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EXPLORING THE POSSIBILITIES OF BLUE AND ORANGE BOND SYNERGIES

AZIZ SIDKY

CASE WESTERN RESERVE UNIVERSITY



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Aziz Sidky

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Part I: Introduction

a) Introduction

This paper will explain the concept of Blue Bonds (“Blue Bonds”); trace their history and development; present Indonesia as a case study with regard to Blue Bond issuance; and explore how Orange Bond Principles™, developed by Impact Investment Exchange (IIX), can be best incorporated within the structure of Blue Bonds to ensure greater gender equity without sacrificing Blue Bond principles.

This analysis will advance two Sustainable Development Goals (SDGs) namely, (1) SDG 5 on “Gender Equality,” and (2) SDG 14 “Life below water.” SDG 5 aims to close “the gender gap and ensure equal opportunities for all” by lessening gender inequality which stagnates social and economic progress. SDG 14 “Life below water” aspires to protect and conserve our oceans, seas, coasts, and marine resources and to address the pollution and overfishing that threatens these crucial ecosystems.¹

IIX’s work is focused on structuring impact investing in a manner that empowers women and marginalized communities and further protects the environment. To that end, IIX defines its mission goal to be one of “transform[ing] the global financial markets where women, the environment, and the underserved communities are valued.”² IIX believes that Orange Principles, are foundational for achieving the SDGs and to human development in general. This paper while focusing on Blue Bonds, will demonstrate how they may be incorporated within the structures and mechanisms that IIX has created to jointly contribute to SDG 5 and 14.

b) The Purpose of Blue Bonds

The interest in Blue Bonds stems from a recognition of the need for greater investments in oceanic and coastal health which is currently in a fragile state. Oceanic and coastal health has undoubtedly deteriorated in the past decades due to practices such as overfishing, marine litter and acidification. There are also unfortunately, various human rights abuses within the fishing industry, including forced labor and unsafe working conditions which have drawn international concern. In this regard, coastal communities, especially women and indigenous groups, face disproportionate vulnerabilities from declining oceanic health, climate change, and lack of equitable access to marine and financial resources.

The current state of SDG 14 is below expectations, with the 2022 UN Ocean Conference for instance recognizing a “collective failure to achieve Ocean related targets.”³ To rectify this, several countries in that Conference made pledges and set goals towards SDG 14 including Indonesia’s a plan to launch a Blue Bond to fund ocean-based initiatives. Unfortunately, despite

¹ *14: Life Below Water*, The Global Goals (2025), <https://globalgoals.org/goals/14-life-below-water/>.

² *The IIX Story*, Impact Investment Exchange, <https://iixglobal.com>.

³ *The Blue Bond Guidance to Finance the Sustainable Blue Economy*, Claire Robertson, DLA Piper (2022), <https://www.dlapiper.com/en-us/insights/publications/2022/09/the-blue-bond-guidance-to-finance-the-sustainable-blue-economy>.

these efforts, SDG 14 is still farther behind in achieving its goals in comparison to the other SDGs.⁴ This is despite the fact that marine health is clearly essential to human development. As one study recognizes, “marine ecosystems and biodiversity provide multiple ecosystem services essential to human life, including a primary source of protein to 17% of the world’s population.”⁵

This sad reality highlights not only the need to do more to achieve SDG 14 but to also to interlink it with SDG 5 to further gender equity. Both SDGs may be incorporated through the same policies, and both are essential determinants of the future trajectory of human development. This is precisely the reason that Blue Bonds, in particular, represent a mechanism with high potential to aid humanity in achieving SDG 14.

c) Methodological Approach

This paper adopts a qualitative and comparative methodological approach, which combines legal analysis, policy review, and case-study evaluation to assess how Blue Bond frameworks may be integrated with IIX’s Orange Bond Principles™ to advance SDG 5 and SDG 14 concurrently. First, the paper will employ a doctrinal and framework-based analysis of Blue Bonds to present the primary international standards and soft-law instruments governing sustainable finance, including the International Capital Market Association’s (ICMA) Green Bond Principles, emerging Blue Bond guidance, and other relevant frameworks. This analysis focuses on identifying the structural, governance, and reporting requirements that define Blue Bonds as a financial instrument.

Second, the paper will use a comparative case-study methodology describing Indonesia’s experience with sovereign Blue Bond issuance. Third, the paper will attempt to conduct an analytical comparison between Blue Bond frameworks and IIX’s Orange Bond Principles™ to evaluate how Orange Principles can be embedded within Blue Bond in compliance with ICMA standards specifically, and with international legal principles generally.

d) General Structure of the Paper

To this end, Part II of this paper will present a general overview of the Blue Bonds, including reviewing their characteristics, structure, benefits, challenges and the key examples of their issuance. Part III will present a case study of Indonesia’s Issuance of a first-of-its-kind Blue Bond in the Japanese debt capital market, which raised US\$ 150 million. Part IV presents IIX’s work on Orange Bonds, including a discussion of IIX Values, “Orange Principles,” and the “Orange Seal.” Part V of the paper will make recommendations and advocate “best practices” for IIX for its Blue Bond issuance that integrate Orange Bond Principles™.

⁴ SUSTAINABLE DEVELOPMENT REPORT 2024, Jeffrey D. Sachs, Guillaume Lafortune & Grayson Fuller, Sustainable Development Solutions Network (2024), at viii

⁵ *Bonds to Finance the Sustainable Blue Economy*, Asian Development Bank (Sept. 2023), <https://www.adb.org/sites/default/files/publication/907071/bonds-finance-sustainable-blue-economy-guide.pdf>.

