



Conceptualizing legal categorization of blue projects as a safeguard against bluewashing in the blue bond framework

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ABSTRACT

Background: Indonesia has a huge potential for the marine economy, but its management has not been fully supported by adequate legal instruments, especially in the implementation of blue bonds as a blue economy financing instrument. This study aims to analyze the weaknesses of Indonesia's legal framework in the supervision and accountability of blue bond issuance and formulate an ideal regulatory design to prevent bluewashing practices. **Methods:** By using normative legal research methods and conceptual, legislative, and comparative approaches. The study examined some of the national regulations relevant to the study and compared them to best practices in Seychelles, Belize, and the Philippines. **Findings:** The results show that Indonesia does not yet have a strict blue project categorization, independent verification mechanism, and a mandatory impact reporting system, thus opening up space for sustainability claims without a clear scientific basis. In contrast, countries such as Seychelles and Belize implement trust fund and ring-fenced fund mechanisms, while the Philippines regulates third-party verification and public reporting obligations through SEC Circular No. 15/2023. **Conclusion:** Based on these findings, the study recommends the design of a hybrid legal framework that combines a transparent trust fund system by strengthening fiscal accountability, enhancing market credibility, and ensuring that blue bonds in Indonesia truly contribute to marine conservation and sustainable blue economy development. **Novelty/Originality of this article:** The novelty of this research lies in the proposal of an integrated regulatory model that adapts international standards to the legal, fiscal, and ecological characteristics of Indonesia as the largest archipelagic country in the world.

KEYWORDS: blue bond regulation; bluewashing; legal accountability.

1. Introduction

Indonesia is the country with the second longest coastline in the world after Canada, which is about 5.9 million km² with a coastline of 95,161 km (Lasabuda in Endarto et al., 2024). Moreover, Indonesia's marine economic potential is estimated to reach IDR 2,026 trillion which is divided into several sectors, including; (1) coastal areas worth IDR 650 trillion, (2) marine biotechnology worth IDR 480 trillion, (3) fisheries worth IDR 380 trillion, (4) petroleum worth IDR 252 trillion, (5) marine transportation worth IDR 240 trillion, and (6) marine tourism worth IDR 24 trillion (Karso, 2022). Due to the great potential possessed by Indonesia, it shows that the sea and coastal resources should be able to be a driving tool for sustainable national development through the concept of blue

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economy, and blue bond become financial instruments that support the blue economy agenda, which has a definition as a debt instrument used to finance marine and clean water projects that generate positive social and environmental impacts (World Bank, 2018). However, the legal framework in Indonesia related to blue bond is still very limited.

The application blue bond in Indonesia is only based on guidelines green bond principles (GBP) issued by International Capital Market Association (ICMA) currently. The guidelines allow publishers to label "Blue Bond" on green bonds that finance 100 percent of marine projects (blue project) (ICMA, 2023). This standard is then used as a reference in financial services authority regulations (*Peraturan Otoritas Jasa Keuangan*, POJK) 18/2023 concerning the Issuance and Requirements of Sustainability-Based Debt and Sukuk Securities, which expands the scope of POJK 60/2017 on green bonds. Yet, there have been no specific provisions regarding blue bond in national regulations until now, so that definitions and parameters are related to the definition blue project in Indonesia is still unclear. The absence of this legal framework became even more important after the Indonesian government, with the support of the Indonesian government, United Nations Development Programme (UNDP), published sovereign blue bond first in May 2023 in the Japanese capital market worth JPY 20.7 billion (USD 150 million), as stated by Archipelagic and Island States Forum (UND-AIS Forum, 2023). This fund is claimed to be used to protect coastal areas, manage sustainable fisheries, conserve marine biodiversity, and rehabilitate mangroves (Endarto et al., 2024). On the other hand, without clear regulations, financed projects are at risk of bluewashing, a condition in which sustainability claims are exaggerated or overused without any real evidence of positive environmental impact.

Oral argues that the certainty of legal accountability is one of the core elements of environmental law rules (Oral, 2024). Environmental governance theory emphasizes the importance of accountability and transparency mechanisms as part of the principles of law enforcement in natural resource management. This means that the accountability of the perpetrators, both state officials and non-state actors, must be guaranteed through domestic legal mechanisms and a culture of impunity must be prevented (Ebbesson, 2010). In the absence of specific rules, it certainly creates space for deviant practices, including bluewashing. Bosmans and de Mariz emphasized the importance of transparency and accountability of blue bond funds to minimize the practice of bluewashing, where the issuer exaggerates the environmental benefits of the funded project (Bosmans & Mariz, 2023). This is also reinforced by Rogge's argument, which emphasizes the need for a clear and consistent definition of "blue," as well as strict capital market regulatory frameworks such as SEBI's guidelines to minimize the risk of bluewashing (Rogge, 2025).

