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Why Indonesia Should Ratify the Biodiversity Beyond National Jurisdiction Agreement?

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Abstract:
Indonesia signed the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement in June 2023 but has yet to decide on ratification. This treaty fills legal gaps in UNCLOS 1982 by regulating marine genetic resources (MGRs), marine protected areas (MPAs), environmental impact assessments (EIAs), and equitable benefit-sharing mechanisms in areas beyond national jurisdiction (ABNJ). Given Indonesia's strategic position as the world's largest archipelagic state, ratification is essential to align national policies with global commitments, secure access to MGRs, and reinforce Indonesia's role in international ocean governance. This study employs a doctrinal legal approach to examine Indonesia's rights and obligations under the BBNJ Agreement and identify necessary adjustments to domestic laws and policies. The findings indicate that delaying ratification weakens Indonesia's position in ABNJ governance and risks limiting access to MGR-related research, technology transfer, and benefit-sharing opportunities. Immediate ratification would ensure Indonesia's active participation in global marine conservation while strengthening national legal certainty and maritime diplomacy. Future research should explore legal harmonization strategies to facilitate effective implementation of the agreement.

Keywords:
agreement; conservation; ratification; utilization.

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Introduction

Global ocean governance has entered a historic new phase with the adoption of the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement by 193 UN member states on June 20, 2023. This agreement complements the 1982 United Nations Convention on the Law of the Sea (UNCLOS) by addressing the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.[1] BBNJ covers the high seas and deep-sea bed, areas beyond the sovereignty of any single state, requiring multilateral cooperation for conservation and equitable resource use.[2] However, Marine Genetic Resources (MGRs) are not specifically regulated under UNCLOS 1982, as the treaty focused on mineral resources

[1] Konrad Marciniak, "Marine Genetic Resources: Do They Form Part of the Common Heritage of Mankind Principle?," in *Natural Resources and The Law of the Sea*, 2017, 373–405.
[2] Elisabeth Druel and Kristina M. Gjerde, "Sustaining Marine Life beyond Boundaries: Options for an Implementing Agreement for Marine Biodiversity beyond National Jurisdiction under the United Nations Convention on the Law of the Sea," *Marine Policy* 49 (2014): 90–97, https://doi.org/10.1016/j.marpol.2013.11.023.

rather than genetic material, which specified in Article 133 within the convention.[3] This regulatory gap has prompted the adoption of the BBNJ Agreement, aiming to ensure sustainable management of MGRs in Areas Beyond National Jurisdiction (ABNJ) and prevent their exploitation without clear governance.

The BBNJ Agreement builds upon previous international efforts to regulate biodiversity and genetic resources, particularly in response to gaps left by UNCLOS 1982. The agreement seeks to harmonize global principles of marine conservation with existing international biodiversity frameworks.[4] In particular, it aligns with the Convention on Biological Diversity (CBD), which promotes the sustainable use of biological resources, and the Nagoya Protocol, which establishes mechanisms for equitable access and benefit-sharing of genetic materials. By integrating these principles, the BBNJ Agreement strengthens international cooperation in managing marine genetic resources beyond national jurisdiction.

MGRs in ABNJ have gained increasing international attention due to their high economic and scientific value,[5] particularly in pharmaceuticals, biotechnology, and agriculture.[6] Bioprospecting has led to advancements in multiple fields, but only a few states have the necessary technology and research capacity to benefit from MGRs, leading to concerns over inequitable access and benefit-sharing.[7] However, the absence of clear legal frameworks has led to disputes over the governance of MGRs in ABNJ, particularly between developed and developing states. The key issue has been whether these resources fall under the freedom of the high seas or the common heritage of mankind (CHM). This debate was ultimately settled with the BBNJ Agreement, which classifies MGRs as part of the CHM regime, ensuring equitable access and benefit-sharing.[8]

The BBNJ Agreement is considered a landmark development in global ocean governance, following UNCLOS 1982, as it establishes a legal framework for the conservation and sustainable use of marine biodiversity beyond national jurisdiction. While the agreement requires ratification by at least 60 states to enter into force, as of January 2025, only 15 states have ratified it. [9] Indonesia, one of the largest archipelagic states in the world, signed the BBNJ Agreement in June 2023 but has yet to ratify it as of January 2025, despite its strategic maritime position and interest in ocean governance.

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[3] Hanh Hong Pham and Tuan Van Vu, "Common Heritage of Mankind Principles Applied to Marine Genetic Resources in Areas beyond National Jurisdiction," *Lex Portus* 8, no. 6 (2022): 7–36, https://doi.org/10.26886/2524-101X.8.6.2022.1.

[4] Chie Sato, "The Necessity of a Global Legal Framework for Protection of Marine Biodiversity in Areas beyond National Jurisdiction: Could the Bbnj Agreement Provide the Basis for an Integrated Framework?," *Max Planck Yearbook of United Nations Law Online* 25, no. 1 (2022): 584–624, https://doi.org/https://doi.org/10.1163/18757413_02501016.

[5] Sri Wartini, "The Legal Lacunae of UNCLOS and CBD to The Access and Benefit Sharing of Marine Genetic Resources in The Area Beyond National Jurisdiction," *Varia Justicia* 18, no. 1 (2022): 52–70, https://doi.org/10.31603/variajusticia.v18i1.6989.

[6] John Samuel Bird, "Bio-Piracy on the High Seas? Benefit Sharing from Marine Genetic Resource Exploitation in Areas beyond National Jurisdiction," *Natural Resources* 09, no. 12 (2018): 413–28, https://doi.org/10.4236/nr.2018.912026.