Part II: Blue Bonds: An Overview

a) Blue Bonds: Definition and Purpose

A Blue Bond is a debt instrument which actors can issue to raise finance and capital for the benefit of marine and ocean-based projects.⁶ They are a subset of Green Bonds which are bonds issued to raise funds for environmentally related causes. The issuers of Blue Bonds may include sovereign nations, development banks, NGOs, private corporations and philanthropic donors, among others. A large number of actors may then invest in Blue Bonds after their issuance including private investors, such as angel investors, high net worth individuals, family offices, venture capital firms, investment banks, and public investors, such as regional development banks, NGOs, sovereign wealth funds and foundations. The financial structures of Blue Bond issuances are becoming increasingly more diverse and include sovereign blue bond issuances, debt-for-nature swaps, and blended finance.

The purpose of Blue Bonds is to contribute to SDG 14 by raising capital for conservation efforts designed to protect marine and coastal ecosystems and reduce marine pollution, acidification, and overfishing. For example, Blue Bonds may be used to capitalize efforts to decrease plastic pollution, create waste management systems, and clean up rivers and waterways, among other uses linked with marine health. Of course, it is also important to support those whose livelihoods depend on such marine-based ecosystems and ensuring the economic security of coastal communities. This is of particular importance for indigenous peoples and women, in line with SDG 5 and SDG 14. Thus, it is beneficial to society at large to also use Blue Bonds to support women entrepreneurs and small-scale fisheries to create sustainable livelihoods and strengthen overall community resilience. Blue Bonds can be a key financing tool to achieve these goals.

b) Sovereign Blue Bonds and the 2018 Seychelles Bond

Sovereign Blue Bonds: A Definition. Sovereign Blue Bonds refer specifically to Blue Bonds issued by national governments. The first such Blue Bonds was launched by the Republic of Seychelles in cooperation with the World Bank and raised US\$15 million from international investors.⁷ The Seychelles was a logical choice for the issuance of the first Blue Bond as it is an archipelagic nation that depends heavily on its fisheries sector and represents some of the world's most important biodiversity hotspots. The Seychelles had a vested interest in taking special efforts towards marine conservation to protect the national endowment represented in their marine ecosystems for future generations.

Seychelles Debt for Nature Swap. The Seychelles had facilitated a highly successful a \$21.6 million debt-for-nature swap in 2015, which was the first of its kind for ocean conservation. This agreement restructured the country's sovereign debt to fund marine protection and climate adaptation initiatives. The Seychelles created the independent Seychelles Conservation and

⁶ *Sovereign Blue Bond Issuance: Frequently Asked Questions*, World Bank Group (2023), <https://www.worldbank.org/en/news/feature/2018/10/29/sovereign-blue-bond-issuance-frequently-asked-questions>.

⁷ *Seychelles launches World's First Sovereign Blue Bond*, Press Release, World Bank Group (2018), <https://www.worldbank.org/en/news/press-release/2018/10/29/seychelles-launches-worlds-first-sovereign-blue-bond>.

Climate Adaptation Trust to manage the funds generated by the swap. The deal was incredibly successful and resulted in increasing protected ocean areas in the Seychelles from 0.04% to 30% by 2020.⁸

The 2018 Seychelles Blue Bond. In 2018, the Seychelles issued a Blue Bond in cooperation with the World Bank which added an additional \$15 million which was needed to complete the Shared Growth Project 3 project. The project aimed at the “expansion of the management coverage of marine protected areas from 5 million hectares to about 22 million, monitoring and efficiency improvements in the fisheries sector, and expansion of access to domestic finance for fisheries in the Seychelles.”⁹ The project was supported by a World Bank guarantee of \$5 million with another \$5 million offered in concessional financing by the Global Environmental Facility (GEF). Overall, the project was considered a phenomenal success, achieving its objectives and jumpstarting the market for Blue Bonds, which now worldwide stands at a staggering \$15.25 billion as of June 2025.¹⁰

Another highly notable sovereign bond was issued in 2022 by Fiji. Its goal was to mobilize local capital, and so it was structured in manner that made it easily accessible to domestic investors such as businessmen, local banks and financial institutions, a first for Blue Bonds.¹¹

c) Blue Bonds as a Subset of Green Bonds: Green Bond Principles

Blue Bonds, as previously mentioned, are a subset of Green Bonds which are bonds that raise capital for projects that aim to have a positive environmental impact. The objective of Blue Bonds is “emphasizing the importance of the sustainable use of maritime resources and of the promotion of related sustainable economic activities,” is also in line with Green Bonds objectives.¹² The International Capital Market Association (ICMA) has issued “Green Bond Principles (GBPs)” which they define as “voluntary process guidelines that recommend transparency and disclosure and promote integrity in the Green Bond market.” Despite being “voluntary guidelines,” these principles are almost unanimously recognized as being the mandatory requirements for issuing Green Bonds. Thus, Blue Bonds, being a subset of Green Bonds, should always comply with the ICMA’s GBPs. Please note that there are also the Green Loan Principles (GLP) which are substantively the same as the Green Bond Principles.¹³

⁸ *Id.*

⁹ *Seychelles: Introducing the World’s First Sovereign Blue Bond, Case Study*, The World Bank (2025), <https://thedocs.worldbank.org/en/doc/cbaf1cefc5164a7f340716ef0af6fd7e-0340012025/original/Case-Study-Blue-Bond-Seychelles.pdf>; *BLUE NATURE ALLIANCE*, Seychelles Conservation and Climate Adaptation Trust, <https://seyccat.org/programme/blue-nature-alliance/>.

¹⁰ <https://thedocs.worldbank.org/en/doc/cbaf1cefc5164a7f340716ef0af6fd7e-0340012025/original/Case-Study-Blue-Bond-Seychelles.pdf>.

¹¹ *FIJIAN SUSTAINABLE BOND FRAMEWORK 2022*, Republic of Fiji (2022), <https://fijiclimatchangeportal.gov.fj/wp-content/uploads/2022/11/Fijian-Sustainable-Bond-Framework.pdf>, at 3.

