



# BONDS TO FINANCE THE SUSTAINABLE BLUE ECONOMY

A PRACTITIONER'S GUIDE

SEPTEMBER 2023





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Floating solar panels. The floating solar photovoltaic power generation panels at the Da Mi hydro power plant in Binh Thuan, Viet Nam (photo by ADB).

# Abbreviations

ADB	Asian Development Bank
ETP	endangered, threatened, and protected
GBP	Green Bond Principles
GHG	greenhouse gas
ICMA	International Capital Market Association
IFC	International Finance Corporation
IMO	International Maritime Organization
IUCN	International Union for Conservation of Nature
KPI	key performance indicator
MARPOL	International Convention for the Prevention of Pollution from Ships
MDB	multilateral development bank
MSP	Marine Spatial Plan
NO <sub>x</sub>	nitrogen oxides
p.e./a.	population equivalent per annum
Principles	GBP, SBP, SBG, and SLBP jointly
SBE	Sustainable Blue Economy
SBG	Sustainability Bond Guidelines
SBP	Social Bond Principles
SDG	Sustainable Development Goal
SLB	Sustainability-linked Bonds
SLBP	Sustainability-linked Bond Principles
SO <sub>x</sub>	sulfur oxides
SPO	second party opinion
SPT	Sustainability Performance Targets
tCO <sub>2</sub> e	ton of carbon dioxide equivalent
TJ	terajoules
UNEP FI	United Nations Environment Programme - Finance Initiative
UNGC	United Nations Global Compact
UOP	use-of-proceeds

**Working together.** Community members helping each other pull a fishing net in Gentuma Raya, Gorontalo, Indonesia (photo by ADB).



# I Introduction and Background

The Blue Economy encompasses economic activities that rely or impact on the use of coastal and marine resources. Like the broader concept of the Green Economy, of which the Blue Economy forms a part, it advocates sustainable use of these resources to minimize negative impacts on the marine environment. Investing in the Sustainable Blue Economy (SBE) recognizes the criticality of the ocean and its resources, and the increasing threats to the marine environment from climate change, overexploitation, and marine pollution.

With traditional marine investments facing rising physical, regulatory, and reputational risks, the transition to an SBE is an opportunity for public, private, and blended investment to enhance asset value and increase resilience and economic productivity. As the largest asset class in the global financial market, the bond market can play a significant role in catalyzing investments. In the last 5 years, a series of “blue bond” issuances (green bonds focused on the sustainable use of maritime resources and the promotion of related sustainable economic activities) demonstrate a growing appetite for ocean-themed bonds.<sup>1</sup>

## About This Guidance

This voluntary Guidance is for broad use by the market

- to provide issuers with guidance on the key components involved in launching a credible “blue bond,”
- to aid investors by promoting availability of information to evaluate the environmental impact of their “blue bond” investments, and
- to assist underwriters by offering vital steps that will facilitate transactions that preserve the integrity of the market.

The Guidance builds on the existing global market standards that underpin the global sustainable bond markets: the [Green Bond Principles](#) (GBP), the [Social Bond Principles](#) (SBP), the [Sustainability Bond Guidelines](#) (SBG), and the [Sustainability-linked Bond Principles](#) (SLBP) provided by the International Capital Market Association (ICMA), collectively known as “the Principles.”<sup>2</sup> These voluntary global market standards have outlined best practice for sustainable bonds since 2014, promoting integrity in the development of the market by clarifying the approach for issuance.

**This Guidance is meant to be used in conjunction with these Principles.** It acts as additional thematic guidance on use of proceed (UOP) bonds such as green bonds or sustainability bonds to finance projects supporting the SBE and ocean health.<sup>3</sup> It also points to the possible use of sustainability-linked bonds incorporating blue key performance indicators (KPIs). (Social projects related to the SBE can be financed through a social or sustainability bond or issuers can use social KPIs to underline their strategy.)

<sup>1</sup> Appendix 2 has examples.