[7] Zakieh Taghizadeh, "Marine Genetic Resources as Common Heritage of Mankind under the BBNJ Agreement; the International Community toward a Pragmatic Benefit-Sharing Approach?," *Biodiversity and Conservation*, no. 0123456789 (2024), https://doi.org/10.1007/s10531-024-02962-2.

[8] Chuanliang Wang, "On the Legal Status of Marine Genetic Resources in Areas beyond National Jurisdiction," *Sustainability (Switzerland)* 13, no. 14 (2021): 5, https://doi.org/10.3390/su13147993.

[9] High Seas Alliance, "Join the Wave in 2025: Call on Leaders to Ratify the High Seas Treaty," highseasalliance.org, 2025, https://highseasalliance.org/2025/01/31/call-on-leaders-to-ratify-the-high-seas-treaty.

Indonesia comprises 17,506 islands, covering an area of more than 7.7 million km², with more than 5.8 million km² of sea and a coastline stretching over 81,000 km[10]. Its maritime territory is a critical intersection of global trade routes, connecting the Pacific and Indian Oceans as well as the Asian and Australian continents, making it geopolitically and economically significant. Moreover, Indonesia possesses rich Marine Genetic Resources (MGRs), which hold high economic value, particularly in pharmaceuticals, biotechnology, and marine conservation[11]. As a megabiodiversity State where 70% of its territory is ocean, Indonesia should pay great attention to preserving the potential of marine biological natural resources. The legal basis for Indonesian marine management is regulated in the Indonesian Water Law (2014) and described in Presidential Regulation on Indonesia's Maritime Policy (2017). Indonesia's delay in ratification raises concerns about potential legal, economic, and administrative challenges that may be hindering the process. Ensuring fair access to these resources and equitable benefit-sharing remains a critical issue. This article analyzes the urgency of Indonesia's ratification, emphasizing its importance in securing national interests and strengthening its role in global ocean governance.

There have been several studies that examine MGR beyond national jurisdiction, among others; first Brogaito (2018) proposed a new concept, namely *mare geneticum*, which argued for the need for protection against MGR.[12] Second, C.Wang (2021) finding that MGRs in ABNJ have the legal attribute of being the common heritage of mankind (hereinafter CHM).[13] Third, Gulardi Nur Bintoro and Haryo Budi (2016) found that Indonesia, as a party to UNCLOS, generally advocates for the rule of law in ocean governance. They argue that Indonesia has a vested interest in ensuring that UN discussions provide opportunities for developing states to actively participate in shaping the legal framework for marine biodiversity beyond national jurisdiction.[14] Fourth, Dirhamsyah (2021) studied the legal status of BBNJ and Indonesia's role in negotiations BBNJ agreement.[15] This article examines the important regulations in the BBNJ Agreement and the urgency of ratifying the BBNJ Agreement for Indonesia'. This article aims to contribute to the international community's efforts to accelerate the ratification of the BBNJ Agreement, ensuring that it enters into force as soon as possible.

While these studies provide important contributions, they also present several gaps. Broggiato et al. (2018) primarily focus on conceptual frameworks but do not address practical mechanisms for implementing *mare geneticum*. Wang (2021)'s work supports CHM status for MGRs, yet it does not consider the counterarguments from developed countries that advocate for a more market-driven approach. Nurbintoro & Nugroho (2016) analyze Indonesia's interests but lack an updated discussion on Indonesia's evolving stance in recent UN

[10] S. Abdulajid, G. A. Tauda, and M. J. Achmad, "Reafirmation of Archipelagic State Principle through the Establishment of Archipelagic Region Law in Indonesia," *IOP Conference Series: Earth and Environmental Science* 890, no. 1 (2021), https://doi.org/10.1088/1755-1315/890/1/012066.

[11] Arif Havas Oegroseno, "Managing High Seas Through a Sui Generis," in *Marine Biodiversity of Areas beyond National Jurisdiction*, 2020, 18, https://doi.org/10.1163/9789004422438.

[12] Arianna Broggiato et al., "Mare Geneticum: Balancing Governance of Marine Genetic Resources in International Waters," *International Journal of Marine and Coastal Law* 33, no. 1 (2018): 3–33, https://doi.org/10.1163/15718085-13310030.

[13] Wang, "On the Legal Status of Marine Genetic Resources in Areas beyond National Jurisdiction."

[14] Gulardi Nurbintoro and Haryo Budi Nugroho, "Biodiversity Beyond National Jurisdiction: Current Debate and Indonesia's Interest," *Indonesia Law Review* 6, no. 3 (2016): 283, https://doi.org/10.15742/ilrev.v6n3.213.

[15] Dirhamsyah, "Biodiversity beyond National Jurisdiction (BBNJ): Indonesian Perspective as an Archipelagic State," *IOP Conference Series: Earth and Environmental Science* 789, no. 1 (2021), https://doi.org/10.1088/1755-1315/789/1/012020.

negotiations. Similarly, Dirhamsyah (2021) explores Indonesia's involvement in BBNJ talks but does not critically evaluate the urgency of ratifying the agreement or its broader implications for Indonesian maritime law and policy.

This article builds on previous studies by critically examining the legal and institutional mechanisms outlined in the BBNJ Agreement, with a specific focus on the conservation and utilization of marine genetic resources (MGRs). It explores how the agreement regulates access to MGRs, ensures equitable benefit-sharing, and establishes conservation measures to safeguard biodiversity beyond national jurisdiction. Additionally, this study analyzes Indonesia's specific obligations and potential benefits from ratification, emphasizing the country's strategic interest in securing access to marine resources while upholding international conservation commitments. The urgency of ratification is also assessed, highlighting the need for Indonesia to promptly ratify the agreement to strengthen its influence in shaping the treaty's implementation, ensure alignment with national maritime policies, and expedite the treaty's entry into force at the international level.