¹² *BONDS TO FINANCE THE SUSTAINABLE BLUE ECONOMY: A PRACTITIONERS GUIDE*, International Capital Market Association (2023), <https://www.icmagroup.org/assets/documents/Sustainable-finance/Bonds-to-Finance-the-Sustainable-Blue-Economy-a-Practitioners-Guide-September-2023.pdf>, at 1.

¹³ *GREEN LOAN PRINCIPLES*, Loan Market Association (2018), https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/LMA_Green_Loan_Principles_Booklet-220318.pdf, at 1.

The Green Bond Principles. GBPs are composed of four requirements 1) use of proceeds; 2) process for project evaluation and selection; 3) management of proceeds; and 4) reporting (allocation and impact reporting).¹⁴ The “use of proceeds” refers to the key requirement of having “[a]ll designated eligible Green Projects provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer.”¹⁵ Green Projects could thus include “assets, investments and activities, as well as other related and supporting expenditures, such as R&D” that relate to an environmental objective. Eligible projects include, but are not limited to, ones that focus on renewable energy, energy sustainability, pollution prevention, environmentally sustainable management, sustainable water and wastewater management, and aquatic biodiversity, to name a few examples.¹⁶

The second requirement of “process for project evaluation and selection” refers to the process by which the issuer determines that the project fits within one of the categories for eligible projects; names the parties to whom the issuer communicates the environmental sustainability objectives of the project, and provides any relevant complementary information that would need to be communicated regarding potential social and environmental risks. The third requirement of the “management of proceeds” refers to how the proceeds raised from the green bonds should be linked through a sub-account or sub-portfolio of the eligible green project. Additionally, “the balance of the tracked net proceeds should be periodically adjusted to match allocations to eligible Green Projects made during that period.”¹⁷ The final requirement of “reporting” supports transparency by requiring the issuer to publishing annual reports that include “a list of the projects to which Green Bond proceeds have been allocated, as well as a brief description of the projects, the amounts allocated, and their expected impact.”¹⁸

d) The Issuance Process for Blue Bonds

The issuance of a Blue Bonds involves a series of coordinated steps designed to ensure alignment with global sustainability standards, regulatory compliance, and measurable environmental and social outcomes. Notably, the ICMA has recently introduced Blue Bond-specific guidance; however, Blue Bonds must be also structured under the Green Bond Principles, as adapted for marine and water related uses of proceeds.¹⁹

Aligning with Global Standards. *First*, Blue Bonds must align with global standards. Although there is no single, mandatory global regulation for blue bonds, a strong consensus has formed around a set of voluntary guidelines and principles that have largely been developed by the International Capital Market Association (ICMA). Issuers must ensure consistency with the

¹⁴ THE GREEN BOND PRINCIPLES, International Capital Market Association, (<https://www.cbd.int/financial/greenbonds/icma-principles2016.pdf>, at 7.

¹⁵ GREEN BOND PRINCIPLES: VOLUNTARY PROCESS GUIDELINES FOR ISSUING GREEN BONDS, International Capital Market Association, <https://www.icmagroup.org/assets/documents/Sustainable-finance/2025-updates/Green-Bond-Principles-GBP-June-2025.pdf>, at 3.

¹⁶ *Id.*

¹⁷ *Id.* at 5.

¹⁸ *Id.*

¹⁹ BONDS TO FINANCE THE SUSTAINABLE BLUE ECONOMY, International Capital Market Association (2023), <https://www.icmagroup.org/assets/documents/Sustainable-finance/Bonds-to-Finance-the-Sustainable-Blue-Economy-a-Practitioners-Guide-September-2023.pdf>, at 1-2.

standards that are set forth in internationally recognized frameworks that help establish credibility and attract impact investors. The primary standards include the ICMA GBP, discussed above, and the UN Global Compact on Sustainable Ocean Principles.²⁰ The UN Global Compact Sustainable Ocean Principles are composed of 9 principles that provide an ethical and sustainability-oriented framework for ocean stewardship, emphasizing responsible investment, transparency, and respect for human rights in ocean-dependent industries. This UN Global Compact is not specifically concerned with Blue Bonds, but with general ocean health and sustainability, and is directed towards businesses to provide them with “a framework for responsible business practices” related to marine health.²¹

Selecting Eligible Projects and Conducting Feasibility Studies. *Second*, issuers must select Eligible Projects and Conduct Feasibility Studies. Projects to be funded by Blue Bonds which must align with SDG 14 (“Life Below Water”). The Projects must substantively address objectives such as marine conservation, pollution reduction, sustainable fisheries, and ecosystem restoration. Feasibility assessments help evaluate project readiness, financial viability, and anticipated impact.²²

Developing a Blue Baseline. *Third*, the issuer must develop a blue baseline which establishes the initial environmental and social conditions of the targeted marine ecosystems or coastal communities. This baseline serves as the benchmark against which project outcomes will be measured.²³

Key Performance Indicators (KPIs). *Fourth*, the issuer should establish measurable KPIs. Issuers should aim to develop achievable, measurable, and auditable KPIs that capture both ecological and social impacts. After that, the issuer should obtain a Second-Party Opinion (SPO) from independent reviewer which verifies the alignment of the Blue Bond framework with ICMA or other recognized ocean and coastal sustainability standards. This process is aimed at enhancing investor confidence and transparency.

Listing the Bond. The *final step* is listing the Blue Bond on a stock exchange. Once the bond framework and offering documentation are complete, the issuer must list the bond on an appropriate stock exchange to facilitate public trading and investor participation. The Blue Bond issuer must decide on the choice of venue for issuing the Blue Bonds and abide by the selected stock exchange’s rules and regulations.²⁴ Potential venues for listing a Blue Bond under the Impact Investment Exchange (IIX) framework could include the Stock Exchange of Hong Kong, the Luxembourg Stock Exchange, the New York Stock Exchange (NYSE), and/or the Indonesia Stock Exchange (IDX). Each of these markets offers distinct regulatory environments and investor bases; however, assessing these is beyond the framework of this paper. The issuer must prepare and submit an offering circular that complies with both securities regulations and the specific listing

²⁰ *Id.* at 9-10.

