GLOBAL GOVERNANCE AND CONSERVATION OF MARINE BIODIVERSITY BEYOND NATIONAL JURISDICTION: CHALLENGES, OPPORTUNITIES, AND NIGERIA'S STAKE

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Abstract

The conservation of marine biodiversity beyond national jurisdiction (BBNJ) is a pressing global environmental issue. The high seas and deep seabed, which make up two-thirds of the ocean, contain rich biodiversity yet remain vulnerable to exploitation and environmental degradation due to weak governance structures. This article explores the challenges and opportunities associated with global governance mechanisms for BBNJ, with a focus on Nigeria's stake in this evolving legal and policy landscape. It examines the recently adopted High Seas Treaty under the United Nations Convention on the Law of the Sea (UNCLOS) and its implications for Nigeria as a coastal state with economic and strategic interests in marine resources.

Keywords: Marine biodiversity, High Seas Treaty, UNCLOS, BBNJ Governance, Ocean Conservation.

1.0 Introduction

Marine biodiversity beyond national jurisdiction (BBNJ) constitutes approximately 64% of the ocean's surface and is home to diverse and ecologically significant species that contribute to global ecosystem services.[1] The governance of BBNJ is primarily guided by the United Nations Convention on the Law of the Sea (UNCLOS), which establishes the high seas as areas beyond national jurisdiction, governed under the principle of the common heritage of mankind.[2] However, the regulatory landscape is highly fragmented, with overlapping mandates of international organizations such as the United Nations (UN),[3] The International Seabed Authority (ISA),[4] The International Maritime Organization (IMO),[5] The Food and Agriculture Organization (FAO),[6] Regional Fisheries

Management Organizations (RFMOs),[7] The Commission on the Limits of the Continental Shelf (CLCS).[8] This fragmentation creates enforcement challenges and regulatory gaps that can lead to unsustainable exploitation, particularly in the areas of deep-sea mining, fisheries, and marine genetic resources (MGRs). Moreover, climate change-induced stressors, including ocean

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[1]K Narula**,** 'Ocean Governance: Strengthening the Legal Framework for Conservation of Marine Biological Diversity beyond Areas of National Jurisdiction' (2016) 12(1) *Maritime Affairs: Journal of the National Maritime Foundation of India*. 65

[2] The United Nations Convention on the Law of the Sea (UNCLOS) of 1982. Part XI, Section 2.

[3] Through the General Assembly and its specialized agencies, the UN oversees negotiations and legal frameworks related to ocean governance

[4] Established under UNCLOS, the ISA regulates activities related to mineral resources in the deep seabed, ensuring environmental protections

[5]The IMO sets regulations for shipping and pollution control that impact marine biodiversity

[6] Through its Committee on Fisheries (COFI), the FAO addresses the sustainable management of high seas fisheries

[7] These bodies regulate fishing activities in specific ocean regions, helping to prevent overfishing and protect marine ecosystems

[8] The CLCS reviews and makes recommendations on the outer limits of continental shelves beyond 200 nautical miles, which can have implications for biodiversity governance in areas beyond national jurisdiction.

acidification, deoxygenation, and rising sea temperatures, exacerbate threats to marine biodiversity in these regions.[9]

Nigeria, as a maritime nation strategically located along the Gulf of Guinea, has substantial interests in fisheries, offshore hydrocarbon exploration, and emerging blue economy sectors. The country must, therefore, engage proactively in the evolving global governance frameworks for BBNJ, ensuring that its economic and environmental priorities are adequately represented in multilateral negotiations, including those surrounding the recently concluded High Seas Treaty. Enhancing Nigeria's role in BBNJ governance will require strengthening national legislative frameworks, fostering regional collaboration with African coastal states, and advocating for equitable benefit-sharing mechanisms for marine resources extracted from the high seas.

2.0 A Century of Global Governance and the Conservation of Marine Biodiversity Beyond National Jurisdiction

The conservation of marine biodiversity beyond national jurisdiction (BBNJ) has undergone profound transformations over the past century, shaped by developments in international law, institutional frameworks, and advancements in marine science. From early sectoral approaches aimed at regulating whaling and fisheries to contemporary integrated efforts under the United Nations (UN) framework, the governance of BBNJ illustrates the evolution of global environmental governance, transnational regulatory mechanisms, and geopolitical influences.