Unlike prior research, which has primarily focused on conceptual and legal frameworks, this article offers a more integrated legal and policy analysis by directly linking Indonesia's maritime interests to the ratification process. The novelty of this study lies in its comprehensive assessment of Indonesia's role in BBNJ governance and its implications for both national and global ocean governance frameworks. By emphasizing Indonesia's strategic positioning within the agreement, this study contributes to the broader discourse on marine biodiversity conservation, sustainable resource management, and international legal compliance.

Method

This research aims to analyze the legal framework governing the conservation and utilization of marine genetic resources (MGRs) in the BBNJ Agreement, while assessing Indonesia's stance on ratification. The study follows a doctrinal legal research approach, focusing on legal sources and regulatory analysis. The IRAC (Issue, Rule, Argument, Conclusion) method is employed as the primary analytical tool, as it enables a structured legal reasoning process to evaluate Indonesia's legal obligations under the BBNJ Agreement. This method is particularly useful for assessing legal certainty, justice, and benefit-sharing mechanisms.[16] The research applies a conceptual and statutory approach, examining legal principles under UNCLOS 1982, the BBNJ Agreement, and related Indonesian laws: the Indonesian Water Law (2014) and Presidential Regulation on Indonesia's Maritime Policyand (2017), and Constitutional Court decision Number 13/PUU-XVI/2018. The study incorporates socio-economic and political considerations affecting Indonesia's ratification process, acknowledging that legal decisions are often influenced by broader policy concerns, national interests, and international commitments. By utilizing doctrinal legal research combined with IRAC methodology, this

[16] Renata Christha Auli, "Metode IRAC Dalam Penalaran Hukum," Hukumonline.com, 2022, https://www.hukumonline.com/klinik/a/metode-irac-dalam-penalaran-hukum-lt631f2b19a4dc4/.

study provides a structured legal and policy-based analysis, offering insights into Indonesia's potential benefits and challenges in ratifying the BBNJ Agreement.

Discussion

1. The Conservation and Utilization of Marine Genetic Resources according to the BBNJ Agreement

The BBNJ Agreement is the most significant ocean governance treaty in over 25 years, serving as an implementing agreement to UNCLOS that complements Part VII (High Seas), Part XI (The Area), and Part XII (Environmental Protection). It regulates marine biodiversity conservation in areas beyond national jurisdiction (ABNJ), including the high seas and deep seabed. While UNCLOS grants sovereign rights over the EEZ and continental shelf, the BBNJ Agreement does not infringe on these but instead establishes frameworks for equitable benefit-sharing and environmental protection. Unlike Part XII's which more focused on marine pollution, BBNJ prioritizes biodiversity conservation and sustainable resource use.

The BBNJ Agreement defines its geographic scope using UNCLOS's jurisdictional framework, ensuring consistency with international maritime law. According to Article 1(2) of UNCLOS, the "Area" includes the high seas and seabed beyond national jurisdiction, covering the ocean floor and subsoil thereof. By relying on UNCLOS's legal framework, the BBNJ Agreement maintains legal coherence while addressing regulatory gaps in marine biodiversity conservation. As part of international maritime law, the BBNJ Agreement focuses specifically on marine biodiversity governance, distinct from treaties regulating shipping, navigation, and pollution prevention (e.g., MARPOL, SOLAS).[17] It also aligns with the Convention on Biological Diversity (CBD), which provides the fundamental definition of "biological diversity". The CBD defines biodiversity as "the variability among living organisms from all sources, including terrestrial, marine, and aquatic ecosystems" (Article 2). Furthermore, the Nagoya Protocol, an extension of the CBD, influences the BBNJ's approach to Marine Genetic Resources (MGRs) by emphasizing fair access and equitable benefit-sharing mechanisms.

Referring to UNCLOS 1982, areas beyond national jurisdiction (ABNJ) include the high seas and "The Area". The high seas extend beyond 200 nautical miles, while The Area refers to the seabed beyond national jurisdiction. Article 87 of UNCLOS grants freedoms on the high seas, including navigation, fishing, scientific research, laying submarine cables, and artificial island construction. Regarding the area, UNCLOS mandates that prospecting, exploration, and exploitation can only be conducted under the supervision of the International Seabed Authority (ISA).[18]

However, UNCLOS only requires states to cooperate in conserving biological resources on the high seas without providing enforcement mechanisms or specific guidelines. To ensure

[17]Maritime Injury Center, "International Maritime Law," maritimeinjurycenter.com, 2024, https://www.maritimeinjurycenter.com/maritime-rights/international-maritime-law/.

[18] Dominique Virgil, "Indonesia ' s Role in Establishing Comprehensive Global Governance of Areas Beyond National Jurisdiction," in *Indonesian Year Book of International Law*, ed. Arie Afriansyah, vol. 2 (jakarta, 2021), 207–40.

effective conservation, UNCLOS must be interpreted alongside other international agreements. For marine pollution, treaties such as MARPOL 73/78 and the London Convention (LC 1972) provide specific regulatory frameworks. In addressing overfishing and overexploitation, agreements such as the UN Fish Stocks Agreement (1995), FAO Code of Conduct for Responsible Fisheries, and Regional Fisheries Management Organizations (RFMOs) play a crucial role. Additionally, marine biodiversity protection relies on the Convention on Biological Diversity (CBD), the Nagoya Protocol, and CITES for endangered marine species.

The BBNJ Agreement's scope extends only to the high seas and The Area, excluding the EEZ and continental shelf, which remain under UNCLOS's sovereign rights framework. However, its conservation measures, such as marine protected areas and environmental impact assessments, could indirectly influence coastal state practices. The agreement aligns with the Convention on Biological Diversity (CBD), which also seeks sustainable biodiversity use, but unlike CBD's broad application to all ecosystems, BBNJ specifically regulates ABNJ.[19] The treaty integrates Nagoya Protocol principles on marine genetic resource benefit-sharing, ensuring equitable access. Beyond marine environmental protection, BBNJ also has an economic dimension, aiming to balance conservation with sustainable resource use, strengthening global biodiversity governance under UNCLOS's legal framework.