<sup>2</sup> The latest version should be referred to as the Guidelines undergo regular updates. ICMA. 2021. [Green Bond Principles—Voluntary Process Guidelines for Issuing Green Bonds](#); ICMA. 2023. [Social Bond Principles—Voluntary Process Guidelines for Issuing Social Bonds](#); ICMA. 2021. [Sustainability Bond Guidelines](#); ICMA. 2023. [Sustainability-Linked Bond Principles—Voluntary Process Guidelines](#).

<sup>3</sup> To underline that blue is a theme under the Principles, “blue bonds” are put in “” in this Guidance.

The Guidance also draws on pre-existing specific guidance from the [Blue Finance Guidelines](#) of the International Finance Corporation (IFC), the [Sustainable Blue Economy Finance Principles](#) and practical [guidance](#) documents of the United Nations Environment Programme - Finance Initiative (UNEP FI), the UN Global Compact [Practical Guidance to Issue a Blue Bond](#) and [Sustainable Ocean Principles](#) and guidance documents, and the [Ocean Finance Framework](#) and [Green and Blue Bond Framework](#) of the Asian Development Bank (ADB).<sup>4</sup> While some “blue bond” issuances have and will include freshwater-related projects (e.g., aligned with IFC’s Blue Finance Guidelines), this Guidance is focused on ocean-related projects that support Sustainable Development Goal (SDG) 14 – Life Below Water.

Although this Guidance focuses on bonds, it may also be applicable to other debt instruments such as loans.<sup>5</sup> In the case of loans, it is recommended that this Guidance be considered alongside the [Green Loan Principles](#) and the [Sustainability-linked Loan Principles](#).<sup>6</sup>

## Importance of the Sustainable Blue Economy

The language used in relation to sustainability and the ocean is varied, with different global institutions adopting different scopes and definitions for what constitutes sustainability in the ocean for economic development and finance. The range of terminology and sectors encountered can include the ocean economy, marine economy, maritime economy, maritime sector, and blue economy, each of which takes a slightly different view on what it includes, particularly with relation to extractive industries, sanitation, and water management.

For the purpose of this Guidance, the terminology SBE is used to define investments that provide economic and social benefits for current and future generations. As such, it maintains, restores, and protects diverse, productive, and resilient ecosystems; halts the loss of biodiversity; enhances energy efficiency; and reduces carbon emissions and pollution while improving livelihoods and jobs. It is based on clean technologies, renewable energy, and circular material flows. Non-renewable extractive industries (e.g., offshore [oil and gas](#), [dredging](#), and [deep-sea mining](#)) as well as [unsustainable practices in other sectors are therefore excluded](#).<sup>7</sup>

The development of an SBE, including the sustainable management of marine fisheries, the expansion of low-carbon aquaculture, the scaling of offshore renewable energy, and the decarbonization of maritime transport is integral to tackling the triple planetary crisis of a rapidly changing climate, nature loss, and pollution.<sup>8</sup> The ocean serves as a vital heat and carbon sink, absorbing about 31% of the carbon dioxide emissions released and regulating the global climate.<sup>9</sup> The transition to an SBE is instrumental in achieving the goals of the Paris Agreement, with 21% of the reduction in greenhouse gas (GHG) emissions that need to take place in blue economy sectors.<sup>10</sup>

<sup>4</sup> IFC. 2022. [Blue Finance Guidelines](#). Washington, DC; UNEP FI. 2021. [Sustainable Blue Economy Principles](#). Geneva; UNEP FI. 2021. [Blue Finance Resources](#). Geneva; UN Global Compact. 2020. [Practical Guidance to Issue a Blue Bond](#). New York; United Nations Global Compact. 2020. [Sustainable Ocean Principles](#). New York; ADB. 2022. [Ocean Finance Framework](#). Manila; ADB. 2021. [Green and Blue Bond Framework](#). Manila.

<sup>5</sup> Although bonds and loans are one of most prominent forms of mainstream finance, there are also other forms of ocean finance. See: World Economic Forum. 2020. [The Ocean Finance Handbook](#).