The issue of bluewashing first emerged during the 2002 World Summit on Sustainable Development in connection with the United Nations Global Compact (UNGC) (Zumach, A, 2012) In Indonesia, the indications of bluewashing practices have been observed in several policies and projects that are publicly framed as part of the blue economy agenda. For instance, the government policy on sea sand export under Government Regulation No. 26 of 2023 concerning the Management of Marine Sedimentation Products reopened permits for the dredging and export of sea sand. Greenpeace and Indonesian Environmental Forum/*Wahana Lingkungan Hidup Indonesia* (WALHI) have criticized this policy as a form of bluewashing, portraying the activity as part of a sustainable blue economy. While in reality, legalizing sea sand mining that threatens coastal ecosystems (Pusparini, 2024). Another case is the large-scale lobster cultivation plan in Pangandaran, which is promoted as a pilot project of the blue economy with high economic value and is claimed to be environmentally friendly and prosperous for the community. In fact, the policy was rejected by Susi Pudjiastuti as the former Minister of Maritime Affairs and Fisheries of the Republic of Indonesia because it was considered to damage the ecosystem and limit fishermen's fishing space (Edi, 2025).

According two examples above show that there is a legal gap that has serious implications for the governance and accountability of blue bonds in Indonesia. Governments can easily claim a commitment to sustainable development, but without clear categorizations, such claims are difficult to independently verify. As a result, the legal

accountability mechanism has become blurred, both for bond issuers, project implementers, and financial supervisory institutions. The impact is not only on legal and fiscal aspects, but also on the legitimacy of the blue economy policy itself. Without clear regulations and cross-sector accountability mechanisms, purportedly sustainable marine projects can turn into legalized bluewashing practices. In addition, the credibility of Indonesia's commitment to the blue economy is also at stake. If the practice of bluewashing is rampant, investor confidence (impact investors) can decrease because by providing blue loans they believe that their transactions are enforcing international environmental law norms through private legal mechanisms.

Even though the literature on sustainable finance and green bonds has grown rapidly in the past decade (Flammer, 2021; Tang & Zhang, 2020), empirical studies that specifically examine sectoral instruments such as blue bonds in developing countries it is still very limited. Most of the existing research has only overfocused on the technical and economic dimensions of publishing blue bonds (Benzaken et al., 2024; Sumaila et al., 2021). Meanwhile, studies on legal governance and accountability mechanisms have not received adequate attention. As a result, there are conceptual and practical gaps in understanding how the absence of a robust accountability framework can raise the risk of the bluewashing. Hence, this research gap is becoming increasingly important in the context of Indonesia, considering that this country is starting to adopt blue finance through publishing Sovereign Blue Bond without being accompanied by legal guidelines and measurable accountability parameters, so that the potential for bluewashing can increase significantly. Based on these problems, the author is interested in further studying the following; 1) how are the weaknesses of the Indonesian legal framework in the supervision and accountability of publishing blue bonds? and 2) how to design the ideal regulation to prevent risks of bluewashing within the legal framework?

2. Methods

The type of research used in this study is normative legal research because it focuses on the analysis of written legal norms and relevant legal principles to understand the issue of accountability in the issuance of blue bonds in Indonesia. Moreover, to support this study the researcher used secondary data that included primary legal materials such as relevant national laws and regulations and international legal instruments. In addition, this research also utilizes secondary legal materials in the form of academic literature, journal articles, reports of international institutions, and the results of previous research relevant to the issue of legal governance in blue finance. Additionally, the approaches used in this study consist of; 1) conceptual approach, which is used to examine relevant legal theories as a theoretical basis, hence it can provide recommendations for the design of the ideal regulatory framework in the issuance of blue bonds in Indonesia, 2) the statute approach, which is carried out by examining all relevant regulations and policies to identify disharmony and gaps in norms that can weaken the accountability mechanism, and 3) the comparative approach, which is used to compare the Indonesian legal framework with practices in other countries that have previously implemented the blue bond framework in order to obtain normative lessons and best practices in preventing bluewashing.

3. Results and Discussion

3.1 Weaknesses of Indonesia's legal framework in supervision and accountability of blue bond issuance

Blue bond can be understood as a sustainable debt instrument specifically aimed at supporting the financing of marine projects and the sustainable management of water resources (Jouffray et al., 2021; Sumaila et al., 2021). This instrument was first introduced in 2018 and has been considered as a form of financial innovation that is in the early stages of development, similar to green bond a decade ago (Gambetta, 2021). World Bank

emphasizing the role blue bond in supporting the blue economy through marine conservation financing (World Bank, 2018), while International Finance Corporation (IFC) and UN Global Compact highlight the broader scope, including the protection of clean water resources and infrastructure and water-based which can take the form of state bonds, project bonds, And Corporate Bonds (IFC, 2025; United Nations Global Compact, 2020). Meanwhile, United Nations Environment Programme (UNEP) Finance Initiative and Asian Development Bank expand its scope to include sectors such as fisheries, ports, marine renewable energy Before providing financing through blue bond, the publisher identifies projects that meet the eligibility criteria (Asian Development Bank, 2021). Green bond principles has categorization parameters blue project which is a reference in assessing the suitability of blue financing regulations with sustainable finance principles (ICMA, 2023). This principle contains five environmental goals, namely climate change mitigation and adaptation, natural resource conservation, biodiversity conservation, and pollution prevention. Each project category shows a different level of contribution to the goal. So that this classification can be used as a parameter to assess the extent to which a project is in accordance with the principles blue finance.