2.1 Early 20th Century: Fragmented Governance (1920s–1950s)

In the early 20th century, marine conservation efforts were predominantly uncoordinated and centered on resource extraction rather than biodiversity protection. During this period, the primary focus was on exploiting marine resources, with limited attention to the ecological impacts of such activities. For instance, the establishment of fisheries management institutions in the late 19th and early 20th centuries aimed to regulate fish stocks to maximize yields, often neglecting broader ecosystem considerations. It wasn't until the mid-20th century that a shift towards comprehensive marine conservation began, prompted by growing awareness of overexploitation and environmental degradation. This transition led to the development of international agreements and organizations dedicated to the protection of marine biodiversity.[10] The 1920s saw the establishment of initial international agreements aimed at fisheries and marine mammal conservation, most notably the1923 Convention for the Regulation of the Meshes of Fishing Nets.[11] However, these early efforts were sectoral, regionally confined, and did not constitute a comprehensive legal framework for high seas biodiversity conservation. The absence of binding enforcement mechanisms and the reliance on State sovereignty limited the effectiveness of these treaties, allowing unregulated exploitation of marine resources beyond national jurisdictions. Additionally, customary international law at the time, as codified in early arbitral decisions such as the North Atlantic Coast Fisheries Arbitration (1910), reinforced the principle of freedom of the seas, which further constrained conservation efforts.[12]

One of the first major milestones in the governance of marine biodiversity beyond national jurisdiction was the adoption of the 1946 International Convention for the Regulation of Whaling (ICRW), which established the International Whaling Commission (IWC). The ICRW was designed to provide for the conservation of whale stocks and the orderly development of the whaling

[9] B Talukder and others**,** 'Climate Change-Accelerated Ocean Biodiversity Loss & Associated Planetary Health Impacts' (2022) 6 *The Journal of Climate Change and Health* 100114.

[10] J A Guinan and R E Curtis, 'A Century of Conservation: A Brief History of NOAA Fisheries' [1971]1(2) *NOAA,* 40-44.

[11] A Benniou, *The Concept of Jurisdiction Over Coastal Fisheries in International Law in the 20th Century* (PhD thesis, University of Manchester 1986).

[12] North Atlantic Coast Fisheries Arbitration (1910) [*United Kingdom v. United States*], Reports of International Arbitral Awards (RIAA), Vol. XI, pp. 167-226.

industry through a framework of quotas, seasonal protections, and species-specific prohibitions.[13] The IWC, while initially focused on sustainable use rather than conservation, became a focal point for evolving international attitudes toward marine species protection. The 1982 moratorium on commercial whaling, enacted through an amendment to the IWC Schedule,[14] signaled a shift from an extractive regulatory regime to a more conservation-oriented approach. However, the IWC's jurisdiction remained limited to whales, highlighting the broader regulatory gap in the governance of marine biodiversity beyond national jurisdiction, which persisted until the emergence of more comprehensive legal frameworks under UNCLOS and subsequent agreements.

2.2 The Post-War Institutionalization of Ocean Governance (1950s–1970s)

The post-World War II era marked a pivotal shift in the legal and institutional framework governing the high seas, driven by the establishment of major international organizations, most notably the United Nations (UN) and its specialized agencies. The United Nations Charter, adopted in 1945, laid the groundwork for global cooperation in environmental and maritime governance.[15] In the realm of fisheries and marine conservation, the UN's Food and Agriculture Organization (FAO) played a critical role by initiating global fisheries management discussions. This culminated in the 1958 Geneva Conventions on the Law of the Sea, which comprised four separate conventions, namely: the Convention on the Territorial Sea and the Contiguous Zone; the Convention on the High Seas; the Convention on Fishing and Conservation of the Living Resources of the High Seas; and the Convention on the Continental Shelf.[16] These Conventions sought to codify customary international law principles concerning high seas freedoms and sovereign rights over marine resources, yet they lacked robust enforcement mechanisms and comprehensive biodiversity protections. The legal vacuum left by these conventions contributed to the later development of UNCLOS as a more comprehensive legal instrument governing marine biodiversity beyond national jurisdiction.

During the 1970s, growing concerns over environmental degradation, coupled with the increasing recognition of the interconnectedness of marine ecosystems, led to significant international efforts aimed at strengthening marine conservation governance. The 1972 United Nations Conference on the Human Environment, also known as the Stockholm Conference, marked a turning point by placing environmental issues, including marine biodiversity protection, on the global agenda.[17] The Stockholm Declaration underscored the necessity of international cooperation to address pollution and resource exploitation in areas beyond national jurisdiction.[18] This period also saw the initiation of negotiations for a comprehensive legal framework governing the oceans under the auspices of the United Nations Convention on the Law of the Sea (UNCLOS),[19] which sought to codify existing customary international law while addressing emerging concerns related to marine biodiversity, resource utilization, and environmental protection. These negotiations, which culminated in the adoption of UNCLOS in 1982, established key principles such as the freedom of the high seas, the common heritage of mankind for deep-seabed resources, and the duty to protect and preserve the marine environment.[20] However, the treaty's provisions on biodiversity conservation remained limited, necessitating subsequent legal instruments to bridge governance gaps concerning marine biodiversity beyond national jurisdiction.