²¹ Sustainable Ocean Principles, UN Global Compact, United Nations, <https://communications-assets.unglobalcompact.org/docs/publications%2FSustainable+Ocean+Principles.pdf>.

²² *Supra* note 18, at 10.

²³ *Id.*

²⁴ *Id.*, at 12-13

rules of the selected stock exchange. They must also obtain approval from the listing authority of the chosen stock exchange prior to issuance.

e) Examples of Blue Bond Issuances

Please bear in mind that the foregoing discussion was limited to sovereign Blue Bonds. However, there are several key examples of Blue Bond issuances other than sovereign bonds. In 2020, the Nordic-Baltic Investment Bank issued a Blue Bond that raised €200 million for projects to reduce water pollution in the Baltic Sea. In 2021, the Belize debt-for-nature deal amounted to a \$364 million "Blue Bond" debt conversion which allowed Belize to buy back a percentage of its external commercial debt at a discounted rate.²⁵

In 2022, The International Finance Corporation (IFC) issued a Blue Bond to highlight the issue of marine plastic pollution. The IFC also facilitated the first Blue Bonds issued in the Philippines and Thailand. In 2023, the Ørsted Corporation, a private Danish energy company, became the first energy company in the world to issue a Blue Bond which was invested in ocean-based renewable energy solutions with a five-year €100 million private placement.²⁶

Part III: Indonesia Case Study:

The Blue Bonds issued by the Indonesian government arose from the framework set up and build upon to issue the Indonesian Green Sukuk (i.e., a green Islamic bond that is compliant with Sharia principles), and SDG Bonds, which were based on the Republic of Indonesia's (RoI) Green Bond and Green Sukuk Framework. The Green Sukuk and SDG Bonds were issued exclusively to finance or re-finance expenditures directly related to projects that promote the transition to a low-emission economy and climate resilient growth. Indonesia issued the world's first sovereign green sukuk in 2018 and consequently, raised \$1.25 billion for projects related to renewable energy and climate adaptation. Between 2019 and 2023, Indonesia raised an additional \$1.4 billion through a domestic retail green sukuk that targeted individual and domestic private investors.²⁷

a) The RoI Green Bond and Green Sukuk Framework

The RoI Green Bond and Green Sukuk Framework was developed by Indonesia in line with the ICMA GBP and complied with the prescribed 4 key GBP principles. Notably, it specified the types of projects that would be eligible including projects in renewable energy, energy efficiency, projects related to resilience to climate change, sustainable transport, green tourism,

²⁵ What is a Blue Bond? Meaning, Issuers & Purpose, Jayaprakash Kandasami, JIRAAF (2025), <https://www.jiraaf.com/blogs/bond-insights/what-is-blue-bond#>

²⁶ Our Blue Bond, Ørsted Corporation, [https://orsted.com/en/who-we-are/sustainability/biodiversity/blue-bonds; Blue Bonds: Making A Splash In The Capital Markets, Norton Rose Fullbright \(2025\), https://www.nortonrosefulbright.com/en/knowledge/publications/9713e070/blue-bonds-making-a-splash-in-the-capital-markets#](https://orsted.com/en/who-we-are/sustainability/biodiversity/blue-bonds; Blue Bonds: Making A Splash In The Capital Markets, Norton Rose Fullbright (2025), https://www.nortonrosefulbright.com/en/knowledge/publications/9713e070/blue-bonds-making-a-splash-in-the-capital-markets#).

²⁷ *Faith in Finance: Indonesia's Innovative Path to Sustainable Development*, Miklos Gaspar, the United Nations (2025), <https://indonesia.un.org/en/297133-faith-finance-indonesias-innovative-path-sustainable-development>.

sustainable agriculture, and several other green projects. It excluded any fossil fuel based electric power generation, large scale hydropower plants, and nuclear-based projects.²⁸

It also clarified that the RoI would use a system of “tagging” to identify eligible expenditures in line with climate objectives. In 2018, the RoI Ministry of National Development Planning (MNDP) developed and released KRISNA23, an integrated planning, budgeting, and monitoring system designed to allow the RoI to “conduct budget tagging according to a list of outputs that are agreed with 22 line ministries and are aligned with Indonesia’s SDGs action plan and roadmap.”²⁹ Specifically, Indonesia developed a multi-step process where tagged projects by the MNDP are validated and assessed by other individual ministries. After this process is completed, the Ministry of Finance tags the project for budget allocation. Both the RoI’s MNDP and the Ministry of Finance have veto power over any tagged project.³⁰

Further, it is important to note that the funds for any tagged project “will be credited to a designated account of the relevant ministries for funding exclusively projects as defined in the framework.”³¹ This mechanism was developed with support from UNDP and other partners. The RoI Ministry of Finance then tracks any disbursement of funds in the account and provide an annual report on each project in line with transparency requirements set forth in the GBPs. The International Institute for Sustainable Development (IIDS) and CICERO Shades of Green provided the secondary opinion on the framework, and concluded that the “framework is found to be in alignment with the green bond principles, social bond principles, and sustainability bond guidelines.”³²

b) Indonesia’s “Blue Economy”

The “blue economy” was first mentioned in Indonesian law before SDG 14 was announced. In the RoI’s Art. 14, Law Number 32/2014 on Maritime Affairs, the term “blue economy” was defined as “an approach to improve sustainable marine management and conservation of marine and coastal resources and ecosystems to realize economic growth with principles including community involvement, resource efficiency, waste minimization, and multiple added value (multiple revenues).”³³

Following that, Indonesian Presidential Decree Number 16 (2017), defined 7 key policy pillars related to Indonesian marine development and conservation. Subsequent action plans set out to achieve these thematic pillars through concrete implementable projects. The Presidential Decree, in effect, set forth a new Indonesian ocean policy which serves as the main reference for all programs and activities related to Indonesia’s maritime environment. The MNDP and the

²⁸ *THE REPUBLIC OF INDONESIA GREEN BOND AND GREEN SUKUK FRAMEWORK*, the Republic of Indonesia, <https://api-djppr.kemenkeu.go.id/web/api/v1/media/B51F74A2-F8BF-47C7-A77F-DA48C2D33067>, at 3-5.