This emphasizes the importance of having a legal instrument that can normatively distinguish which projects are eligible for blue bond financing. Unfortunately, until now Indonesia does not have a regulation that specifically regulates the classification of blue projects or the mechanism for blue economy operationalization. Even though the principles of the blue economy have been mandated in Law No. 32 of 2024, its implementation has not been followed by a legal apparatus that affirms the criteria for projects that can be categorized as sustainable marine activities.

Table 1. Comparison of regulations related to blue finance in Indonesia

Regulations and policies	Scope and substance of regulation	Institutional and implementation	Weaknesses
Law No. 4 of 2023 concerning the Development and Strengthening of the Financial Sector	Article 1 number 35 regulates the principle of sustainable finance which is defined as a regulation that integrates environmental, social, and governance aspects. This Law regulates the financing of the transition from high emission to environmentally friendly [Explanation of Article 222(1)] and is a mandate for the preparation of a sustainable taxonomy that will determine the green/blue criteria [Article 223 paragraph (1) letter d].	Regulated through a multi-authority mechanism, the Ministry of Finance acts as the chair of the Sustainable Finance Committee and is responsible for fiscal policies and green incentives; OJK plays the role of regulator and supervisor; and Bank Indonesia supports macroprudential measures through green credit incentive policies.	It has not accommodated access to global funding such as climate or blue funds. Regarding taxonomy, it has not been strictly regulated, so there is the potential for the emergence of carbon incentives disguised as the "green transition" so that it can trigger bluwashing.
Law No. 32 of 2014 concerning Marine Affairs	Regulations covering marine natural resources, economy, and maritime security. Although the Explanation of Article 14 (1) has introduced the blue economy, it has not	This law only provides a vision and big principles without operational instruments such as funding, sustainability indicators, and clear achievement targets.	It still does not have measurable environmental targets, so the implementation of the blue economy principle depends on derivative policies which are

Law No. 32 of 2009 concerning Environmental Protection and Management	regulated blue financing specifically. Focus on the conservation and control of environmental pollution, including the ocean. This law recognizes the concept of environmental instruments in Article 42 (economic incentives/disincentives, environmental taxes, carbon trading, subsidies, and trust funds).	This law is not directly connected to the financial sector. Coordination between the OJK and the Ministry of Environment and Forestry is carried out at the end of the memorandum of understanding (MoU) to encourage banks to pay attention to corporate performance rating assessment program in environmental management (PROPER), but there is no obligation for financial institutions to be responsible for the environmental impact of their investments.	at risk of becoming bluewashing. The law is still general and has not highlighted specific aspects regarding blue carbon and blue bonds.
Law No. 8 of 1995 concerning the Capital Market	Regulating all capital market activities, but not yet containing environmental issues. This law does not recognize the term sustainable securities so that all instruments (bonds, stocks, mutual funds) are not differentiated based on environmental/social objectives.	Initially, it was the authority of the Capital Market Supervisory Agency/ <i>Badan Pengawas Pasar Modal</i> (Bapepam), but now it has been transferred to the OJK. The focus is only on the capital market, so the environmental aspect is not considered in the go-public process or bond issuance.	This law does not contain environmental, social, and governance (ESG) and there is no mechanism for verifying green claims, so the potential for blue and greenwashing is high.
POJK No. 60/POJK.04/2017 concerning the Issuance of Debt Securities and Sukuk Based on Sustainability	It only regulates the issuance of green bonds to finance environmentally friendly projects but does not specifically mention "blue bonds". The regulation only recognizes green bonds and Environmentally Sound Business Activities/ <i>kegiatan usaha berwawasan lingkungan</i> (KUBL) which covers 11 sectors, including the conservation of biological resources on land and sea [Article 14].	OJK is the main regulator and supervisor of the issuance and use of green bond funds. However, sector ministries such as the Ministry of Environment and Forestry are not directly involved, as the function of environmental assessment is left to Independent Environmental Experts [Article 1 number 4].	The regulations are still general, not yet regulating the specific classification of "blue" projects. In this law, the criteria for KUBL are still too broad so that it has the potential to cause bluewashing. In addition, there is no national standard for the competence of environmental experts so the assessment is not uniform.