<sup>6</sup> Asia Pacific Loan Market Association, Loan Market Association, and Loan Syndications & Trading Association. 2022. [Green Loan Principles](#); Asia Pacific Loan Market Association, Loan Market Association, and Loan Syndications & Trading Association. 2023. [Sustainability-linked Loan Principles](#).

<sup>7</sup> United Nations Environment Programme - Finance Initiative. 2022. [Recommended Exclusions for Financing a Sustainable Blue Economy](#). Geneva.

<sup>8</sup> UNEP. 2020. [The triple planetary crisis: Forging a new relationship between people and the earth](#).

<sup>9</sup> N. Gruber et al., 2019. The Oceanic Sink for Anthropogenic CO<sub>2</sub> from 1994 to 2007. *Science*. 363 (6432). pp. 1193-1199; H.-O. Pörtner et al, eds. 2019. IPCC [Special Report on the Ocean and Cryosphere in a Changing Climate](#). Intergovernmental Panel on Climate Change (IPCC).

<sup>10</sup> O. Hoegh-Guldberg et al. 2019. The Ocean as a Solution to Climate Change: Five Opportunities for Action. Washington, DC: World Resources Institute.



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.<sup>11</sup> Biodiversity loss, and the consequences this has on food systems, livelihoods, prosperity, and resilience is a pressing global challenge. In the past 2 years, there have been a number of breakthrough agreements that will help to promote activity that protects ocean health. With approximately 11 million tons of plastic flowing each year into the ocean, the endorsement in March 2022 of the resolution to “[End Plastic Pollution](#)” and develop an internationally legally binding agreement by 2024 sends a market signal to shift away from single-use plastics and invest in circular solutions.<sup>12</sup> At the UN Biodiversity Conference (COP15) in December 2022, the [2030 Kunming-Montreal Global Biodiversity Framework](#) included a target to protect at least 30% of land and ocean globally by 2030 (“30×30 target”).<sup>13</sup> In March 2023, the UN [High Seas Treaty](#), a legal framework for parts of the ocean outside national boundaries, was agreed.<sup>14</sup> It requires that environmental impact assessments must be carried out before any new exploitation of marine resources in areas beyond national jurisdictions. It also includes provisions for the equitable sharing of knowledge, technologies, and benefits from marine genetic resources, alongside establishing a legal framework allowing the creation of marine protected areas in international waters.

## Importance of Bonds to Finance the Sustainable Blue Economy

Sustainable bonds include use of proceeds bonds (green, social, and sustainability) as well as general-purpose (sustainability-linked) bonds. In 2022, the global issuance volume was \$862 billion, dropping from a record high of \$1 trillion in 2021, with analysis anticipating a bounce back moving forward. Research shows that 98% of total sustainable bonds issued globally are aligned with the ICMA Principles.<sup>15</sup>

Green bonds continue to constitute the greatest share of this market, with growth in social bonds, sustainability bonds, and SLBs—SLBs being the newest segment of the market. In 2022, the green-labeled cumulative volume reached \$2.2 trillion since 2006.<sup>16</sup> Between 2018 and 2022, transactions reportedly labeled as blue reached a total value of \$5 billion.<sup>17</sup>

<sup>11</sup> E. S. Brondizio et al., eds. 2019. [Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#). Bonn, Germany: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Secretariat; Food and Agriculture Organization of the United Nations (FAO). 2020. [The State of World Fisheries and Aquaculture 2020: Sustainability in Action](#). Rome.

<sup>12</sup> Resolution adopted by the United Nations Environment Assembly. 2022. [5/14 End Plastic Pollution: Towards an International Legally Binding Instrument](#). Nairobi.

<sup>13</sup> Decision adopted by the Conference of the Parties to the Convention on Biological Diversity. 2022. [15/4 Kunming-Montreal Global Biodiversity Framework](#). Montreal.

<sup>14</sup> United Nations. 2023. [Draft Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction](#). New York.