[13] International Convention for the Regulation of Whaling (1946), 161 UNTS 72.
[14] International Whaling Commission, "Schedule to the International Convention for the Regulation of Whaling," as amended in 1982, available at https://iwc.int
[15] Charter of the United Nations, 26 June 1945, 1 UNTS XVI.
[16] Convention on the High Seas, 29 April 1958, 450 UNTS 82; Convention on Fishing and Conservation of the Living Resources of the High Seas, 29 April 1958, 559 UNTS 285
[17] United Nations, "Report of the United Nations Conference on the Human Environment," Stockholm, 5-16 June 1972, A/CONF.48/14/Rev.1.
[18] Stockholm Declaration on the Human Environment, 16 June 1972, 11 ILM 1416 (1972)
[19] United Nations Convention on the Law of the Sea (UNCLOS), 10 December 1982, 1833 UN TS 3
[20] UNCLOS, Part XI, Art. 136-137 (Common Heritage of Mankind Principle).

2.3 UNCLOS and the Foundations of Modern BBNJ Governance (1980s–1990s)

UNCLOS, which entered into force in 1994, remains the cornerstone of ocean governance, codifying the legal framework for marine resource management and jurisdictional delineations. It introduced the concept of Exclusive Economic Zones (EEZs), granting coastal states sovereign rights over marine resources within 200 nautical miles,[21] while reaffirming the principle of the freedom of the high seas beyond national jurisdiction. However, despite establishing the International Seabed Authority (ISA) to regulate mineral resources in the deep seabed under the common heritage of mankind principle,[22] UNCLOS lacked explicit provisions for the conservation and sustainable use of marine biodiversity beyond national jurisdiction. The treaty primarily focused on regulating traditional maritime activities such as navigation, fishing rights, and resource exploitation,[23] leaving governance of high seas biodiversity fragmented and largely dependent on regional fisheries management organizations (RFMOs) and soft law instruments. This regulatory gap necessitated subsequent legal developments, including the adoption of the 1995 UN Fish Stocks Agreement and the initiation of negotiations for a dedicated BBNJ treaty under UNCLOS.

The 1992 United Nations Conference on Environment and Development (UNCED), commonly referred to as the Earth Summit, significantly advanced international commitments to ocean conservation by adopting Agenda 21 and the Convention on Biological Diversity (CBD). Agenda 21, a non-binding action plan, emphasized the need for integrated coastal and marine management, sustainable fisheries, and the conservation of marine ecosystems beyond national jurisdiction.[24] Meanwhile, the CBD, which legally bound its parties, recognized the importance of biodiversity conservation and sustainable use, but it lacked specific provisions addressing marine areas beyond national jurisdiction (ABNJ).[25] The absence of concrete enforcement mechanisms within both instruments led to continued legal fragmentation, prompting subsequent negotiations within the UN framework to develop more robust governance mechanisms for high seas biodiversity protection, including discussions that eventually culminated in the BBNJ process under UNCLOS.

2.4 21st Century: The Road to a BBNJ Treaty (2000s–2020s)

In the 21st century, advances in marine science underscored the ecological significance of BBNJ, revealing the threats posed by anthropogenic activities such as overfishing, illegal, unreported, and unregulated (IUU) fishing, climate-induced ocean acidification, and the emerging risks associated with deep-sea mining and bioprospecting.[26] Recognizing the inadequacies of existing legal frameworks in addressing these challenges, the UN General Assembly, through Resolution 59/24 (2004),[27] established the Ad Hoc Open-ended Informal Working Group on BBNJ. This working group played a pivotal role in assessing regulatory gaps and catalyzing international momentum toward a new legal instrument.[28] Following a decade of deliberations, the UNGA, through Resolution 72/249 (2017), formally convened an intergovernmental conference to negotiate a legally binding instrument under UNCLOS. These negotiations culminated in the 2023 adoption of the BBNJ Agreement, signifying a transformative step toward a comprehensive governance framework for high seas biodiversity.