The BBNJ Agreement reaffirms key principles recognized by the international community, including the polluter pays principle, the precautionary approach, the common heritage of humanity, and the obligation to prevent transboundary harm. It introduces new mechanisms such as marine protected areas (MPAs) and Area-Based Management Tools (ABMTs) to protect vulnerable marine biodiversity.[20] Additionally, the treaty establishes environmental impact assessment (EIA) rules for commercial activities in ABNJ, requiring states and companies to report potential ecosystem harm. However, effective fisheries governance remains a challenge, as overfishing on the high seas continues under Regional Fisheries Management Organizations (RFMOs).[21] While BBNJ strengthens biodiversity protection, it does not fully address the "tragedy of the commons" in global fisheries, highlighting the need for further collaboration with the UN Fish Stocks Agreement (1995) and RFMOs. [22]

The principle of the Common Heritage of Humankind (CHM) is enshrined in Article 5(b) of the BBNJ Agreement, emphasizing a comprehensive strategy for the sustainable management of shared marine resources to ensure their long-term availability for future generations.[23] The application of CHM to Marine Genetic Resources (MGRs) in ABNJ raises

[19] Pascale Ricard, "Marine Biodiversity beyond National Jurisdiction : The Launch of an Intergovernmental Conference for the HAL Id : Hal-02514627," *Maritime Safety and Security Journal* 19, no. 4 (2018).
[20] Shani Friedman, "The Interaction of the BBNJ Agreement and the Legal Regime of the Area, and Its Influence on the Implementation of the BBNJ Agreement," *Marine Policy* 167, no. May (2024): 106235, https://doi.org/10.1016/j.marpol.2024.106235.
[21] Enric Sala et al., "The Economics of Fishing the High Seas," *Science Advances* 4, no. 6 (2018): eaat2504, https://doi.org/10.1126/sciadv.aat2504.
[22] Petra Gümplová, "The New High Seas Treaty Will Not End the Tragedy of the Global Fishing Commons," sfb294-eigentum.de, 2023, https://sfb294-eigentum.de/en/blog/the-new-high-seas-treaty-will-not-end-the-tragedy-of-the-global-fishing-commons/.
[23] Taghizadeh, "Marine Genetic Resources as Common Heritage of Mankind under the BBNJ Agreement; the International Community toward a Pragmatic Benefit-Sharing Approach?"

awareness of the common interest in global biodiversity conservation, guiding states to balance self-interest with collective responsibility in ABNJ activities. The benefit-sharing principle, fundamental to CHM, asserts that while all nations should have access to natural resources, their sustainable use is a joint responsibility.

In the High Seas and The Area, CHM is primarily applied through the International Seabed Authority (ISA), which governs mineral resource exploitation under UNCLOS Part XI. While the CHM concept in ISA focuses on deep-sea mining, BBNJ extends its application to biological resources, particularly MGRs, reinforcing equitable access and benefit-sharing obligations. [24] Despite broad scholarly consensus on CHM's non-ownership and non-appropriation principles, its legal status remains debated. Nevertheless, a cooperative governance framework ensures that shared marine resources are utilized sustainably. The BBNJ Agreement integrates CHM principles to establish fair benefit-sharing mechanisms, ensuring that developing states can access and benefit from MGRs, aligning economic and environmental objectives.[25]

A significant feature of the BBNJ Agreement is the establishment of an Access and Benefit-Sharing Committee and a Clearing-House Mechanism, aiming to facilitate data exchange and promote fair access to Marine Genetic Resources (MGRs) (Art. 15, 51 BBNJ). The agreement functions alongside existing international organizations, including the United Nations (UN), FAO-RFMOs (fisheries management), and the International Seabed Authority (ISA), which regulates mineral exploitation in The Area. While ISA oversees deep-sea mining under UNCLOS Part XI, BBNJ extends governance to biological resources, reinforcing equitable benefit-sharing obligations.[26] The treaty's four key components—MGRs, area-based management tools (ABMTs), environmental impact assessments (EIAs), and capacity-building—complement RFMOs' fisheries conservation efforts while addressing biodiversity governance gaps.

First, marine genetic resources and acess to benefit sharing. The final agreement preserves the harmony between the authority over bioprospecting operations and the liberty of marine scientific research. In fact, there is a notification method (Article 12) for MGR-related activities and digital sequence information at every stage of the process, including pre-, post-, and use. Therefore, Parties shall promptly notify the Clearing House Mechanism of any MGR collecting activities in regions beyond of their national authority (at least six months prior to the collection). The objective of Part II of the BBNJ Agreement is to maintain a fair and equal distribution of benefits while preserving the autonomy of maritime scientific research. It specifies the exchange of digital sequence information (DSI) and MGRs from ABNJ, together with non-financial and financial incentives. Marine genetic resources refers to the genetic resources derived from the high seas and the Area. MGRs are defined in the BBNJ Agreement as "any material of marine plant, animal, microbial or other origin containing functional units of heredity of actual or potential value" (BBNJ Art. 1(8)). Although it refers to

[24] John E Noyes, "The Common Heritage of Mankind: Past, Present, and Future The Common Heritage of Mankind: Past, Present, and Future THE COMMON HERITAGE OF MANKIND: PAST, PRESENT, AND FUTURE," *Denv. J. Int'l L. & Pol'y* 447, no. 1 (2012): 2011–12.
[25] Taghizadeh, "Marine Genetic Resources as Common Heritage of Mankind under the BBNJ Agreement; the International Community toward a Pragmatic Benefit-Sharing Approach?"
[26] Dirhamsyah, "Biodiversity beyond National Jurisdiction (BBNJ): Indonesian Perspective as an Archipelagic State."

the digitalized data on an MGR, the term "DSI" is not specified in the BBNJ Agreement. The ability to access and utilize marine genetic resources is currently unevenly distributed among nations due to the lack of research facilities and technology in many of them. Benefit sharing is therefore a crucial component of the BBNJ Agreement.