²⁹ *Republic of Indonesia SDGs Framework Second Opinion*, Cicero: Shades of Green, <https://api-djppr.kemenkeu.go.id/web/api/v1/media/FE9489C3-9261-4C4D-81AE-2536EFD45AAA>, at 12-13.

³⁰ *Id.*

³¹ *Id.*, at 13.

³² *Id.*, at 1.

³³ *Law of the Indonesian Republic Number 32 2014 About the Sea*, Republic of Indonesia, <https://maritimepreneur.com/static/media/Indonesia%20-%20Law%20of%20the%20Sea.7eefbf63e45b3ad1256.pdf>.

OECD then published an extensive framework entitled, “Blue Economy: Development Framework for Indonesia’s Economic Transformation,” which “provide[s] a framework for Indonesia’s sustainable blue economy development concept,” and “contribute[s] to Indonesia’s integrated ocean management and development.”³⁴ The report does not specifically mention Blue Bonds, but rather gives snapshots the current state of the blue economy sectors and outlines the path to transition towards the greater development of a blue economy in Indonesia.

c) The Ministry of National Development Planning’s Relevant Notes and Frameworks

The MNDP’s 2022 Blue Finance Policy Note presented “Potential Blue Finance Instruments” which, for the first time, included “Blue Bonds and Blue Sukuk” as possible future policy instruments. Specifically, the Ministry stated that “[a] sovereign Blue Bond or blue sukuk has been identified as a potentially viable option [for implementation], subject to the completion of a formal feasibility assessment.” By 2024, that Note’s recommendation came to fruition through the issuance of the RoI’s first Blue Bond.³⁵

Another key document on Indonesia’s blue economy is the “Indonesia Blue Economy Roadmap, 2023–2045” which outlined the “2045 Indonesia Vision” which, among other goals, is focused on developing the Indonesia maritime economy so that its proportion of GDP rises from 6.4% in 2015 to 12.5% in 2045.³⁶ Notably, this report included action plans that discussed the development of sustainable blue finance and specifically included “Blue Bond for fisheries management projects and ocean renewable energy projects.”³⁷ Further, Indonesia’s SDG Government Securities Framework was developed in 2021 by the Indonesian Ministry of Finance, in cooperation with various partners including UNDP, HSBC Bank and Crédit Agricole. This framework presented an integration of Green, Social, Sustainability, and Sustainability-Linked (GSSS) and blue sustainability objectives through a regime that was compliant with ICMA GBPs.

d) The 2023 Indonesian Blue Bond

Indonesia issued its first sovereign Blue Bond on the Japanese stock market which was aligned with ICMA GBPs in May 2023. The Blue Bond was also fully compliant with ASEAN Capital Market Forum (ACMF) regulations. The bond had 7-and-10-year maturity periods, with

³⁴ BLUE ECONOMY: DEVELOPMENT FRAMEWORK FOR INDONESIA’S ECONOMIC TRANSFORMATION, Ministry of National Development Planning, Republic of Indonesia (2021), https://perpustakaan.bappenas.go.id/e-library/file_upload/koleksi/dokumenbappenas/file/Blue%20Economy%20Development%20Framework%20for%20Indonesias%20Economic%20Transformation.pdf, at xiii.

³⁵ INDONESIA BLUE FINANCE POLICY NOTE, Indonesia Climate Change Trust Fund (ICCTF) & Ministry of National Development Planning (2022), https://www.icctf.or.id/wp-content/uploads/2022/12/Blue-Finance-Policy-Note_Publish.pdf, at 44.

³⁶ *Project 2045 Executive Summary Indonesia-Japan 2045 : A Joint Project of Two Maritime Democracies*, Indonesian National Development Planning Agency (2018), https://www.eria.org/uploads/media/Executive_Summary_of_Project_2045_webfile.pdf, at 4.

³⁷ INDONESIA’S BLUE ECONOMY ROADMAP, Ministry of National Development Planning of the Republic of Indonesia (2023), https://perpustakaan.bappenas.go.id/e-library/file_upload/koleksi/migrasi-data-publikasi/file/Unit_Kerja/Dir%20Industri%2C%20Ekonomi%20dan%20Kreatif/Dummy_Indonesia%20Blue%20Economy%20Roadmap_Ebook.pdf, at 121.

1.2 and 1.43% annual interest rate (coupon rate) respectively. This sovereign bond was successful in raising \$150 million that was invested in various projects to protect Indonesia’s marine ecosystems and oceanic biodiversity. The Blue Bond was issued based on Indonesia’s SDG Government Securities Framework and the RoI Green Bond and Green Sukuk Framework, similar to the previously issued Green Sukuk and SDG Bonds. The tagging system was slightly narrowed to become a “Climate Budget Tagging” system, but largely worked the same way. However, the new tagging system was solely limited to projects that benefited marine, oceanic and coastal health.³⁸

In the RoI’s 2024 SDG Bond and Blue Bond Allocation and Impact Report (the “Impact Report”), the RoI’s Ministry of Finance followed up and presented an impact report on Blue Bonds (and SDG bonds). The Impact Report showcased that ¥20.7 billion (\$150 million) allocated in Blue Bonds, mostly in projects related to oceanic and coastal health. Of the \$150 million, “Disaster Management and Risk Reduction” represented 62.18% of that amount; “Coastal Protection and Restoration of Biodiversity and Ecosystems” represented 37.57%; and “Waste Management” represented only 0.25% of the total amount allocated of the Blue Bonds.³⁹ The Impact Report breaks down the individual projects in terms of how much was spent; the supervising ministry, offering a description for each; and identifying impact indicators.

