] Dolzer, R., & Schreuer, C.
Principles of International Investment Law (2nd edn, Oxford: Oxford University Press, 2018).

[28] P. Birnie, A. Boyle and C. Redgwell, *International Law and the Environment* (3rd edn, Oxford University Press 2009)., UNCLOS, art 60(3).

[29] (n22).

which decisions on full or partial removal can be evaluated. However, the absence of explicit statutory criteria aligned with UNCLOS standards may lead to inconsistencies in implementation and regulatory uncertainty. Ultimately, the flexibility inherent in UNCLOS reflects a shift toward a risk-based and environmentally sensitive approach to decommissioning. Rather than imposing a one-size-fits-all rule, it allows states to tailor solutions based on scientific, environmental, and technical considerations.

For Nigeria, effectively operationalising this flexibility requires the integration of international standards into domestic law, the strengthening of regulatory oversight, and the adoption of transparent decision-making processes. When properly implemented, the principle of partial removal can contribute to sustainable offshore management by minimizing environmental harm while ensuring the continued safety and usability of maritime spaces. The legal significance of these standards lies in their incorporation into domestic law through UNCLOS obligations. By referencing "generally accepted international standards," UNCLOS effectively requires states to align national decommissioning regimes with evolving global best practices. Failure to do so may expose states to international responsibility, particularly where inadequate decommissioning results in transboundary harm or navigational risks.

In conclusion, international standards and guidelines play a critical role in operationalizing UNCLOS obligations. They transform broad treaty principles into actionable rules, ensuring that decommissioning is conducted in a manner that safeguards the marine environment while maintaining the safety and integrity of international navigation.

4. The Petroleum Industry Act 2021

The PIA establishes a comprehensive legal framework for Nigeria's petroleum industry, incorporating provisions on decommissioning, environmental restoration, and financial assurance mechanisms.[30] The Act represents a watershed in the evolution of Nigeria's petroleum regulatory framework, marking a transition from fragmented and outdated legislation to a unified, comprehensive legal regime. Prior to its enactment, Nigeria's oil and gas industry was governed by a multiplicity of statutes, including the Petroleum Act 1969 and various subsidiary regulations, which lacked coherent provisions on abandonment and decommissioning. The 1969 Act only made reference to Required licensees to properly plug abandoned wells and to prevent leakage or environmental harm. There was no mention of decommission or any framework for abandonment and decommissioning[31] The PIA addresses these deficiencies by embedding structured obligations relating to environmental protection, decommissioning, and financial responsibility within a single legislative framework.

A key feature of the PIA is its recognition of abandonment and decommissioning as integral components of the petroleum lifecycle, rather than residual or post-operational concerns. The Act mandates licensees and lessees to submit detailed decommissioning and abandonment plans for regulatory approval, thereby ensuring that the cessation of operations is anticipated and systematically managed.[32] This approach reflects a shift towards proactive regulation, aligning Nigeria's legal framework with international best practices in petroleum governance. Furthermore, the PIA introduces financial assurance mechanisms, particularly the requirement for

[30] Petroleum Industry Act 2021.

[31] Petroleum Act, 1969 Petroleum (Drilling and Production) Regulations 1969, reg. 25

[32] *Ibid*. 232

operators to establish and maintain dedicated decommissioning and abandonment funds.[33] This provision is significant in mitigating the historical risk of unfunded environmental liabilities being transferred to the state or host communities. By imposing a clear financial obligation on operators, the Act operationalizes the polluter pays principle and enhances accountability within the industry.[34]In addition, the PIA reinforces environmental governance by mandating the restoration of affected environments upon the cessation of petroleum operations. This aligns with broader principles of sustainable development and environmental stewardship, ensuring that economic activities in the petroleum sector do not result in irreversible ecological damage.[35]

Challenges relating to regulatory capacity, compliance monitoring, and legacy infrastructure remain significant. Overall, the PIA provides a solid legal foundation for modern petroleum governance in Nigeria, but its success ultimately depends on robust enforcement by regulatory institutions, effective implementation and continuous alignment with global best practices.

5. Interface Between UNCLOS and the PIA

There is significant alignment between UNCLOS and the PIA. Both frameworks emphasize removal of installations, environmental protection, and adherence to international best practices.[36] The interface between the UNCLOS and the PIA 2021 reveals a significant degree of normative and functional convergence, particularly in relation to the regulation of abandonment and decommissioning of offshore petroleum installations. Both legal regimes, though operating at different levels, international and domestic, share a common objective of ensuring environmental protection, safety of navigation, and the orderly removal of disused offshore infrastructure.