<sup>15</sup> ICMA analysis for years 2020, 2021, and 2022 is based on Environmental Finance and LGX DataHub (excluding the domestic market of the People's Republic of China). ICMA. [Sustainable Bond Market Data](#).

<sup>16</sup> C. Michetti et al. 2023. [Sustainable Debt Global State of the Market 2022](#). Climate Bonds Initiative.

<sup>17</sup> P. Bosman and F. De Mariz. 2023. [The Blue Bond Market: A Catalyst for Ocean and Water Financing](#).

## II Benefits for Issuers

Bonds can be used to finance the SBE by all types of public and private sector issuers.<sup>18</sup> These include

- sovereigns and sub-sovereign agencies such as municipalities,
- multilateral development banks (MDBs) and development finance institutions,
- banks and other financial institutions, and
- large and medium-sized companies.

For an issuer, the main advantages of issuing “blue bonds” are typically that they

- access the untapped financial potential in the blue economy and create opportunities for larger and longer-term financing;
- offer the opportunity to expand into new business categories, capturing the potential to become a market leader in a new asset class;
- improve diversification of its investor base, thereby expanding funding sources and potentially reducing exposure to fluctuations in bond demand;
- lead, in some cases, to improved financing costs through excess demand;
- lead to reputational benefits (e.g., marketing can highlight an issuer’s environmental credentials and support for blue investment); and
- establish improved monitoring and reporting requirements to better capture environmental impacts of financing.

As UOP bonds, “blue bonds” can also have internal benefits for issuers such as

- increased internal awareness on sustainability issues and related change in corporate culture;
- integration of sustainability considerations into business decision-making;
- increased interaction/synergies between different teams on sustainability matters;
- adoption of new policies, processes, and information technology tools to better track sustainable projects and assets; and
- identification and better management of sustainability risks.

<sup>18</sup> “Blue bonds” are just one form of blue finance, and issuers should consider if they are the most appropriate structure for their objectives.

### III “Blue Bonds:” Which Projects Are Eligible?

Before contemplating financing through a “blue bond,” potential issuers need to identify eligible projects. The GBP explicitly recognize several broad categories of eligibility for green projects that contribute to five environmental objectives:

- (i) climate change mitigation,
- (ii) climate change adaptation,
- (iii) natural resource conservation,
- (iv) biodiversity conservation, and
- (v) pollution prevention and control.

These are also highly relevant for the SBE. The 10 eligible project categories under the GBP are descriptive rather than prescriptive to allow for a wide range of green projects, including those focused on the SBE to be financed. This section aims to give issuers a better understanding of what could be financed. Building on the GBP and synthesizing other key documents, it brings together examples of blue economy projects and eligibility criteria that are common across institutions.

Table 1 provides an indicative list of blue project categories that captures the most commonly used types of projects supported or expected to be supported by the “blue bond” market. (Table 1 shows the eligible green [environmental] project categories from the GBP in green font. Additional SBE-related project categories are in blue font and their estimated contribution to the GBP environmental objectives is indicated with the little blue shaded squares.)

Projects include assets, investments, and other related and supporting expenditures such as research and development that may relate to more than one category and/or environmental objective. Designation to a project category is based on the investment’s primary purpose.

An integrated approach to investments is encouraged in line with [UNEP FI’s SBE Finance Principles](#) that promote the identification of systemic and cumulative impacts.