The Disaster Management and Risk Reduction included the following activities:

- Breakwater Development;
- Coastal Protection Infrastructure Development;
- Flood Control Development Infrastructure;
- Resilient Coastal Area Infrastructure;
- Coastal Protection Infrastructure Maintenance; and
- Coastal area vegetation plantation.

Each of these activities related to Disaster Management and Risk Reduction are made up of several specific projects that have provided descriptions and impact indicators. Altogether these projects cover an area of 1,920.11 hectares in 33 provinces with the specific aim of preventing disasters. For example, one project in Central Java “focuses on the construction of breakwater infrastructure aimed at mitigating coastal disasters . . . [b]y reducing the impact of waves and stabilizing shorelines. . . to protect coastal communities, preserve marine ecosystems, and enhance economic resilience.” The Central Java project covered an area of 17.20 hectares, impacted 20,000 households, involved 30 local people in its development, and cost around \$1,263,880. In sum, coastal health related projects were the largest in this category.⁴⁰

As the discussion above showcases, Indonesia’s interest in Blue Bonds developed from its green finance-based initiatives and its prioritization of marine and coastal health. It depended on unique framework which engaged multiple ministries and a system for tagging system and

³⁸ *Indonesia Launches the World’s First Publicly Offered Sovereign Blue Bond – with UNDP’s Support*, United Nations Development Project, <https://www.undp.org/indonesia/blog/indonesia-launches-worlds-first-publicly-offered-sovereign-blue-bond-undps-support>.

³⁹ SDG Bond and Blue Bond Allocation and Impact Report, Ministry of Finance, Republic of Indonesia, <https://api-djppr.kemenkeu.go.id/web/api/v1/media/482ECACF-A030-4267-B11D-87FBB2A24385>, at 44-45.

⁴⁰ *Id.*, at 17-24.

reporting on these projects in line with ICMA guidelines. Overall, Blue Bonds proved to be a successful tool to help Indonesia finance a diverse range of marine health and coastal health related projects.

Part IV: IIX and Orange Bonds

IIX's mission is self-defined as an attempt to “transform the global financial markets where women, the environment, and the underserved communities are valued.” To achieve that end, IIX has created the world's largest debt-sourced platform for impact investing, and created and launched the Orange Bond™, which is defined as “a sustainable debt asset class for investing with a gender lens.”⁴¹ They also launched the impactful Women's Livelihood Bond™ (WLB™) series of orange bonds which raised \$288 million, and impacted more than 3.3 million lives across 7 countries and 6 sectors. This IIX bond series was also designed to eliminate barriers that prevent women and girls, who represent half of the world's population, from achieving their potential as a result, in part, by “[s]exual violence and exploitation, the unequal division of unpaid care and domestic work, and discrimination in public office [among others].”⁴²

a) Orange Bond Principles™

The Orange Bond Initiative™ was launched in 2022 by IIX to create the world's first gender-lens investing debt asset class and was explicitly designed to mobilize capital for women's empowerment especially in the Global South. The Orange Bond Principles™ were trademarked and published by IIX in October 2022. They are comprised of 3 overarching principles that are required for any Orange Bond™ certification namely, “(1) Gender-Positive Capital Allocation; (2) Gender-Lens Capacity and Diversity in Leadership; and (3) Transparency in the Investment Process and Reporting.”⁴³ These requirements are summarized in the table below:

⁴¹ *Orange Bonds: A Cross-Cutting Asset Class For Investing In Gender Equity*, Orange Movement, Impact Investment Exchange, <https://orangemovement.global/orange-bonds>.

⁴² *Women's Livelihood Bond*, Impact Investment Exchange (2025), <https://wlb.iixglobal.com>.

⁴³ THE ORANGE BOND PRINCIPLES™, Impact Investment Exchange (2023), <https://iixglobal.com/wp-content/uploads/2023/02/Orange-Bond-Principles.pdf>, at 3-7.

<u>Orange Bond Principles:</u>	“Gender-Positive Capital Allocation” (One of the following needs to be met)	“Gender-Lens Capacity and Diversity in Leadership” (One of the following needs to be met)	“Transparency in the Investment Process and Reporting” (All of the following need to be met)
1	finance products or services that disproportionately benefit women, girls, and gender minorities	over 30% of the leadership team (such as the Board of Directors) is composed of women and minorities	“transparency in investment process,”
2	finance projects with a gender diverse/inclusive workforce/value chains	over 30% of those working on the core functions of the Orange Bond are women or minorities	“transparency in impact measurement”
3	finance organizations or enterprises that are majority owned by women or have women in more than 30% of leadership positions	the leadership team includes women or minorities from the target population who will benefit from the proceeds of the bond	“transparency in reporting”
4	finance ESG or SDG projects that are designed to have a disproportionately positive effect on women, girls and minorities		

The third principle of the Orange Bond Principles™ relates to transparency. However, unlike the two other principles it notably requires *all* of the following to be met by the bond issuer:

- 1) “transparency in investment process,” which requires a clear explanation of the intended impact of the bonds; how the proceeds will be allocated; the process through which they were selected; and how they will be monitored throughout the life of the bond;
- 2) “transparency in impact measurement” which requires the bond issuer to make annual impact assessments; and
- 3) “transparency in reporting” which requires the bond issuer to provide investors with the impact achieved in gender-equality by using metrics that are disaggregated by gender. The report shall demonstrate “the substantial and intentional impact experienced by women, girls and gender minorities.”⁴⁴

b) Indonesia’s Orange Bond Framework and the Orange Sukuk Framework

While Indonesia’s 2023 blue bonds were not labeled as Orange Bonds, the RoI later collaborated with IIX to issue new Orange Bonds and Orange Sukuk frameworks for Indonesia in 2025. These frameworks were created to concurrently align with ICMA standards (including GSSS Principles), and comply with Indonesia’s national regulatory requirements.⁴⁵ The concept of RoI’s Orange Bond and Orange Sukuk Framework was to “unlock ripple effects across the SDG spectrum, from health and education to climate resilience and economic growth, by investing in women as agents of inclusive, inter-generational impact.” According to IIX, “Orange Bonds enable Indonesia to simultaneously advance its national priorities, from accelerating its green and blue economy strategies to closing its US\$1.7 trillion SDG financing gap, while positioning itself as a regional and global pioneer of inclusive, gender-smart sustainable finance.”⁴⁶