The relationship between the United Nations Convention on the Law of the Sea (UNCLOS) and the Petroleum Act of Nigeria is relevant in the area of abandonment and decommissioning of offshore petroleum installations. While UNCLOS provides the international legal obligations governing the marine environment and offshore structures, the Petroleum Act (and modern reforms such as the Petroleum Industry Act) sets out the domestic procedures and responsibilities for carrying out decommissioning.

Under UNCLOS, coastal states have sovereign rights to exploit natural resources in their maritime zones, but these rights are accompanied by duties to protect and preserve the marine environment. In relation to decommissioning, UNCLOS requires that abandoned or disused installations be removed to ensure safety of navigation and to prevent harm to the marine environment. It also obliges states to take measures to control pollution arising from offshore activities and to ensure that such installations do not pose long-term environmental risks.

The Petroleum Act operationalizes these obligations at the national level by placing responsibility on licensees and operators to properly abandon wells and decommission facilities at the end of production. This includes plugging wells, dismantling platforms, and restoring the site in accordance with regulatory standards. The Act empowers the government to enforce compliance,

[33] *Ibid*, Section 233,

[34] Samuel Dunmade, Iyanuoluwa Adeyemo and Justice Uka-Ofor, 'Decommissioning and Abandonment: Nigeria's Experience in a Global Context' (2023) SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4649437 accessed 14 April, 2026

[35] Olujobi, O.J., *The Petroleum Industry Act 2021: A Legal and Institutional Analysis of Reform in Nigeria's Oil and Gas Sector* (Ibadan: Spectrum Books, 2022).

[36] P. Osmundsen and R. Tveterås, 'Decommissioning of Petroleum Installations -Major Policy Issues' (2003) 31 Energy Policy 1579.

issue guidelines, and ensure that operators bear the financial responsibility for decommissioning activities.

The interface between UNCLOS and the Petroleum Act on abandonment and decommissioning can be seen in several key areas. First, UNCLOS establishes the international duty to remove offshore installations and prevent marine pollution, while the Petroleum Act provides the legal mechanisms for implementing those duties domestically. Second, UNCLOS sets general standards, but leaves detailed procedures to national laws; the Petroleum Act fills this gap by prescribing how and when decommissioning should occur. Third, UNCLOS obligations on environmental protection require that domestic petroleum laws incorporate environmental impact assessments and monitoring, which are reflected in national regulatory frameworks.

In practice, Nigeria's approach to decommissioning has evolved under the Petroleum Industry Act, which introduces clearer rules on decommissioning plans, funding arrangements (such as abandonment funds), and regulatory oversight. These developments align domestic law more closely with UNCLOS requirements on environmental protection and safe removal of offshore installations.

In conclusion, UNCLOS and the Petroleum Act interact in a complementary manner regarding abandonment and decommissioning: UNCLOS provides the overarching international obligations to remove installations and protect the marine environment, while the Petroleum Act and related legislation provide the enforceable domestic framework for carrying out those obligations effectively.

6. Challenges in Implementation

The key challenges in implementation include weak regulatory capacity, financial constraints, aging infrastructure, and legal fragmentation between international and domestic regimes.[18]

6.1. Weak Regulatory Capacity

A major barrier to effective integration is insufficient institutional capacity within regulatory bodies responsible for enforcing both petroleum law and maritime obligations. Weak capacity manifests in inadequate technical expertise, limited enforcement authority, and poor inter-agency coordination. From a legal perspective, this creates an enforcement gap where statutory obligations exist on paper but are not operationalized in practice. In the context of UNCLOS, this may expose the state to international responsibility for failure to meet due diligence obligations, particularly in environmental protection and resource management.

6.2. Financial Constraints

Effective maritime governance and petroleum regulation require substantial financial investment in monitoring systems, environmental compliance mechanisms, and dispute resolution infrastructure. Financial constraints limit the ability of regulatory agencies to conduct offshore surveillance, enforce environmental standards, or respond to violations. Legally, under UNCLOS, states are expected to adopt "appropriate measures" to protect the marine environment. However, fiscal limitations may lead to non-compliance with this standard of due diligence, thereby weakening the credibility of domestic implementation under the PIA framework.

6.3 Aging Infrastructure

Aging and inadequate infrastructure—such as outdated monitoring technology, insufficient offshore platforms oversight systems, and weak spill-response capacity—further complicates

compliance with both domestic and international legal obligations. This raises issues of regulatory effectiveness and risk allocation. In legal terms, infrastructure deficits may impede the state's ability to meet its preventive obligations under international environmental law, particularly the duty to prevent transboundary harm and marine pollution.