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[21] UNCLOS, Part V, Art. 55-57

[22] UNCLOS, Part XI, Art. 136-137; Agreement Relating to the Implementation of Part XI of UNCLOS, 28 July 1994, 1836 UNTS 3

[23] UNCLOS, Part VII, Art. 87-89

[24] United Nations Conference on Environment and Development (UNCED), Agenda 21, 14 June 1992, UN Doc. A/CONF.151/26/Rev.1.

[25] Convention on Biological Diversity (CBD), 5 June 1992, 1760 UNTS 79, Art. 4

[26] K M Gjerde and Others, "Protecting the Global Ocean Beyond National Jurisdiction: Towards an Integrated Governance Approach." [2019] (103) *Marine Policy* 103-112.

[27] UNGA Res 59/24 (17 November 2004), UN Doc A/RES/59/24.

[28] G Wright and Others, 'The Long and Winding Road: Negotiating a Treaty for the Conservation and Sustainable Use of Marine Biodiversity in Areas Beyond National Jurisdiction' [2018] *IDDRI* No. 08/18, *Study*.

In 2023, the BBNJ Agreement, formally titled the "Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction," was finalized following years of intricate negotiations.[29] The treaty represents a landmark legal instrument under UNCLOS, aimed at establishing a robust framework for the designation and management of marine protected areas (MPAs),[30] regulating the equitable sharing of benefits derived from marine genetic resources (MGRs),[31] and instituting mechanisms for capacity-building and technology transfer to developing states in line with the principle of common but differentiated responsibilities (CBDR).[32] Moreover, the treaty enhances environmental impact assessment (EIA) obligations for activities with potential adverse effects on high seas biodiversity,[33] reinforcing the precautionary principle and ecosystem-based management approaches in international marine governance.[34] The BBNJ Agreement's finalization marks a significant evolution in global ocean governance, bridging longstanding legal gaps and reinforcing the collective duty to protect marine biodiversity beyond national jurisdiction. The governance of marine biodiversity beyond national jurisdiction has transitioned from a historically fragmented, resource-centric management model to an increasingly holistic, legally structured, and science-driven approach. This transformation has been significantly shaped by the progressive development of treaty-based obligations under UNCLOS and the emerging institutional architecture of the BBNJ framework. The adoption of ecosystem-based management principles, the precautionary approach, and the recognition of the common heritage of mankind within legal regimes governing high seas biodiversity mark a substantive evolution in international law.[35] As the BBNJ Agreement enters its implementation phase, rigorous state cooperation, compliance monitoring, and adaptive governance mechanisms will be crucial to ensuring its long-term effectiveness in addressing transboundary marine biodiversity challenges and mitigating legal uncertainties associated with high seas conservation efforts.[36]

3.0 Challenges in Global Governance of BBNJ

Despite the existence of well-established legal frameworks such as the United Nations Convention on the Law of the Sea (UNCLOS), the Convention on Biological Diversity (CBD), and the newly adopted High Seas Treaty, significant governance gaps persist in the management of marine biodiversity beyond national jurisdiction (BBNJ). These challenges are multifaceted and stem from structural, legal, scientific, and financial constraints inherent in the current global governance framework. One of the most pressing concerns is jurisdictional fragmentation, wherein multiple international bodies, including the International Maritime Organization (IMO), the Food and Agriculture Organization (FAO), the International Seabed Authority (ISA), and regional fisheries management organizations (RFMOs), oversee various aspects of ocean governance. This results in conflicting mandates, regulatory overlaps, and inefficiencies that weaken enforcement mechanisms and allow loopholes to be exploited. The lack of a unified enforcement authority makes it difficult to hold States and non-State actors accountable for activities detrimental to marine biodiversity.[37]

[29] United Nations, 'Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction' adopted 19 June 2023, UN Doc A/CONF.232/2023.
[30] BBNJ Agreement, Part III, Art. 17-20
[31] BBNJ Agreement, Part II, Art. 10-13
[32] BBNJ Agreement, Part V, Art. 42-44
[33] BBNJ Agreement, Part IV, Art. 23-30
[34] P Birnie, A Boyle and C Redgwell, *International Law and the Environment* (3rd edn, Oxford University Press 2009).
[35] M Okello**,** *Governance of the High Seas in International Law* (PhD thesis, Kampala International University, School of Law 2019).
[36] Rakhyun E. Kim, The Likely Impact of the BBNJ Agreement on the Architecture of Ocean Governance May 2024, *Marine Policy* 165: 106190
[37] R Warner, 'Strengthening Governance Frameworks for Biodiversity Beyond National Jurisdiction' [2019], 103671 Marine Policy, 108.