Second, Area-Based Management Tools (ABMTs), including Marine Protected Areas (MPAs). Part III of the BBNJ Agreement outlines the process for designating, monitoring, and implementing ABMTs, which regulate human activity in specific ocean areas to achieve conservation or sustainable resource management goals. These tools help protect ecosystems, enhance ocean resilience to climate change, and support sustainable fisheries. [27] The Kunming-Montreal Global Biodiversity Framework (GBF), adopted under the Convention on Biological Diversity (CBD), sets a target to protect 30% of the ocean by 2030, aligning with the BBNJ Agreement's objectives. Additionally, the IUCN categorizes ABMTs into marine protected areas (MPAs), sectoral tools, and marine spatial planning, reinforcing their role in global biodiversity governance.

Third, Environmental impact assessments; Environmental Impact Assesment (EIAs) are crucial in achieving the goal of the BBNJ Agreement because they guarantee that human activities are evaluated in order to prevent, mitigate, and manage substantial detrimental impacts (BBNJ Art. 27(b)). EIAs help States make decisions that advance the goals of the Agreement by identifying potential harm to marine ecosystems and the people who depend on them. By allowing for public feedback and participation, modern EIA practice also encourages transparency and stakeholder engagement. This includes local and coastal communities as well as Indigenous Peoples who may be impacted by planned operations.

Fourth, Capacity-building and the transfer of marine technology are central to the BBNJ Agreement and are explicitly addressed in Part V, with additional cross-cutting references throughout the treaty (BBNJ Arts. 9(b); 17(e), 27(f)). These provisions aim to enhance conservation efforts and ensure sustainable use of marine biodiversity in areas beyond national jurisdiction (ABNJ) while assisting developing states, including landlocked and small island developing states (SIDS), in implementing the treaty (BBNJ Art. 40). The agreement mandates cooperation through legal frameworks and institutions to facilitate equitable access to marine technologies and scientific data (BBNJ Art. 41). A critical aspect of capacity-building under the BBNJ Agreement is the recognition of different capabilities among states, particularly in access to marine genetic resources (MGRs). Developing countries often face technological and financial barriers to utilizing MGRs, making capacity-building essential for their equitable participation. UNCLOS already establishes differential treatment for states based on geographic and economic factors, and the BBNJ Agreement builds on these principles by including SIDS, least developed countries (LDCs), and landlocked developing states (LLDCs) in capacity-building programs (BBNJ Arts. 40, 41, 42).

[27] Débora Gutierrez, Helena Calado, and Javier García-Sanabria, "A Proposal for Engagement in MPAs in Areas beyond National Jurisdiction: The Case of Macaronesia," *Science of the Total Environment* 854, no. September 2022 (2023), https://doi.org/10.1016/j.scitotenv.2022.158711.

The BBNJ Agreement recognizes the challenges developing states face in accessing and utilizing marine genetic resources (MGRs) and ensuring equitable benefit-sharing. In Article 14(e), Indonesia successfully advocated for the inclusion of archipelagic states alongside least developed states, landlocked developing states, and small island developing states (SIDS) as priority beneficiaries of capacity-building and marine technology transfer programs. This provision strengthens Indonesia's position in managing marine protected areas (MPAs) and area-based management tools (ABMTs) while ensuring fair access to deep-sea biodiversity resources.

As a party to the Convention on Biological Diversity (CBD) and the Nagoya Protocol, Indonesia is already committed to implementing prior informed consent and benefit-sharing regulations for genetic resources, particularly for those managed by Indigenous and local communities. The BBNJ Agreement complements these obligations by extending similar frameworks to ABNJ, reinforcing Indonesia's role in global biodiversity governance. Migratory fish species, such as tuna, illustrate the urgency of Indonesia's engagement with the BBNJ Agreement. These species spawn in Indonesian waters but are often harvested in the high seas, raising concerns about equitable resource use. Indonesia must ensure that the BBNJ framework recognizes highly migratory species within MGRs and enables developing coastal states to benefit from the marine biodiversity they help sustain. Given its strategic geographic position and marine biodiversity richness, Indonesia plays a crucial role in shaping the BBNJ's legal and governance framework to ensure fair, science-based, and sustainable utilization of ABNJ resources.[28]

2. Indonesia's Interest to Ratify the BBNJ Agreement

Indonesia is considered the largest archipelago in the world. Geographically, Indonesia is located between two oceans, the Pacific Ocean in the Northeast and the Indian Ocean in the West. Indonesian waters also border with the South China Sea in the North as well as the Andaman Sea in the Northwest.[29] It is well known that Indonesia is surrounded by oceans that are abundant in marine natural resources. The Indian Ocean the Pacific Ocean and other oceanographic missions have shown that these regions are the richest seas, even if there are still undiscovered ones.