6.4. Legal Fragmentation Between International and Domestic Regimes

One of the most significant challenges is normative fragmentation between UNCLOS obligations and domestic petroleum regulation under the PIA. Fragmentation arises where overlapping jurisdictions, inconsistent definitions, or conflicting institutional mandates create uncertainty in enforcement. For example, ambiguity in the allocation of regulatory authority between maritime agencies and petroleum regulators can result in jurisdictional disputes. This undermines legal certainty, which is essential for investor confidence and regulatory compliance. Additionally, where domestic law does not explicitly incorporate UNCLOS principles, courts and regulators may struggle to interpret obligations consistently with international law, leading to fragmented jurisprudence and inconsistent enforcement outcomes.

From a legal standpoint therefore, full domestication of UNCLOS principles into domestic legislation such as the PIA strengthens normative coherence between international obligations and municipal enforcement mechanisms. While Nigeria, as a State Party to UNCLOS, is bound under international law to comply with its provisions particularly Articles 192, 194, and 235 relating to environmental protection and state responsibility, these obligations are only fully effective domestically when incorporated into enforceable statutory frameworks. Incorporation into the PIA would bridge the current gap between international maritime environmental duties and petroleum operational regulation. This will ensure that offshore exploration and production activities explicitly reflect the "due diligence" standard required under UNCLOS, including the prevention, reduction, and control of marine pollution arising from seabed activities.

6.5. Liability and the Role of Strict Liability Principles

UNCLOS does not provide detailed rules on liability, leaving this to domestic legal systems. In Nigeria, the rule in *Rylands v Fletcher* supplements statutory provisions by imposing strict liability for environmental harm resulting from hazardous activities.[37] This creates a hybrid system combining international obligations, domestic statutory law, and common law principles. A central challenge in this hybrid legal framework is the allocation of liability for marine environmental damage arising from petroleum activities. UNCLOS itself is notably underdeveloped on liability rules, providing general obligations to ensure compensation for damage but deferring the design of liability regimes to domestic law.[38] This creates a regulatory gap that must be filled by national legal doctrines and statutory provisions.

In Nigeria, the common law rule in *Rylands v Fletcher* serves as a foundational strict liability principle that is particularly relevant to hazardous industrial and petroleum activities. Under this doctrine, a party who brings onto land and keeps there something likely to cause harm if it escapes is strictly liable for resulting damage, regardless of negligence, provided the use is non-natural and the escape is foreseeable. Applied to offshore oil operations, this principle supports liability for oil spills, blowouts, and other forms of environmental contamination without requiring proof of fault. The incorporation of strict liability principles into Nigeria's petroleum governance reinforces the hybrid liability structure combining international environmental

[37] (1868) LR 3 HL 330

[38] UNCLOS Article 235

obligations, statutory regulation under the PIA, and common law doctrines. This hybridisation is significant because it enhances environmental protection by lowering evidentiary burdens on claimants and increasing the accountability of operators engaged in inherently hazardous activities.

However, the effectiveness of strict liability in the offshore petroleum context is not without limitations. Issues such as causation in complex marine environments, attribution among multiple operators, and enforcement against multinational corporations may dilute its practical impact. Moreover, statutory frameworks under the PIA may in some instances coexist uneasily with common law principles, potentially leading to doctrinal fragmentation unless judicial interpretation ensures coherence.

Overall, due to UNCLOS's limited liability regime, domestic legal systems particularly through strict liability under Rylands v Fletcher, plays a crucial role in operationalising environmental accountability.[39] The resulting legal architecture is best understood as a hybrid system, combining international norms, statutory regulation, and common law principles, but its effectiveness ultimately depends on robust enforcement and coherent judicial integration.

7. Conclusion/ Recommendations

UNCLOS provides a robust international framework for regulating abandonment and decommissioning of offshore installations, emphasizing safety, environmental protection, and adherence to international standards. While the PIA represents a significant advancement in Nigeria's petroleum regulatory regime, its effectiveness depends on the extent to which it incorporates and operationalizes UNCLOS principles. Mainstreaming UNCLOS into Nigeria's decommissioning framework will enhance environmental governance, ensure accountability, and align Nigeria with global best practices. Ultimately, a harmonized approach combining international obligations, domestic legislation, and common law principles is essential for sustainable petroleum resource management in Nigeria. It is therefore, recommended as follows:

7.1 Incorporation of International Standards in the Domestic Framework

Nigeria should explicitly incorporate IMO guidelines and other global standards into its domestic framework to ensure consistency with international obligations.[40]The proposal that Nigeria should explicitly incorporate International Maritime Organization (IMO) guidelines and other global maritime standards into its domestic legal framework under the Petroleum Industry Act (PIA) raises important questions of legal harmonisation, treaty implementation, and regulatory coherence. This recommendation is situated within broader efforts to align Nigeria's petroleum governance regime with obligations arising under the UNCLOS, as well as associated maritime safety and environmental protection instruments administered through the IMO.