Table 1: Indicative Blue Project Categories

GBP Environmental Objectives					
Indicative blue project categories and sub-categories (closely related to GBP category)	Climate Change Mitigation	Climate Change Adaptation	Natural Resource Conservation	Biodiversity Conservation	Pollution Prevention and Control
<b>1. Coastal Climate Adaptation and Resilience</b> (“Climate Change Adaptation”) Projects that support ecological and community resilience and adaptation to climate change including using nature-based solutions <i>[Projects must be within 50 km of the coast or within the marine environment]</i>		◆◆◆	◆◆	◆	
<b>2. Marine Ecosystem Management, Conservation, and Restoration</b> (“Terrestrial and Aquatic Biodiversity”) Projects that manage, conserve, and restore the health of coastal and marine ecosystems <i>[Projects must be within the marine environment or within 100 km of the coast]</i>	◆	◆	◆◆◆	◆◆◆	◆◆
<b>3. Sustainable Coastal and Marine Tourism</b> Projects that improve the environmental sustainability of coastal and marine tourism			◆◆	◆◆	◆◆
<b>4. Sustainable Marine Value Chains</b> (“Environmentally Sustainable Management of Living Natural Resources and Land Use”) Projects that improve the environmental sustainability of marine value chains a. Sustainable marine fisheries Management b. Sustainable aquaculture operations (algae, bivalves, fish, and seagrass). c. Seafood supply chain sustainability	◆	◆	◆◆	◆◆	◆◆◆
<b>5. Marine Renewable Energy</b> (“Renewable Energy”) Projects that increase contribution of marine and offshore renewable energy to energy mix and renewable energy projects that support other SBE sectors while safeguarding the marine environment. These include: <ul style="list-style-type: none"> <li>• Offshore wind (both fixed and floating installations)</li> <li>• Wave</li> <li>• Tidal</li> <li>• Floating solar</li> <li>• Ocean thermal energy conversion</li> </ul>	◆◆◆		◆	◆◆	

continued on next page

Table 1 continued

GBP Environmental Objectives					
Indicative blue project categories and sub-categories (closely related to GBP category)	Climate Change Mitigation	Climate Change Adaptation	Natural Resource Conservation	Biodiversity Conservation	Pollution Prevention and Control
<p><b>6. Marine Pollution</b>                      (“Pollution Prevention and Control”/                      “Sustainable Water and Wastewater Management”/“Circular Economy Adapted Products, Production Technologies and Processes”)                      Projects that prevent, control, and reduce waste from entering the coastal and marine environments</p> <p>a. Wastewater management                      b. Solid waste management                      c. Resource efficiency and circular economy (Waste prevention and reduction)                      d. Non-point source pollution management</p> <p><i>[For wastewater management, projects must be within 100 km of the coast.</i></p> <p><i>For solid waste management, projects must be within 50 km of the coast or a river that drains to the ocean.</i></p> <p><i>For non-point source pollution management, projects must be within 200 km of the coast or within 50 km of rivers (and their tributaries) that flow to the ocean]</i></p>	◆◆	◆◆	◆◆	◆◆	◆◆◆
<p><b>7. Sustainable Ports</b>                      (“Clean Transportation”)                      Projects that increase environmental performance and sustainability of port functions and infrastructure</p>	◆◆	◆			◆◆◆
<p><b>8. Sustainable Marine Transport</b>                      (“Clean Transportation”)                      Projects that involve increasing environmental performance and sustainability of maritime transportation</p>	◆◆		◆	◆◆◆	◆◆◆

GBP = Green Bond Principles, km = kilometer.

Note: Symbols denote the categories’ contribution to the objective.

- (i) ◆◆◆ = Primary
- (ii) ◆◆ = Secondary
- (iii) ◆ = Tertiary

Source: Synthesis pre-existing guidance from authors.



**Marine life in Batangas.** Healthy coral is critical for maintaining ocean biodiversity, Philippines (photo by ADB).

## IV Alignment with the Principles

### “Blue Bonds”

The GBP define green bonds as “any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the GBP.”

The four core components of the GBP are

- (i) use of proceeds,
- (ii) process for project evaluation and selection,
- (iii) management of proceeds, and
- (iv) reporting (allocation and impact).