Another major issue is the absence of robust enforcement mechanisms within existing treaties. Although UNCLOS and related agreements establish regulatory frameworks, compliance remains largely voluntary, with no binding mechanisms to ensure adherence. As a result, illegal, unreported, and unregulated (IUU) fishing continues to threaten marine biodiversity, with economic losses estimated at over USD 23 billion annually.[38] Deep-sea mining, another emerging concern, is inadequately regulated, raising significant environmental risks associated with habitat destruction, biodiversity loss, and pollution.[39]

3.1 Marine Genetic Resources (MGRs) and Benefit Sharing

MGRs and benefit sharing pose additional legal and ethical challenges. MGRs from the high seas hold immense potential for biotechnological and pharmaceutical advancements. However, the issue of access and equitable benefit-sharing between technologically advanced nations and developing countries remains unresolved. The current legal framework under UNCLOS does not adequately address the fair and transparent distribution of benefits derived from genetic resources in areas beyond national jurisdiction.[40]

3.2 Climate Change and Environmental Degradation

This exacerbates these governance gaps, as rising ocean temperatures, acidification, and deoxygenation alter marine ecosystems at unprecedented rates.[41] Anthropogenic pollution, including plastics and chemical contaminants, further depletes biodiversity and disrupts marine food chains.[42] Climate-induced shifts in fish populations also complicate the management of transboundary fisheries, necessitating dynamic, science-based governance approaches.[43]

3.3 Technological and Financial constraints

Finally, technological and financial constraints hinder the effective participation of developing nations, including Nigeria, in BBNJ governance. Conducting deep-sea research and monitoring compliance with international treaties require advanced technological capabilities and substantial financial investments, which many nations lack. Addressing these disparities through capacity-building initiatives, technology transfers, and international funding mechanisms remains a critical priority for ensuring equitable 1participation in BBNJ governance. Without targeted support, developing nations may struggle to assert their interests, contribute meaningfully to decision-making processes, and benefit from marine genetic resources. Strengthening global partnerships and fostering inclusive frameworks can help bridge these gaps, promoting sustainable ocean governance and fair access to marine resources.

4.0 Opportunities for Improved BBNJ Governance

The adoption of the High Seas Treaty under the United Nations Convention on the Law of the Sea (UNCLOS) represents a paradigm shift in the governance of marine biodiversity beyond national jurisdiction (BBNJ). It provides a legal framework to address governance gaps, reinforce international cooperation, and enhance marine biodiversity conservation through legally binding commitments. The treaty and broader governance enhancements present key opportunities in the following ways:

[38] U R Sumaila and Others, 'Illicit Fishing and the Need for Stronger International Enforcement Mechanisms', [2020] (11) (1), *Nature Communications*, 159.
[39] L A Levin and N Le Bris, 'The Deep Ocean Under Climate Change' [2015] (350) (6262), *Science* 766-768.
[40] R Blasiak, 'Corporate Control and Global Governance of Marine Genetic Resources' [2018] (4)(6) *Science Advances*, 5237.
[41] IPCC, 'Special Report on the Ocean and Cryosphere in a Changing Climate [2019]
[42] T S Galloway and C Lewis, 'Marine Microplastics Pollutants and Their Impact on Biodiversity' [2016] (50) (6), *Environmental Science & Technology*, 2795-2803.
[43] M L Pinsky and Others, 'Preparing Ocean Governance for Species on the Move' [2018] (360) (6394), *Science* 1189-1191.

4.1 Strengthened Legal and Institutional Frameworks

The treaty establishes mechanisms for the designation of marine protected areas (MPAs)[44], the implementation of environmental impact assessments (EIAs)[45] and the adoption of conservation and management measures.[46] It also introduces institutional structures such as the Conference of the Parties (COP) to oversee implementation[47], ensuring accountability and transparency in BBNJ governance.[48] The Biodiversity Beyond National Jurisdiction (BBNJ) Treaty establishes a comprehensive legal and institutional framework to enhance the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction.

4.2 Capacity Building and Technology Transfer

The treaty includes provisions for capacity-building initiatives and the transfer of marine research technologies to developing countries.[49] This is particularly critical for nations like Nigeria, where the lack of technological and financial resources has historically limited engagement in deep-sea research and conservation activities.[50] Access to marine scientific knowledge and data-sharing platforms will enhance Nigeria's ability to participate in BBNJ conservation effectively.