Government securities Framework SDGs Framework 2021	Supporting the development of the marine economy, the maritime sector is targeted to contribute 12.5% of national GDP by 2045. This policy framework contains 5 marine development strategies.	The Ministry of Finance has the role of establishing a framework, selecting instruments (bonds or sukuk), and executing issuances in the capital market. The government determines the allocation of SDG Bonds/Sukuk in the financing strategy. Then an evaluation is carried out by the Ministry of Finance and National Development Planning Agency/ <i>Badan Perencanaan Pembangunan Nasional</i> (Bappenas) which is outlined in the form of a report given to investors every year called the SDGs Bond Report.	The framework is voluntary, not a binding rule so its success depends on political will and the sustainability of the commitment. So, it still needs a legal umbrella to be binding and sustainable.
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Regarding the table above shows a recurring pattern, namely the existence of a normative framework at the institutional level such as in Law No. 4/2023 (Article 1 number 35 regulates the definition of Sustainable Finance; Article 222 regulates the reporting and financing obligations of transition; and Article 223 mandates the preparation of a Sustainable Taxonomy), POJK No. 60/POJK.04/2017 and POJK No. 18/POJK.04/2023 regulates the capital market as a sustainable instrument, as well as the Explanation of Article 14 in Law No. 32/2014 which adopts the principles of the blue economy. Based on the results of the author's study of some of the above regulations, there are several weaknesses, including; First, it has not yet expressly regulated technical criteria that are binding for a blue project, such as ecological boundaries, safe distance of projects from coastlines, indicators of biodiversity recovery, and tolerance limits to environmental impacts (ICMA, 2023). The absence of this obvious parameter makes the "blue" vulnerable to exploitation by actors who propose projects with high risks to the environment in order to remain considered feasible and meet qualifications blue bond (Karpf & Mandel, 2017).

Second, it does not have a clear evaluation mechanism such as Escrow Account that uses a third party to hold transaction funds until all the requirements of the written agreement are met by the parties involved (Bhagat et al., 2022), clawback clause as a refund clause if the target is not achieved (Mueller et al., 2019) and trust fund restoration to guarantee the availability of funds for environmental rehabilitation if the project causes damage. This mechanism is important to adopt because if a project is proven to be damaging to the environment, there is a mechanism to force a return or provide an environmental restoration fund. The regulations analyzed by the author above also do not regulate the mechanism of accountability sanctions in the event of misuse of funds from issuance blue bond. So that in current practice, issuers do not face contractual responsibilities if funds are diverted or used inappropriately (Alauddin et al., 2024). Legal sanctions such as administrative fines by the OJK in the form of civil liability for investor losses (Restitution) or criminal charges of fraud can be sentenced to up to 10 years in prison based on Law No. 8 of 1995 concerning the Capital Market. However, in the absence of a clear enforcement

mechanism, the sanctions only stop at the normative level, making violations difficult to process.

The risk of these regulatory weaknesses can be seen in one of the national policies regarding marine reclamation and exports through Government Regulation No. 26 of 2023 concerning the Management of Marine Sedimentation Products, especially in Article 2 which regulates the two objectives of the management of marine sedimentation products, namely; (1) tackling sedimentation that can reduce the carrying capacity and carrying capacity of coastal and marine ecosystems as well as marine health and (2) optimizing the results of sedimentation in the sea for the benefit of the development and rehabilitation of coastal and marine ecosystems. This policy reopening the dredging and export permits for sea sand. Although Article 2 letter a of Government Regulation No. 26 of 2023 states that the management of marine sedimentation products aims to protect mangroves and coral reefs, the substance of the policy contradicts the Decree of the Minister of Planning which explicitly states that the suction of seawater that is categorized as a result of sedimentation has the potential to damage mangroves, seagrass beds, and coral reefs (Alauddin et al., 2024). This inconsistency raises the question, is the policy intended to save ecosystems or actually legalize the exploitation of coastal resources?

Article 2 letter b of Government Regulation No. 26/2023 also encourages the use of sedimentation products for development, while Article 9 paragraph (2) opens up opportunities for sea sand exports. In fact, marine sedimentation is not always synonymous with sea sand, so this provision has the potential to be a loophole for the commercialization of sand mining under the pretext of ecosystem management. This concern is reinforced by the issuance of two Trade Minister Regulations No. 20 of 2024 concerning the Second Amendment to the Regulation of the Minister of Trade on Goods Prohibited for Export and the Regulation of the Minister of Trade No. 21 of 2024 concerning the Second Amendment to the Regulation of the Minister of Trade on Export Policy and Regulation which changes the status of sea sand exports from prohibited to permissible (Muthahhar, 2024), as well as the Decree of the Minister of Maritime Affairs and Fisheries No. 47 of 2024 which technically sets the specifications of sedimentated sand for export. As a result, the ecological objectives of the government regulation are reduced to economic interests. This reflects the practice of policy level bluewashing which packages the exploitation of marine resources in the phrase sustainability.

The above situation shows the absence of strict technical limitations in defining blue project like Ecological threshold, minimum distance from shoreline, or measurable indicators of biodiversity restoration. So that the absence of these technical criteria has a direct impact on the emergence of projects that are claimed to be "environmentally friendly" even though they actually cause damage to the ecosystem. Another example can be seen in the Lobster cultivation project in Pangandaran, West Java. The project is considered to be able to improve the local economy and the implementation of blue economy. However, this project has met with rejection from various parties, including coastal communities, environmental activists, and former Minister of Maritime Affairs and Fisheries Susi Pudjiastuti. The main criticism highlights that large-scale lobster farming has the potential to cause water pollution due to the accumulation of feed waste and manure, damage coral reefs, and threaten marine tourism which is the backbone of the Pangandaran economy (Edi, 2025). Claims that lobster cultivation is an implementation blue economy This cannot be justified in the absence of criteria blue project and a comprehensive environmental impact assessment (EIA).