As an active participant in the negotiations of UNCLOS 1982 and the BBNJ Agreement, it is crucial for Indonesia to ratify the treaty. To analyze this urgency, Radbruch's theory of law provides a useful framework. Radbruch argued that law is built upon three interrelated and often conflicting values: justice (philosophical aspect), legal certainty (juridical aspect), and purposiveness (sociological aspect). [30] Indonesia, as the world's largest archipelagic state, holds significant marine biodiversity and vast ocean resources, making its role in global ocean

[28]Gabriella Gianova and Andreas Aditya Salim, "BBNJ: Why Does It Matter to Indonesia?," thejakartapost.com, 2023, https://www.thejakartapost.com/paper/2023/03/16/bbnj-why-does-it-matter-to-indonesia.html.
[29] Dirhamsyah, "Biodiversity beyond National Jurisdiction (BBNJ): Indonesian Perspective as an Archipelagic State."
[30] Robert Alexy, "Gustav Radbruch's Concept of Law," *Law's Ideal Dimension* 26, no. 1946 (2021): 107–18, https://doi.org/10.1093/oso/9780198796831.003.0008.

governance critical. Given its geographic position between major oceans, Indonesia must ensure its marine policies align with both national interests and international commitments.

Applying Radbruch's legal theory, Indonesia's ratification of the BBNJ Agreement must balance justice, legal certainty, and purposiveness. Justice demands fair access to marine resources, legal certainty ensures clear international obligations, and purposiveness assesses whether the treaty serves Indonesia's broader marine governance objectives, including sustainability and effective law enforcement. Radbruch's Intolerability Thesis suggests that if the agreement disproportionately benefits developed nations, reform is necessary. [31] However, rejecting it may worsen environmental degradation and weaken Indonesia's role in ocean governance. Therefore, Indonesia must carefully assess whether ratification aligns with its national interests while maintaining fairness in benefit-sharing.

First, value of justice or philosophical aspect. Justice and law are inseparable and are fundamental to a common life. In life, it is not only human that should be treated fairly but also all environments have the right to be treated fairly.[32] The philosophical foundation of justice is closely linked to morals and ethics, guiding human interactions with nature to ensure sustainability. Environmental ethics serves as a moral compass, emphasizing that humans, natural resources, and the environment—both biotic and abiotic—are interconnected as environmental citizens. These elements interact to sustain life, and their relationships must be fair and just. As Briant Baxter explains, ecological justice extends fairness to non-human entities, recognizing their intrinsic value within ecosystems. [33]

Environmental justice and ecological justice, though related, differ in their focus. Environmental justice primarily concerns fairness in the distribution of environmental benefits and burdens among people, particularly regarding marginalized communities affected by pollution and climate change. Ecological justice, on the other hand, extends beyond human interests to recognize the intrinsic value of nature itself, advocating for the protection of ecosystems regardless of human benefit. [34] Furthermore, the concept of the environment as a legal subject aligns with ecological justice, suggesting that nature should have legal standing to protect its own rights, rather than being treated merely as a resource for human use. This perspective challenges traditional anthropocentric legal frameworks and calls for a holistic approach to environmental governance. [35] In the context of marine biodiversity conservation, adopting such an approach could strengthen legal protections for marine ecosystems under the BBNJ Agreement, ensuring that marine resources are managed ethically and sustainably.

The BBNJ Agreement has the potential to guarantee justice for Indonesia in terms of benefit sharing and participation in marine scientific research beyond national jurisdiction

[31] F. Saliger, "Content and Practical Significance of Radbruch's Formula," *Problems of the Philosophy of Law* Vol. II (2004): 68.
[32] Andri Gunawan Wibisana, "Keadilan Dalam Satu (Intra) Generasi:Sebuah Pengantar Berdasarkan Taksonomi Keadilan Lingkungan," *Mimbar Hukum* 29, no. 2 (2017): 292, https://doi.org/10.22146/jmh.19143.
[33] Brian Baxter, *A Theory of Ecological Justice* (England: Routledge, 2005).
[34] Chukwumerije Okereke and Mark Charlesworth, *Environmental and Ecological Justice*, *Advances in International Environmental Politics*, 2014, https://doi.org/10.1057/9781137338976.
[35] Okereke and Charlesworth.

because establishes the principle of fair and equitable distribution of benefits from the use of marine genetic resources. Indonesia can get a share of the economic benefits resulting from marine genetic resources, even if their use is carried out by other States and opens up opportunity to obtain technology transfer and capacity development related to marine research. Justice can be demonstrated by providing equal access for all States, to utilize marine genetic resources beyond national jurisdiction. [36] This can reduce the technological and economic gap between developed and developing States in the utilization of marine resources and provide an opportunity for Indonesia to actively participate in the exploration and utilization of global marine genetic resource. [37]

The second aspect is legal certainty. Legal certainty, as a fundamental purpose of law, is integral to the pursuit of justice. The enforcement of law concerning an activity, irrespective of the actor, exemplifies legal certainty. Legal certainty enables individuals to foresee the repercussions of their involvement in a particular legal activity. Legal certainty encompasses normative aspects, including regulations and judicial decisions. It refers to the implementation of societal order that is clear, organized, consistent, and coherent, and is not influenced by subjective factors within the community.

The concept of legal certainty according to Gustav Radbruch, legal certainty is defined as the existence of regulations that are made and promulgated clearly, surely, and logically. Ratification of the BBNJ Agreement can increase legal certainty for Indonesia in managing marine resources on beyond national jurisdiction, especially regarding access and utilization of marine genetic resources. The BBNJ Agreement provides a clear international legal framework to regulate access and use of marine genetic resources outside national jurisdiction. This complements Chapter XII of UNCLOS on marine environmental protection and the Convention on Biological Diversity (CBD) and its protocols, which emphasize the sustainable and equitable use of genetic resources.