Indonesia’s Orange Bond Framework was created to offer practical guidance for structuring, issuing, and verifying gender-equity based fixed-income instruments. The framework aimed to aid RoI in narrowing its SDG financing gap while investing in women as agents of economic growth and development. The orange bonds issued according to this framework were meant to comply with existing RoI sustainable finance and related regulations and thus qualify for the same regulatory incentives that RoI offers to GSSS bonds. While they fundamentally function within the same Indonesian structure previously covered in this paper, crucially, they also must also comply with the previously covered Orange Bond Principles™ including Gender-Positive Capital Allocation, Gender-Lens Capacity and Diversity in Leadership, and Transparency in the Investment Process and Reporting.⁴⁷

Similarly, RoI’s Orange Sukuk framework aimed to comply with both existing national regulations with regards to sukuks and the Orange Bond Principles. Sukuks are financial instruments that allow for capital accumulation in a manner that is compliant with the Islamic

⁴⁴ *Id.*

⁴⁵ *Issuance Framework for Indonesia Orange Bond and Sukuk*, Impact Investment Exchange (2025), <https://iixglobal.com/issuance-framework-for-indonesia-orange-bond-and-sukuk-2025/>.

⁴⁶ *Comprehensive Guidelines for Orange Bonds in Indonesia for Inclusive, Climate-Resilient Sustainable Development*, Impact Investment Exchange (2025), <https://iixglobal.com/issuance-framework-for-indonesia-orange-bond-and-sukuk-2025/>, at 15.

⁴⁷ *Id.*

Shariah (the Islamic body of religious law). To that end Sukuk's, like other instruments in Islamic Finance, avoid the use of interest, and instead allow investors to reap the rewards of their investment from the actual performance. To accomplish this, sukuk often employ contract types such as "Ijara (leasing), Wakalah (agency-based investment), and Murabaha (cost-plus sale)" in lieu of any set interest-based structure.⁴⁸ Orange Sukuks, like normal Sukuks, have to be Shariah compliant. However in addition to that requirement, they also align with IIX's previously mentioned Orange Bond Principles™.⁴⁹ To ensure that these key requirements are met, a governance process for such Orange Sukuks includes an internal Shariah Advisory Board that reviews the Board according to Islamic law, along with Documentation and traceability of decision-making and project screening and approval committee that ensure that the gender component is met as well.⁵⁰

c) Labeling an Orange Bond: The Example of the 2021 Jordan Refugee Impact Bond

The 2021 Refugee Impact Bond in Jordan was the first social impact bond focused on training and supporting refugees. Its aim was to "improve integration and economic resilience of refugee communities into host communities and empowers them to meet their basic needs." The bond received its orange bond status in 2023, thereby becoming the world's first Refugee Bond to receive the Orange Bond label after an independent review confirmed its alignment with the Orange Bond Principles, focusing on gender equality and inclusive outcomes for women and refugees.⁵¹ The Refugee Bond had a 4-year term and an annualized return of 5.1%. This bond has improved the quality of life for women and refugee communities and specifically helped 2,324 women set up women-owned SMEs. This bond was the first peace-keeping development impact bond that was labeled by IIX as an orange bond. IIX as the leading authority on orange bonds, and determined that this Jordan refugee bond met Orange Principles™ and therefore, designated it as an Orange Bond™.

d) The Orange Seal™

One of the services offered by IIX is called an "Orange Seal™" which is a measurement and rating tool that demonstrates a commitment to gender equality and environment sustainability by the bond issuer or other organization. Once IIX makes this determination, it may provide the "Orange Seal™" certification which simply recognizes "businesses driving gender equality and climate action," and the demonstrated commitment of such businesses to diversity, equity, and inclusion (DEI). This certification is made through an assessment of performance of the entity across several areas encompassing 1) DEI in mission and intention; 2) that DEI is taken into account in human capital; and 3) transparency, policy and reporting procedures.⁵²

⁴⁸ *Id.*, at 3.

⁴⁹ *Id.*, at 4.

⁵⁰ *Id.*, at 11.

⁵¹ *Refugee Impact Bond*, UNESCO (2025), <https://media.unesco.org/sites/default/files/webform/gec002/refugee-impact-bond.pdf>.

⁵² *The Orange Seal*, Impact Investment Exchange, <https://orangemovement.global/orange-seal>.

In order to get the “Orange Seal™” an organization must undergo the IIX’s verification process to 1) register or log into the IIX Values platform; 2) complete IIX’s ESG assessment and verification form; and finally, 3) IIX will authenticate these forms by reaching out to key stakeholders, such as employees, suppliers, and customers. IIX Values™ is the platform that offers impact measurement and data analytics to deliver IIX Values™ Impact Reports. IIX assesses and verifies whether the company is complying with ESG and gender inclusivity principles. Once this process is completed, IIX then makes a final determination on whether to award the Orange Seal™ and issues a IIX Values™ Impact Report issued by IIX. The above two sections discussing the labeling of a social impact bond or GSSS Bonds as “Orange Bonds,” or certifying such bonds with an “Orange Seal” are relevant to the following discussion.