Practice bluewashing in national projects such as reclamation and large-scale marine aquaculture, it shows the absence of technical standards and strict supervision that are prerequisites for sustainability within the framework blue bond. Although Article 12 paragraph (2) of Law No. 4./2023 affirms the obligation of financial service actors to integrate environmental aspects in sustainable financing activities, and regulations such as Government Regulation No. 26/2023 actually open up space for exploitative activities that are claimed to be part of the blue economy (Putri et al., 2025). This reflects the incompatibility between the legal norms of sustainable finance and the practices of

exploitation of marine resources that can create fictional expectations, i.e. market expectations built on a narrative of sustainability without a scientific basis or environmental verification (Beckert, 2013). In the context of publishing blue bond, this distortion lowers the credibility of the state as a publisher (issuer credibility) because the promise of sustainability is not followed by substantive adherence to the principles of transparency, accountability, and Impact Based Finance (Kılıç, 2024) as mandated by Article 65 paragraph (2) of the PPLH Law.

When a project is funded or claimed as part of a blue economy does not have a specific standard/categorization and is not independently verified, blue bond will lose its function as a credible instrument for marine conservation. Ghouma and Zeineb emphasized that institutional investors assess the reputation of the issuing country as the main factor in determining sovereign risk premium (Ghouma & Ouni, 2022). Substantively, blue bond should act as an instrument to fund marine conservation projects, as aligned with Targets 2 and 19 Kunming-Montreal global diversity framework (United Nations Environment Programme, 2022) and Articles 192-194 of United Nations Convention on the Law of the Sea (UNCLOS) 1982 concerning the state's obligation to protect the marine environment. However, when funds blue bond potentially channeled to projects that actually cause ecosystem degradation such as reclamation or sea sand exports, of course the legitimacy of the instrument will be weakened.

3.2 Design of the ideal regulatory framework to prevent bluewashing in blue bond issuance in Indonesia

Blue bond is a financial instrument issued by the government or financial institution to fund marine ecosystem conservation and sustainable marine development projects (Thompson, 2022). Indonesia publishes sovereign blue bond first in May 2023 worth JPY 20.7 trillion (≈USD150 million). This instrument runs alongside the sustainable development goals (SDGs) Government and Green Sukuk, with a tenor of 7 and 10 years and a coupon of around 1.2-1.43% (UND-AIS Forum, 2023). Publication results blue bond will be used to strengthen blue economy such as coastal protection, fisheries management and sustainable aquaculture, marine biodiversity conservation, and mangrove rehabilitation. But blue bond in Indonesia does not have a specific regulation, only based on POJK No. 18/POJK.04/2023 which issues regulations related to the issuance of debt securities based on sustainability (sustainable bonds/sukuk). However, the regulation is still general and does not explicitly mention "Blue Bond" or establish specific technical criteria for blue project.

There are several countries that have implemented blue bonds, one of which is Seychelles, Belize, and the Philippines. The three countries were chosen as a comparative study because Seychelles became the first country to issue sovereign blue bonds with the support of international institutions; Belize represents a debt for nature swap model that has succeeded in reducing debt while strengthening marine conservation funding; while the Philippines already has a legal framework and capital market guidelines for blue bond issuance.

3.2.1 Seychelles

Seychelles became the first country in the world to issue sovereign blue bond in October 2018 worth USD 15 million (10-year tenor, 6.5% coupon) with support from World Bank (Bovino & Niesten, 2021). This instrument was developed post-agreement debt-for-nature swap 2015 and aimed at financing marine conservation, strengthening fisheries governance, and climate-resilient coastal infrastructure. This financing involves a collaboration between the Government of Seychelles, World Bank (with a USD 5 million International Bank for Reconstruction and Development guarantee), Global Environment Facility (GEF) through soft loans for interest subsidies and institutional investors such as Calvert, Nuveen, and Prudential (Bosmans & Mariz, 2023). Bond proceeds are allocated

through two main mechanisms, namely; (1) blue grant fund USD 3 million under management Seychelles Conservation & Climate Adaptation Trust (SeyCCAT) and (2) blue investment fund USD 12 million managed by Development Bank of Seychelles (DBS) to support sustainable fisheries value chains (United Nations Development Programme, 2023; World Bank, 2025). Both are derivatives of debt swap with The Nature Conservancy (TNC) worth USD 20.2 million in 2015, which also funded the preparation of the Marine Spatial Planning national (Booth & Brooks, 2023).