By ratifying this agreement, Indonesia will have a strong legal basis to protect its interests in international waters. In addition, this Agreement provides a clear definition and classification of marine genetic resources, which can reduce ambiguity in the interpretation and application of the law . Ratification of treaty in Indonesia can be adoption in law or president regulation refer to Article 9 Law number 24 of 2000 . The mechanisms for accessing marine genetic resources beyond the EEZ has regulated in Article. This provides legal certainty for Indonesia in protecting innovations and discoveries originating from these resources. The BBNJ Agreement also provides a mechanism for resolving disputes related to access and utilization of marine genetic resources. This provides a guarantee for Indonesia that there is a legal route that can be taken if a conflict occurs with another State. Ratification will encourage Indonesia to align its national laws with international standards set out in the BBNJ Agreement.

[36] Sergio Peña Neira, "Planning on Law: Fair and Just in the Division of Benefits. The Case of Genetic Resources in the High Seas (Water Column)," *Revista Derecho Del Estado*, no. 41 (2018): 227–53, https://doi.org/10.18601/01229893.n41.09.

[37] Gita Sabharwal, "National Consultation for the Ratification and Implementation of Biodiversity beyond National Jurisdiction," United Nations Indonesia, 2024.

Apart from justice and legal certainty, adherents of utilitarianism, notably Bentham and Mill, introduce purposiveness as the third legal objective, emphasizing the greatest happiness for the greatest number. According to this perspective, law is a tool designed to maximize collective benefit, rather than equally benefiting everyone individually. [38] In the context of marine genetic resources, the principle of "common heritage of mankind," recognized under UNCLOS and reinforced by the BBNJ Agreement, aligns with this utilitarian ideal by promoting collective welfare through fair distribution and sustainable use of marine resources. Ratifying the BBNJ Agreement allows Indonesia to ensure its national policies regarding marine biodiversity governance also serve global welfare, contributing to the broader international community.

Furthermore, from a sociological perspective, the ratification of the BBNJ Agreement aligns with the principle of expediency, interpreted as pursuing legitimate and beneficial economic purposes. Fundamentally, law must serve clear societal objectives by delivering concrete economic benefits and well-being. Indonesia's ratification is particularly significant given its strategic geographic location bordering major ocean areas rich in biodiversity, such as the Indian Ocean, Pacific Ocean, and South China Sea. [39] Ratifying the BBNJ Agreement would provide Indonesia with economic advantages through equitable benefit-sharing mechanisms, particularly from marine genetic resources whose potential spans biotechnology, pharmaceuticals, and cosmetics industries. Additionally, capacity-building and technology-transfer provisions under the agreement can accelerate Indonesia's technological advancement, enabling direct participation in marine scientific research beyond national jurisdiction. The Agreement also ensures sustainable use practices, safeguarding ecosystem services vital for fisheries, tourism, and maritime sectors crucial to Indonesia's economy. Given Indonesia's strategic geographical position, effective management of biodiversity beyond national jurisdiction can positively influence ecosystem stability within national waters, directly benefiting domestic fisheries and maritime industries, thus aligning national economic interests with global sustainability objectives. [40]

Indonesia borders Areas Beyond National Jurisdiction (ABNJ) in four key marine regions: the Indian Ocean to the west of Sumatra, south of Java, south of Nusa Tenggara Barat and Nusa Tenggara Timur, and the Pacific Ocean north of Papua. Indonesia's Exclusive Economic Zone (EEZ) and Continental Shelf directly border the high seas and international seabed, which constitute the geographical scope of ABNJ. Indonesia's management of marine biodiversity in these regions will directly influence its domestic marine ecosystems due to ecological interconnections. Additionally, fisheries in these ABNJ areas are managed through Regional Fisheries Management Organizations (RFMOs), which regulate fishing activities to ensure sustainable practices and resource conservation. [41] Furthermore, Indonesia possesses a Continental Shelf extending beyond 200 nautical miles west of Aceh, as recommended by

[38] Otong Rosadi, *Quo Vadis Hukum, Ekologi Dan Keadilan Sosial* (Yogyakarta: Thafa Media, 2012).
[39] Nurbintoro and Nugroho, "Biodiversity Beyond National Jurisdiction: Current Debate and Indonesia's Interest."
[40] Gianova and Salim, "BBNJ: Why Does It Matter to Indonesia?"
[41] Novita Yoseline Tambunan, "Peran Lembaga Pengelola Perikanan (Lpp) Dalam Perikanan Tuna Di Indonesia," *JISIP (Jurnal Ilmu Sosial Dan Pendidikan)* 5, no. 2 (2021), https://doi.org/10.58258/jisip.v5i2.1966.

the Commission on the Limits of the Continental Shelf (CLCS), where Indonesia's continental shelf directly interfaces with ABNJ, highlighting the critical need for clear international regulatory frameworks. [42]

The direct impact on Indonesia's biodiversity and marine environment. Indonesia has a Continental Shelf beyond 200 nautical miles which has received recommendations from the Commission on the Limits on the Continental Shelf (CLCS) to the west of Aceh, there is a horizontal boundary where Indonesia's Continental Shelf beyond 200 NM borders the ABNJ.[43] As an archipelagic State has potential to become a maritime State, Indonesia has an interest in taking advantage of the management of BBNJ, research development and exploitation of Indonesia's maritime affairs in the future should reach ABNJ.

The Indonesian Constitution of 1945 mandated Indonesia to be actively involved in the preservation of world's peace. This was interpreted as a duty of Indonesia to play an active role in international sphere, including in the formation of international law. Indonesia realized the importance of international cooperation in reaching the goal of enhancing prosperity and maintaining peace and international order. Historically, Indonesia has been actively involved in the law of the sea conferences which led to the creation of UNCLOS. During the Third Conference, Indonesia was also a supporter of the regime of the common heritage of mankind in the deep seabed area.[44]

The BBNJ Agreement promotes international collaboration in marine scientific research, offering Indonesia greater opportunities to participate in global research projects and enhance access to marine data and biotechnology development. As a mega-biodiverse nation, Indonesia faces challenges in marine scientific capacity, with limited infrastructure, funding, and research institutions dedicated to deep-sea biodiversity studies. Strengthening marine research centers and investing in marine biotechnology is essential to maximize the benefits of the agreement. A key mechanism under the BBNJ Agreement is the clearing-house mechanism, which facilitates data-sharing, technology transfer, and capacity-building. [45] Ratification would expand Indonesia's research capabilities, allowing better integration with international marine scientific networks. Additionally, recognizing traditional knowledge in marine conservation, as emphasized in the agreement, ensures that Indonesia's indigenous practices contribute to global biodiversity governance while securing equitable benefit-sharing for developing states.