4.3 Sustainable Blue Economy Development

Improved governance frameworks can unlock new economic opportunities through sustainable marine resource utilization. Enhanced legal clarity on marine genetic resources (MGRs) allows for equitable access and benefit-sharing, ensuring that developing nations gain from marine biotechnology advancements.[51] Moreover, regulated ecotourism, sustainable fisheries, and offshore renewable energy projects present new frontiers for economic diversification.[52]

4.4 Climate Resilience and Ocean Protection

Strengthened governance mechanisms contribute to climate resilience by integrating marine biodiversity conservation into broader climate change mitigation strategies.[53] Nigeria, as a coastal state vulnerable to sea-level rise and extreme weather events, stands to benefit from coordinated global efforts that link ocean health to climate action.[54] By leveraging these opportunities, Nigeria can position itself as a proactive player in the evolving global framework for BBNJ governance, ensuring that national and regional interests are represented in multilateral negotiations.

5.0 Nigeria's Stake in BBNJ Conservation

As a coastal nation with a maritime domain extending approximately 853 km along the Gulf of Guinea**,** Nigeria's interest in the conservation and governance of marine biodiversity beyond national

[44] Article 17.
[45] Article 27
[46] Article 33, 34, Annex 1
[47] Article 47; The establishment of the COP serves as the primary decision-making body, overseeing the implementation of the treaty, promoting transparency, and ensuring accountability among member states
[48] Article 48; R Warner, 'Institutional Challenges in Implementing the BBNJ Agreement' (2021) 36(4) *International Journal of Marine and Coastal Law* 567–589; The BBNJ Treaty was concluded on June 19, 2023, when it was formally adopted by the United Nations General Assembly. Though the treaty, also known as the High Seas Treaty, was finalized after nearly two decades of negotiations Authors has already started making projections prior to the conclusion.
[49] Article 41, 42; H Harden-Davies, 'Marine Science and Capacity Building Under the BBNJ Treaty' (2017) 95 *Marine Policy* 25.
[50] J Rochette, 'Ocean Governance and the Challenge of Capacity-Building in Developing States' (2020) 118 *Marine Policy* 103964.
[51] R Blasiak, 'The Marine Genetic Resource Governance Gap: Addressing Equity in Benefit-Sharing' (2020) 6(12) *Science Advances* 3335.
[52] UR Sumaila, 'Sustainable Fisheries and the Blue Economy' (2019) 10 *Nature Communications* 3474.
[53] Intergovernmental Panel on Climate Change (IPCC), *Special Report on Climate Change and Oceans: Synergies Between Ocean Protection and Climate Action* (2022).
[54] HO Pörtner, 'Climate Change and Marine Biodiversity: The Need for Urgent Action' (2021) 374 *Science* 984–987.

jurisdiction (BBNJ) is both strategic and economic. The Gulf of Guinea, encompassing over 6,000 km of coastline across 19 states, is rich in natural resources, including significant reserves of oil and gas, as well as diverse marine ecosystems,[55] Nigeria's stake in the conservation and governance of marine biodiversity beyond national jurisdiction (BBNJ) is both strategic and economic. The country already relies heavily on marine resources for fisheries, hydrocarbon extraction, and maritime trade, making the protection of biodiversity in adjacent high seas areas critical to national security, food sovereignty, and sustainable development. Nigeria's engagement in BBNJ governance should be anchored in the following key priorities:

5.1 Advocacy for Equitable Benefit Sharing

Given the increasing commercial and pharmaceutical value of marine genetic resources (MGRs), Nigeria must advocate for a fair and transparent framework for benefit-sharing under the High Seas Treaty. This includes ensuring that African states receive adequate compensation and technological access for discoveries derived from genetic material in the high seas.[56] The Biodiversity Beyond National Jurisdiction (BBNJ) Agreement provides a framework for equitable benefit-sharing of MGRs, emphasizing capacity-building, technology transfer, and scientific collaboration. Under Article 10 of the BBNJ Agreement, parties must ensure that benefits arising from MGRs, including both monetary and non-monetary benefits, are shared fairly and equitably.[57] This is crucial for African states like Nigeria, which may not have the financial or technological resources to exploit these resources independently.

Furthermore, the Convention on Biological Diversity (CBD) and its Nagoya Protocol establish foundational principles for access and benefit-sharing (ABS), particularly concerning genetic resources and traditional knowledge.[58] The principles enshrined in these instruments should guide Nigeria's approach in advocating for a legally binding and enforceable ABS mechanism within the BBNJ framework. A practical example of equitable benefit-sharing is the case of deep-sea hydrothermal vent bacteria, which have been used to develop new antibiotics and industrial enzymes.[59] Without a robust benefit-sharing framework, pharmaceutical companies from developed nations may continue to exploit these genetic resources without compensating source countries. Nigeria can push for stronger enforcement provisions and financial contributions from commercial entities profiting from MGRs within ABNJ.