Institutionally, Seychelles has integrated blue bond in its legal and fiscal system. SeyCCAT as public private trust fund operate independently and apply project criteria based on ICMA blue bond principles (Benzaken et al., 2024). The supervision is carried out jointly by the Ministry of Finance, the Ministry of Fisheries, and World Bank through the National Project Implementation Unit. Regarding accountability, SeyCCAT publishes an annual progress report (blue bond progress report) and quarterly financial statements independently (Hunt & Hilborn, 2025). In addition, financial mechanisms such as Escrow Account and GEF soft loans ensure conservation funds remain safe even if targets are not met. Transparency of reporting and independent audits are the main foundation of Seychelles' efforts to prevent bluewashing and strengthen national blue economy governance (Booth & Brooks, 2023).

3.2.2 Belize

Belize completed transactions of blue bond debt conversion in November 2021 with a value of USD 364 million as part of the Debt restructuring for marine conservation. In this scheme, The Nature Conservancy (TNC) through its subsidiaries in collaboration with Credit Suisse to buy back government bonds (Superbond 2034) at a discount of about 45% thus reducing the debt burden to 12% of Belize's GDP. This transaction results in Conservation Fund USD 23.5 million with an annual allocation of approximately USD 4.2 million for coral reef, coastal and marine ecosystem protection programs (The Nature Conservancy, 2021). As part of the agreement, the Government of Belize is legally committed to achieving a marine conservation target of 30% of national waters by 2026, including the implementation of Marine Spatial Planning and sustainable funding through the Conservation Fund (Jiang & Cao, 2024). Its implementation is regulated in Blue Bonds Loan Bill 2021 which is the official legal basis for the transaction. Blue Bonds Loan Bill 2021 requires ring-fencing conservation funds and make the achievement of environmental targets a legal part of the debt contract (Blue Bonds Loan Bill, 2021). Its financial structure also includes debt reserve account and parametric insurance to overcome the risk of default due to natural disasters.

Institutionally, the implementation of the project is led by the Ministry of Finance with a cross-sectoral committee, while the management of conservation funds is carried out by Independent Trustee (Kılıç, 2025). Transparency is maintained through annual reports compiled jointly by the Government of Belize and TNC, as well as independent audits of conservation outcomes. Settings cross-default between Blue Loan Agreement and Conservation Funding Agreement create an automatic sanction mechanism if conservation obligations are not met (Olsen & De Mariz, 2025). Belize demonstrates an effective model of legal and financial integration in preventing bluewashing and ensuring credibility blue bond.

3.2.3 Philippines

The Philippines is one of the ASEAN countries that has begun to develop the blue bond market through capital market regulation policies (Pinhão, 2023). As of November 2023, Securities and Exchange Commission (SEC) issues Circular No. 15/2023 about Guidelines on the Issuance of Blue Bonds, that defines eligible blue projects including sustainable fisheries management, sand ecosystem rehabilitation, and wastewater treatment. This

guideline adopts ICMA blue bond principles and requires third-party verification for each funded project (Securities and Exchange Commission, 2023).

The implementation of this policy is characterized by the issuance of blue bond first by Maynilad water company in 2024, with a value of PHP 15 billion used for clean water infrastructure and wastewater treatment projects (Maynilad Water Services, 2025). The bonds are listed on Philippine Dealing & Exchange Corp (PDEX) with a demand rate of 2.47 times. The data shows the market's enthusiasm for corporate blue instruments (Maynilad Water Services, 2025). At the national policy level, the Philippines is also discussing the blue economy Act (House Bill No. 2450) to form the National Blue Economy Council which will strengthen cross-ministerial coordination between the financial, environmental, and maritime sectors (Senate Economic Planning Office, 2024).

The Philippines' sustainable finance framework is already integrated with the Green Finance Framework and is regulated by the Department of Finance and the Central Bank of the Philippines (BSP) (Endarto et al., 2024). Its accountability mechanism has also been set out in SEC guidelines that require annual reporting of the use of funds, independent verification, and public auditing. If there is a failure to report or irregularities in the use of funds, administrative, civil, or criminal sanctions based on securities regulation code (Republic of the Philippines, Department of Finance, 2022).

Table 2. Comparison of blue bond regulatory frameworks in Seychelles, Belize, Philippines, and Indonesia

Aspects	Seychelles	Belize	Philippines	Indonesia
Purpose of blue bond issuance	Issued in 2018 as a post-debt-for-nature swap instrument	Issued in 2021 through debt restructuring to lower public debt ratios and fund sustainable ocean conservation	Developed in 2023 to expand financing of sustainable water and marine projects	Published in 2023 which aims to support the blue economy agenda
Regulation and institutions	Seychelles Blue Bond Frame Work and is managed by SeyCCAT and DBS with the support of the World Bank and GEF in the national trust fund system	Blue Bonds Loan Act 2021	SEC Circular No. 15/2023 and the national Green Finance Framework with oversight by the SEC, DOF, and BSP in multi-agency governance	It does not have any special regulations yet. Its application refers to the green bond principles (ICMA) and POJK 18/2023 without any special institutions for the blue bond implementation mechanism.
Accountability and transparency mechanisms	Using independent audits, annual reports (blue bond progress report) and escrow mechanisms to ensure the safety of funds and conservation outcomes	Implement joint annual reports with the Government and TNC, independent audits, and cross default clauses linking conservation compliance with debt obligations	Requires third-party verification [Section 12. External Review and Verification], annual public reporting, and administrative and criminal sanctions for issuers who deviate from SEC guidelines	There is no specific audit or reporting mechanism for blue projects and its supervision is still common in the framework of capital market sustainability reporting