Indonesia already has strong potential in marine biotechnology, particularly in the fields of pharmaceuticals, bioactive compounds, and marine-based industrial applications. Research institutions such as the Indonesian Institute of Sciences (LIPI), the National Research and Innovation Agency (BRIN), and various universities have been conducting studies on the utilization of marine microorganisms, algae, and coral reef ecosystems for

[42] Oegroseno, "Managing High Seas Through a Sui Generis."
[43] Aryuni Yuliantiningsih and Ade Maman Suherman, "Nexus between Biodiversity beyond National Jurisdiction and Extended Continental Shelf : The Need for Sui Generis Status in Overlapping Jurisdiction ∗," *Journal of East Asia and International Law* 16, no. 2 (2023): 321–38, https://doi.org/: http:/.doi.org/10.14330/jeail.2023.16.2.07.
[44] Nurbintoro and Nugroho, "Biodiversity Beyond National Jurisdiction: Current Debate and Indonesia's Interest."
[45] Clement Yow Mulalap et al., "Traditional Knowledge and the BBNJ Instrument," *Marine Policy* 122, no. June (2020): 104103, https://doi.org/10.1016/j.marpol.2020.104103.

biotechnology development. For example, Indonesian researchers have explored the use of marine-derived bioactive compounds for antibiotic and anti-cancer treatments. [46] By leveraging international cooperation under the BBNJ framework, Indonesia can further develop its marine biotechnology sector, enhance research funding, and access advanced laboratory facilities.

In the context of international law, society in this case is an international society consisted of States . The ratification of the BBNJ agreement has several sociological aspects and important benefits for Indonesia:

a. Indonesia, as the largest archipelagic State in the world, has a great interest in preserving marine biodiversity. The ratification helps protect marine ecosystems beyond national jurisdiction which has an impact on the sustainability of Indonesia's fisheries resources.
b. This agreement aims to realize a fair sharing of benefits from marine genetic resources as global justice. This gives Indonesia the opportunity to gain access and benefit from marine biotechnology research.
c. By ratifying, Indonesia shows its commitment to global issues, improves its image on the international stage and strengthens its position in other maritime negotiations. This agreement also encourages technology transfer and increased marine research capacity, opens up opportunities for Indonesian scientists to collaborate internationally and encourages Indonesia to strengthen policies and institutions related to marine resource management, increasing the effectiveness of national marine governance.

The practice of ratification in Indonesia refers to Article 9 law Number 24 of 2000 on the international treaty law. Ratification of treaty in Indonesia can take into the form of laws and presidential regulations. Referring to Constitutional Court Decision Number 13/PUU-XVI/2018, that the criteria for international agreements that must be ratified in the form of laws are in accordance with Article 11 (2) of the 1945 Constitution, namely if the agreement have a broad and fundamental impact and give rise to a financial burden on the state. When adopting national legislation, states should consider the objectives of the BBNJ Agreement as a means of guiding interpretation and application of national legislation in a manner that is consistent with the overall ambition of the Agreement. The Indonesian government should think about which provisions are necessary to include in primary legislation and which provisions could be developed through secondary legislation, making it easier to adapt rules over time as necessary. The government should consider how the new rules will interact with the existing legislative and policy framework in order to ensure overall coherence at the national level.

Conclusion

The BBNJ Agreement represents a significant advancement in international ocean governance. The treaty addresses regulatory gaps left by UNCLOS 1982. Key provisions focus

[46] Ari Satia Nugraha et al., "Indonesian Marine and Its Medicinal Contribution," *Natural Products and Bioprospecting* 13, no. 1 (2023): 1–27, https://doi.org/10.1007/s13659-023-00403-1.

on the conservation and sustainable use of Marine Genetic Resources (MGRs). The agreement regulate four important pillars including, Marine Genetic Resources and Fair and equitable sharing of benefit, Area Based Management Tools including Marine Protected Area, Environmental Impact Assessment, and Capacity Building and Transfer of Technology marine genetic resources (MGRs).

Indonesia, the world's largest archipelagic state, requires ratification to secure its maritime interests. Legal, economic, and environmental benefits accompany Indonesia's ratification. Legal recognition strengthens Indonesia's position in ABNJ-related governance. The agreement safeguards maritime rights and interests under the Common Heritage of Mankind (CHM) principle. Economic advantages include access to marine biotechnology, research funding, and technology transfer. Indonesia's marine biodiversity supports its role in oceanic research and innovation. Environmental commitments reinforce marine conservation. The treaty ensures the sustainable management of high seas biodiversity. Domestic fisheries and marine ecosystems benefit from enhanced protection. Ratification aligns with Indonesia's sustainability goals. Marine research cooperation expands scientific and technological capacity. Fair access to marine resources benefits developing countries and archipelagic states. Diplomatic standing strengthens in global ocean governance. Indonesia secures a role in shaping international maritime policies. Immediate ratification ensures Indonesia remains active in marine biodiversity governance. Future research should examine legal harmonization of BBNJ provisions. Implementation must integrate effectively into national marine policy. Challenges require resolution for long-term success.

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