Moreover, the International Seabed Authority (ISA) has adopted regulations on deep-sea mining that require contractors to contribute to a benefit-sharing mechanism for developing states.[60] Nigeria should advocate for similar provisions in the governance of MGRs to ensure fair economic and technological benefits for African nations.

5.2 Strengthening Regional Cooperation

As a leading economy in West Africa, Nigeria should take a proactive role in fostering regional collaboration through organizations such as the African Union (AU), the Abidjan Convention, and the Economic Community of West African States (ECOWAS).[61] Strengthening partnerships with

[55] R Marangio**,** *Deep Waters: The Maritime Security Landscape in the Gulf of Guinea* (EU Institute for Security Studies 2021) https://www.iss.europa.eu/publications/briefs/deep-waters-maritime-security-landscape-gulf-guinea accessed 13th March 2023.
[56] R Blasiak "The Marine Genetic Resource Governance Gap: Addressing Equity in Benefit-Sharing." *Science Advances*, (2020) 6(12), eaaz3335
[57] BBNJ Agreement, Part II, Art. 10-13.
[58] Convention on Biological Diversity (CBD), 5 June 1992, 1760 UNTS 79; Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, 29 October 2010, UN Doc. UNEP/CBD/COP/DEC/X/1.
[59] J M Arrieta, (2010). "What Lies Underneath: Conserving the Oceans' Genetic Resources." *Proceedings of the National Academy of Sciences*, 107(43), 18318-18324.
[60] International Seabed Authority, "Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area," ISBA/19/C/17 (2013).
[61] J Rochette, "Regional Ocean Governance in Africa: Advancing Marine Biodiversity Protection." (2014) *Marine Policy*, 49, 178-185.

neighboring coastal states will enable the region to present a unified stance in international negotiations and improve enforcement against illicit activities such as illegal, unreported, and unregulated (IUU) fishing.[62] The African Union (AU), through its Agenda 2063 and the African Charter on Maritime Security and Safety (the Lomé Charter), has prioritized the sustainable use of Africa's maritime resources.[63] Nigeria can leverage AU platforms to advocate for stronger legal and enforcement mechanisms against IUU fishing and marine biodiversity exploitation beyond national jurisdiction.

The Abidjan Convention, which governs cooperation for the protection and development of the marine and coastal environment of the West and Central African region, provides a legal basis for Nigeria to engage with neighboring coastal states in strengthening regional environmental governance.[64] By harmonizing national laws with the provisions of the Abidjan Convention, Nigeria can facilitate joint enforcement operations, information sharing, and coordinated surveillance of maritime zones vulnerable to illegal exploitation.

ECOWAS, as a regional economic bloc, has played a growing role in maritime security and fisheries management through instruments such as the ECOWAS Integrated Maritime Strategy (EIMS).[65] Nigeria, being a major stakeholder in ECOWAS, should champion the full implementation of EIMS to enhance cooperative surveillance and policing of the region's Exclusive Economic Zones (EEZs). A successful example of regional cooperation in combating IUU fishing is the West Africa Task Force (WATF), which brings together multiple states and regional organizations to share intelligence and conduct joint maritime patrols.[66] Nigeria's active participation in such initiatives will improve its capacity to detect and prosecute illegal fishing activities. Additionally, the Fisheries Transparency Initiative (FiTI), adopted by several African coastal states, provides a model for ensuring accountability in marine resource governance.[67] Nigeria can adopt FiTI principles to enhance transparency in its fisheries sector, particularly in licensing foreign fishing vessels operating in its waters.

Finally, Nigeria should collaborate with the International Maritime Organization (IMO) to strengthen port state measures under the FAO Port State Measures Agreement (PSMA).[68] By enforcing stricter inspections and denying entry to vessels engaged in IUU fishing, Nigeria can play a pivotal role in regional efforts to curb marine resource exploitation.