Part V: Recommendations & Best Practices for IIX for Future Blue Bond Issuances

IIX’s experience with Indonesia in pioneering both an Orange Bond Framework and an Orange Sukuk Framework tailored to Indonesia’s needs that is based on the Orange Principles™, demonstrates that IIX can expertly embed IIX “Orange” Values into specific contexts, and integrating them into Blue Bonds is a natural extension to generate needed impact in Indonesia’s ocean communities. In order to maximize its impact, IIX may consider the following recommendations:

Develop a Framework for a Blue-Orange Bond. Any blue-orange bonds would have to comply with all the following: the Orange Bond Principles™ developed by IIX, ICMA’s GBPs, and the general ICMA Recommended Steps to Issue Blue Bonds. To add clarity for potential blue-orange bond issuers, IIX could develop and publish a Blue-Orange Integrated Bond Framework that explicitly maps Orange Bond Principles™ onto the existing ICMA Green Bond Principles as applied to Blue Bonds. This would supplement the existing ICMA principles with a gender equity overlay developed by IIX in line with Orange Bond Principles™. The transparency and reporting requirements can be bridged between these requirements (as there is significant overlap). If this action were taken, presumably IIX would publish and disseminate the Blue-Orange Integrated Bond Framework on IIX’s website. In time, this Framework could be used, published and promulgated by sovereign governments. It would then provide a useful precedent to private actors as well.

In effect a blue-orange bond would be the same as a normal Blue Bond, but it would abide by additional criteria related to the “Gender-Positive Capital Allocation” and “Gender-Lens Capacity and Diversity in Leadership” principles of Orange Bond™ certifications, and they would also have an expanded transparency requirement that includes the gender equity focused elements developed by IIX. For example, “use of proceeds” for the bond would remain aligned with SDG 14-eligible marine and coastal projects but can additionally require that at least a defined portion of proceeds (or a defined subset of projects) demonstrate gender-positive or gender-responsive outcomes, and this could for example be for women in coastal and fisheries-dependent communities. The “Project Evaluation and Selection” criteria for the bonds could potentially incorporate gender-impact screening, including assessment of women’s participation in value chains, access to finance, livelihoods, and decision-making related to ocean-based projects.

“Reporting” on the bond would also include gender-disaggregated social metrics, consistent with Orange Bond Principles™.

Such a bond framework would allow investors to invest in bonds they are certain would contribute to marine and coastal preservation and health, while empowering gender equity in communities at the same time. It would offer a guarantee that the investment would not be made in a gender-blind manner. In effect, it would allow IIX to offer potential issuers a ready-to-use structure that is eligible for capital markets for financing blue project. This will also advance gender equity as a core design feature, rather than merely being a peripheral objective. This could also be used to harness IIX Values which may provide a holistic impact assessment tool for blue-orange bonds. IIX could thus explicitly position blue-orange bonds as a distinct, premium sub-category within the Blue Bond market, defined not merely by ocean-related use of proceeds, but by intentional integration of gender equity and environmental sustainability.

Issue a Blue-Orange Bond. In line with the general framework above, IIX can either issue or work with partners to issue a bond that is both “orange” and “blue.” IIX will have to carefully study potential projects the bond would finance and choose ones that would concurrently contribute to SDG 5 and SDG 14. This bond could serve as a demonstration of IIX’s Blue-Orange Bond Framework outlined above. It could potentially be a new iteration in their successful Women’s Livelihood Bond™ series focusing on women working in the blue economy.

Promote Orange Seal for Certain Blue Bond Issuers. IIX could position the Orange Seal™ as a voluntary but highly credible certification for Blue Bonds issuers that demonstrates their commitment to gender equity. This certification would apply to organizations and corporations that issue the Blue Bond. It would allow the bond issuer to market the Blue Bond as one issued by an organization that has attained Orange Seal certification, thus demonstrating to potential investors their commitment to gender equity.

Partner with Sovereign and Development Finance Issuers in the Global South. IIX could leverage its expertise in Orange-related issues and partner with selected governments in the Global South, especially ocean-dependent developing states, and development banks, that are interested in Blue Bond issuances. As the Indonesian case study showcased, sovereign nations are likely to develop unique structures for Blue Bond issuance in line with their own legal and governmental structure. IIX would aid such States in augmenting their existing or developing systems to integrate gender and social objectives into project tagging/planning systems related to Blue Bonds. IIX’s ability to add value in this context would not be in replacing government frameworks, but in enhancing them through the addition of gender-lens design and certification that could potentially attract further investors. This targets blue projects in a gender inclusive manner that would also enhance the actual positive impact of the potential Blue Bonds.

A “Pipeline Accelerator” for Women-Led Blue Economy Enterprises. IIX can potentially partner with other organizations to support and highlight women-led SMEs working in blue oriented areas such as fisheries, aquaculture, waste management, and marine renewables. The aid provided to these SMEs could include technical assistance, credit readiness support, and impact-measurement training among others. These organizations would also be aided in attaining the Orange Seal™ certification. These SMEs could then be presented as prime candidates to

benefit from projects linked with blue-orange bonds. This would ensure that Orange Principles™ are embedded even before capital is raised.

In conclusion, the interface and interlinkages between Blue Bonds and Orange Bonds are both remarkable and could represent a coherent and sustainable evolution of blue finance that remains firmly grounded in the core principles of Blue Bonds and SDG 14. Orange bonds include a necessary gender lens to the downstream impact and empowerment of women entrepreneurs and other underserved coastal communities and beyond.

Marine health remains quintessential for continued human development, and it is important to recognize that increased ocean health, coastal resilience, and sustainable fisheries (among other blue objectives) cannot be achieved in isolation from the communities that depend on them, particularly women and marginalized groups. Thus, by aligning gender equity with marine conservation objectives, Blue-Orange synergies can strengthen the effectiveness, legitimacy, and long-term sustainability of ocean-focused investments. As such this new, groundbreaking approach is innovative pathway for advancing SDG 14 in tandem with SDG 5 and should be considered for broader application across blue finance and other GSSS-related undertakings.