Given the fact, the three country models above show the same goal, in order to mobilize capital for marine conservation and strengthen development blue economy. Although they have similar policy directions, there are fundamental differences that lie in the legal design and accountability mechanisms applied. Seychelles and Belize already built a water management system trust fund and ring fenced fund, while the funds from the issuance blue bond separated from the general state budget (Jiang & Cao, 2024). Therefore, this structure is reinforced by financial security instruments such as escrow account, debt reserve fund and parametric insurance to ensure that funds are used in accordance with conservation objectives (Benzaken et al., 2024). Additionally, the two countries also bound conservation commitments through legally binding contractual agreements, dissertations, audit mechanisms, and independent reporting that strengthen public transparency.

Instead of the Philippines focuses on regulation blue bond in the realm of the capital market through Securities and Exchange Commission (SEC) Circular No. 15/2023, that affirms the importance of Third Party Verification and restrictions on use Blue Bond Label that has not been confirmed by the commission (Republic of the Philippines, Department of Finance, 2022). This model relies on the capacity of market regulators to maintain the credibility of projects through external verification and periodic supervision. Thus, the Seychelles and Belize models are better suited for Sovereign Issuance because it is strong in fiscal protection and contractual governance (Benzaken et al., 2024), while the Philippine model is more adaptive to corporate instruments that require regulatory flexibility but still uphold public accountability.

Furthermore, if it is assessed from its advantages, there are two strategic practices that can improve the integrity of blue finance. First, the formation of Trust Fund independent such as SeyCCAT and Belize Conservation Fund creating a financial system separate from the national fiscal (Booth & Brooks, 2023; Jiang & Cao, 2024). This mechanism ensures that the allocation of funds for marine conservation is carried out selectively and supervised by independent agencies, thereby increasing transparency and preventing misuse of public funds. Second, the implementation of independent verification and public reporting obligations. SEC regulations establish the category of eligible projects (eligible blue projects and activities) and adopt ASEAN green bond standards and ICMA Blue bond principles (Securities and Exchange Commission, 2023). These rules strengthen the legitimacy of the project and reduce risk of bluwashing.

However, not all elements in the three models can be adopted directly to the Indonesian context. Type debt for nature swap implemented by Belize, such as involving large-scale debt transactions, implemented by the cross default, and international insurance guarantees coordinated by global financial institutions such as Credit Suisse and U.S Development Finance Corporation (DFC) (Jiang & Cao, 2024). This structure is too complex when applied to large-scale economies such as Indonesia, which has a much broader fiscal and public debt framework and complex decentralization (Hamidi & Puspita, 2021). Implementation of ring-fencing in Seychelles there is also a risk of inferring overlap between institutions, given that Indonesia's fiscal management system is still very centralized. Therefore, the approach that can be adopted in Indonesia is a hybrid model, which combines the Trust Fund transparent as applied in Seychelles and Belize for publishing sovereign blue bond, with a project categorization framework regulated in the SEC Circular Memorandum no. 13/2023 in the Philippines. Thus, Indonesia can set technical criteria and a list of eligible projects. The combination of these two models will strengthen fiscal accountability and market credibility, while ensuring that blue financing in Indonesia is truly in line with the principles of transparency and measurable environmental outcomes.

This research confirms that Indonesia needs to immediately strengthen the legal and accountability framework for blue bond. The two main drawbacks today are the absence of official categorization of blue projects in capital market regulation and the absence of a mechanism for third-party verification and mandatory impact reporting that is legally binding. OJK Regulation No. 18/2023 only refers to the general green bond principles of the ICMA without establishing technical parameters that distinguish blue projects from green projects (Endarto et al., 2024). As a result, projects that have the potential to damage

ecosystems, such as reclamation or intensive cultivation in coastal areas, can still be claimed as sustainable projects in the absence of verified scientific evidence (Edi, 2025; Pusparini, 2024). This condition creates the occurrence of bluewashing and lowers Indonesia's credibility in the eyes of international investors. Thus, the author recommends the idea of categorization blue project which can be applied in Indonesia (Table 3).