One of the central advantages of mainstreaming international standards into the PIA is the promotion of legal certainty and regulatory predictability. At present, offshore petroleum operators in Nigeria are subject to a combination of domestic statutes, subsidiary regulations, and international best practices that may not always be formally integrated. By expressly incorporating IMO guidelines, the PIA would create a unified compliance framework, reducing inconsistencies between domestic enforcement standards and international expectations.

[39] (n38)

[40] S. Smith, International Regulation of Offshore Oil and Gas (Cambridge University Press 2018).

7.2. Strengthening Environmental Obligations

Enhanced environmental impact assessments, post-decommissioning monitoring, and stronger liability regimes are necessary to align with UNCLOS environmental objectives.[41] UNCLOS establishes a comprehensive legal framework obligating States to protect and preserve the marine environment. Articles 192 and 194 impose a general duty on States to prevent, reduce, and control pollution from any source, including offshore installations and activities. Additionally, Article 208 requires States to adopt laws and regulations to prevent pollution arising from seabed activities subject to their jurisdiction. These provisions collectively impose due diligence obligations rather than strict liability, requiring States to take "all necessary measures" that are reasonable and appropriate in the circumstances.

7.3. Post-Decommissioning Monitoring and Continuing Responsibility

The inclusion of post-decommissioning monitoring reflects an extension of environmental responsibility beyond operational cessation. Under UNCLOS principles, States retain obligations to ensure that activities under their jurisdiction do not cause ongoing marine pollution even after formal abandonment of installations. This is particularly relevant for offshore oil infrastructure, where residual contamination, abandoned wells, and seabed degradation may persist long after decommissioning. Strengthened monitoring obligations will therefore operationalize the "polluter pays" principle and ensure continuity of environmental stewardship, preventing regulatory gaps after asset retirement.

7.4. Strengthening Liability Regimes

A robust liability framework is essential to enforce compliance with environmental obligations. UNCLOS requires States to ensure that legal persons under their jurisdiction are subject to liability for pollution damage.[42] However, it leaves the specific structure of liability regimes to domestic law. Enhancing liability under the PIA would likely involve stricter civil liability standards, clearer attribution rules for environmental harm, and more effective remediation mechanisms. This may include strict liability for operators engaged in inherently hazardous offshore activities and mandatory financial security mechanisms (such as insurance or environmental bonds). Such reforms would improve deterrence and ensure that environmental restoration costs are not externalized to the public.

7. 5. Enhancing Removal Obligations

The PIA should prioritize full removal of installations and clearly define conditions under which partial abandonment is permissible in line with the UNCLOS.[43] The Petroleum Industry Act 2021 establishes Nigeria's domestic regime for upstream petroleum operations, including decommissioning and abandonment obligations. The PIA places responsibility on licensees and lessees to submit decommissioning and abandonment plans, fund such obligations through escrow mechanisms, and ensure regulatory approval prior to cessation of operations. However, while the PIA addresses financial provisioning and procedural compliance, it is comparatively less explicit on the substantive hierarchy of removal obligations, particularly, whether full physical removal is the default requirement; the threshold conditions permitting partial abandonment (e.g., leaving subsea infrastructure in situ); and the extent to which environmental

[41] UNEP, Environmental Assessment of Ogoniland (2011).

[42] UNCLOS Article 235.

[43] UNCLOS Article 63 (3)

and navigational safety considerations override economic efficiency arguments. This creates a potential interpretative gap between domestic implementation and UNCLOS-aligned best practice. Embedding "full removal as the default rule" within the PIA would strengthen regulatory coherence with UNCLOS. A clear statutory presumption of full removal reduces discretionary ambiguity, thereby limiting regulatory disputes between operators and regulators at decommissioning stage.

7.6 Strengthening Regulatory Institutions such as NUPRC

The Nigerian Upstream Petroleum Regulatory Commission (NUPRC), established under the PIA, plays a central role in upstream regulation. However, its effectiveness in enforcing UNCLOS-aligned obligations depends on its statutory mandate, technical capacity, and institutional independence. Strengthening NUPRC would involve expanding its regulatory authority over offshore environmental compliance, including mandatory environmental risk assessments consistent with international maritime standards. Legally, this requires ensuring that its enforcement powers are not merely administrative but include quasi-judicial sanctioning authority, particularly for breaches involving marine pollution or ecological harm within Nigeria's maritime jurisdiction.

Furthermore, coordination between NUPRC and maritime agencies such as the Nigerian Maritime Administration and Safety Agency (NIMASA) is essential to avoid jurisdictional fragmentation in offshore regulation.