5.3 Investment in Marine Research and Innovation

Nigeria's scientific capacity in marine research remains underdeveloped, limiting its ability to participate in deep-sea exploration and biodiversity assessments. Increased funding for oceanographic research institutions, capacity-building initiatives, and collaboration with global marine science programs will enhance Nigeria's ability to harness and manage marine resources sustainably.[69] Nigeria can strengthen its marine research sector by aligning national policies with international legal frameworks such as the United Nations Convention on the Law of the Sea (UNCLOS), particularly Part XIII, which promotes marine scientific research.[70] UNCLOS encourages states to develop marine science capabilities and engage in cooperative research efforts,

[62] U R Sumaila, "Illicit Fishing and the Need for Stronger International Enforcement Mechanisms." *Nature Communications*, (2020) 11(1), 159.
[63] African Union, "Agenda 2063: The Africa We Want," AU Commission, 2015.
[64]Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention), 1981, 20 ILM 729
[65] ECOWAS Integrated Maritime Strategy (EIMS), ECOWAS Commission, 2014.
[66] West Africa Task Force (WATF), "Regional Cooperation in Fisheries Enforcement," available at https://www.watf.org
[67] Fisheries Transparency Initiative (FiTI), "Standards for Transparent and Sustainable Fisheries Governance," available at https://www.fiti.global
[68] FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA), 2009, FAO Doc. C2009/LIM/11.
[69] H Harden-Davies, "Marine Science and Capacity Building Under the BBNJ Treaty." (2017) *Marine Policy*, 95, 25-33.
[70] United Nations Convention on the Law of the Sea (UNCLOS), Part XIII, 1982, 1833 UNTS 3

particularly for developing nations. Additionally, the Intergovernmental Oceanographic Commission (IOC) of UNESCO plays a key role in supporting ocean science initiatives, and Nigeria can expand its involvement in IOC-led research programs.[71]

The African Union's Decade of African Seas and Oceans (2015–2025) emphasizes the need for greater investment in oceanographic research and marine innovation.[72] Nigeria should integrate its national marine policies with AU strategies to ensure access to regional funding and technical support. One practical example is South Africa's Council for Scientific and Industrial Research (CSIR), which has successfully conducted oceanographic research to support fisheries management and climate change adaptation.[73] Nigeria can model its marine research initiatives on South Africa's approach by establishing a dedicated national marine research institute. Another key initiative is the Global Ocean Observing System (GOOS), which provides real-time data on ocean conditions for climate monitoring and marine resource management.[74] By increasing investments in ocean observation infrastructure, Nigeria can enhance its capacity to predict and respond to environmental changes affecting its marine biodiversity.

Finally, Nigeria should explore partnerships with private-sector stakeholders engaged in marine biotechnology, such as pharmaceutical companies utilizing marine genetic resources (MGRs) for drug discovery. The Nagoya Protocol on Access and Benefit-sharing provides a legal basis for ensuring fair compensation and knowledge-sharing from MGR-based innovations.[75]

5.4 Aligning National Legal Frameworks with International Commitments

To fully integrate into the global BBNJ governance framework, Nigeria needs to harmonize its domestic environmental policies with emerging international norms under the High Seas Treaty. This includes strengthening regulatory mechanisms for marine protected areas (MPAs), implementing robust environmental impact assessments (EIAs), and developing policies that support Nigeria's transition to a sustainable blue economy.[76] By actively engaging in global governance discussions, Nigeria can safeguard its economic and ecological interests while contributing to the equitable and sustainable management of marine biodiversity beyond national jurisdiction.

6.0 Conclusion

The conservation of marine biodiversity beyond national jurisdiction is a crucial global governance challenge requiring collective action. While significant hurdles exist, the High Seas Treaty offers a promising framework for enhanced protection of marine ecosystems. Nigeria, as a maritime nation, must leverage this opportunity to advocate for fair resource sharing, strengthen regional collaborations, and invest in marine science and governance. Proactive engagement will ensure that Nigeria not only contributes to but also benefits from the sustainable management of the global ocean commons.

[71] Intergovernmental Oceanographic Commission (IOC) of UNESCO, *Marine Scientific Research and Capacity Development* https://ioc.unesco.org accessed 13th March 2025.
[72] African Union, "Decade of African Seas and Oceans 2015–2025," AU Assembly Decision 533(XXIII).
[73] African Union, "Decade of African Seas and Oceans 2015–2025," AU Assembly Decision 533(XXIII).
[74] Global Ocean Observing System (GOOS), *Ocean Observations for a Sustainable Future* https://www.goosocean.org accessed 13th March 2025.
[75] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, 29 October 2010, UN Doc. UNEP/CBD/COP/DEC/X/1.
[76] K M Gjerde, "Protecting the Global Ocean Commons: The Role of the High Seas Treaty." (2019) *Marine Policy*, 103, 103756.