Based on the table above, the author recommends a blue project categorization system that is simplified and adapted to the legal, fiscal, and ecological context of Indonesia's marine ecology. This recommendation closes the normative gap in POJK No. 18/POJK.04/2023, which does not yet regulate the official categorization of blue projects. This system places blue projects as thematic instruments with measurable use of proceeds based on ecological benefits, spatial proximity to coastal areas and their contribution to national targets such as the Nationally Determined Contribution (NDC) and the National Action Plan for the Blue Economy/*Rencana Aksi Nasional Ekonomi Biru* (RAN-EB). The recommended priority categories include; 1) restoration of sand and marine ecosystems in the form of rehabilitation of mangroves, seagrass beds, and coral reefs that play a role in carbon mitigation and biodiversity conservation, 2) sustainable fisheries and aquaculture for food security and coastal economy, 3) waste management and prevention of marine pollution considering that Indonesia accounts for 9% of global plastic waste, 4) marine energy and maritime infrastructure to support low-carbon energy security, 5) sustainable marine tourism and coastal climate resilience, which balances economic growth and conservation, and 6) climate resilience and coastal adaptation.

Table 3. Recommendations for categorization of blue projects in Indonesia

Category blue project	The main objectives of the environment	Relevance for conditions in Indonesia	Basis of recommendation
Management and restoration of coastal and marine ecosystems	Biodiversity conservation and climate adaptation	Indonesia has 3.3 million ha of mangroves and 2.5 million ha of degraded coral reefs (Yamamoto, 2023)	In accordance with the Ecosystem Management category in the SEC and the ICMA Principles on conservation impact
Sustainable fisheries and marine aquaculture	Conservation of biological resources and food security	Indonesia is the world's second-largest fish producer, but 38% of fishery stocks are overexploited (Suharsono, A et al., 2021)	In accordance with the Sustainable Fisheries and Aquaculture category in the SEC which supports the prevention of overfishing
Waste management and prevention of marine pollution	Pollution control and climate change mitigation	Indonesia contributes 9% of global marine plastic waste (Yifan Wang & Rachel Karasik, 2022)	Direct adoption of the SEC Solid Waste Management and ICMA Pollution Prevention categories that have a high impact on SDGs Nos. 6 and 14
Marine energy and environmentally friendly maritime infrastructure	Carbon emission mitigation and energy efficiency	Indonesia has a potential of 17.9 GW of marine energy, but it has not been utilized optimally (Sugihartono, 2024)	As per the Marine Renewable Energy category in the SEC which strengthens the national blue energy transition
Sustainable marine tourism	Conservation of coastal ecosystems and local economies	Many sea destinations such as Labuan Bajo and Raja Ampat are under pressure due to	Refers to the Sustainable Tourism category in the SEC

Climate resilience and coastal adaptation	Climate adaptation and coastal community protection	mass tourism (Remmer & Achmad, 2018) 70% of the population lives on the coast and is vulnerable to sea level rise (United Nations Sustainable Development Group, 2023)	Referring to ICMA's Climate Adaptations Projects category which is relevant to Indonesia's NDC targets and the National Adaptation Strategy
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This approach would be an ideal concept because; First, it is aligned with the international standards of ICMA and the regulations that have been implemented in the Philippines (SEC Philippines). Second, it can be an applicable regulation to be integrated into POJK 18/2023. Third, it is ecologically relevant because it considers the spatial and socioeconomic characteristics of Indonesia as an archipelagic country. Thus, the categorization of blue projects based on technical principles and independent verification will strengthen blue bond governance while preventing bluewashing, and can be the basis for the establishment of an integrated Indonesian Blue Finance Taxonomy between the OJK, the Ministry of Finance, and the Ministry of Maritime Affairs and Fisheries.

4. Conclusions

To conclude, based on above analysis, it shows that although blue bonds are recognized as an important instrument in blue economy financing, Indonesia still faces fundamental weaknesses in legal and governance aspects. The absence of a strict blue project categorization in POJK and national financial taxonomy causes unclear parameters related to what types of projects can be labeled as "blue projects". The absence of a mandatory third-party verification mechanism and impact reporting also increases the risk of bluewashing, where high-risk projects can be claimed as sustainable projects without scientific verification. Therefore, Indonesia urgently needs to build a blue project taxonomy and accountability framework that integrates ICMA principles and best practices such as the Philippine SEC so that blue bonds can function as credible instruments for marine conservation.

Based on comparative studies with Seychelles, Belize, and the Philippines, the most relevant model adopted in Indonesia is a hybrid approach that combines an independent trust fund mechanism for sovereign bond issuance with a verification and public disclosure system as implemented in the Philippines for the corporate sector. This design requires the establishment of a clear and binding blue project categorization in accordance with the principles of ICMA and SEC Circular No. 15/2023 so that each financed project has measurable ecological benefits, spatial proximity to coastal areas, and contributes to national targets such as NDC and RAN-EB. In addition, a mandatory environmental reporting and audit mechanism is needed, an escrow fund to ensure the use of funds, and legal sanctions in the event of irregularities in the use of funds. With this framework, Indonesia can ensure that blue bonds function as credible, transparent, and real impact instruments for ocean conservation and sustainable blue economy development.

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Author Contribution

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The authors declare no conflict of interest.

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During the preparation of this work, the author (Gladys Azalia Christi) used Grammarly and DeepL to assist in improving grammar, clarity, and English translation of the manuscript. After using these tools, the author reviewed, revised, and edited the content as needed and takes full responsibility for the integrity and accuracy of the final manuscript.

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