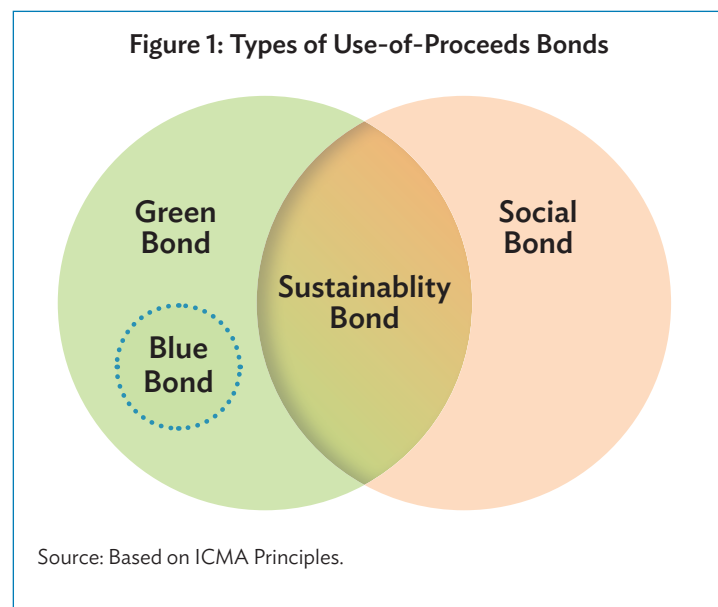
In addition, the GBP put forward two key recommendations for issuers:

- (i) to create a bond framework, and
- (ii) to obtain an external review.

The GBP recognize “blue bonds” as bond issuances with the objective of emphasizing the importance of the sustainable use of maritime resources and of the promotion of related sustainable economic activities.<sup>19</sup> Green bonds that finance 100% blue projects can be labeled by an issuer as “blue bonds.” Such “blue bonds” are also green bonds as long as they align with the four core components of the GBP.

Blue projects can also be financed under sustainability bonds that were designed to encompass both green (blue) and social projects. Guidance for sustainability bonds is provided by the SBG. It is also understood that green (blue) projects can have social co-benefits and vice versa. Under the Principles, the classification of a use of proceeds bond (as a green, “blue,” sustainability or social bond) should be determined by the issuer based on its primary objectives for the underlying projects.

Figure 1 illustrates the interaction between green, “blue,” sustainability, and social bonds as described in the Principles.



<sup>19</sup> ICMA. 2021. [Green Bond Principles—Voluntary Process Guidelines for Issuing Green Bonds](#). Appendix Note 3.

## Incorporating Blue into an Issuer's Strategy with Sustainability-Linked Bonds

Beyond UOP instruments, sustainable bonds include sustainability-linked bonds (SLBs), a still relatively new general-purpose instrument. SLBs focus on the overall sustainability performance of an issuer based on KPIs measuring progress toward defined sustainability performance targets (SPTs). The most used structure is the potential variation of the bond coupon. If an issuer does not achieve its SPTs, the financial and/or structural characteristics of the bond will be negatively impacted, which, in the market, takes the form of a coupon step-up. There have also been a very limited number of transactions where if an issuer exceeds its KPIs, it will be rewarded by a coupon step-down. To assess the selected KPIs' performance in relation to the pre-defined SPTs, issuers publish regular reports and solicit independent and external verification.

Full guidance for SLBs can be found in the SLBP, which identify five core components for these sustainable instruments:

- (i) Selection of KPIs,
- (ii) Calibration of SPTs,
- (iii) Bond characteristics,
- (iv) Reporting, and
- (v) Verification.

SLBs can include KPIs linked to the SBE and can therefore serve to finance an issuer's overall strategy in this area. Based on the SLBP, the KPIs should be

- relevant, core, and material to the issuer's overall business, and of high strategic significance to the issuer's current and/or future operations;
- measurable or quantifiable on a consistent methodological basis;
- externally verifiable; and
- able to be benchmarked, i.e., as much as possible using an external reference or definitions to facilitate the assessment of the SPTs' level of ambition.

An illustrative registry of KPIs can be found on the [ICMA website](#). The registry provides a table with potential KPIs for various sectors and sub-sectors and indicates which sustainability themes could be most material or material to which sector. While the ocean is explicitly included in the water theme, KPIs under other themes such as climate change and biodiversity could also be linked to the SBE if suitable.



## Social Issues and the Sustainable Blue Economy

There is growing consensus that an SBE can only be achieved if it<sup>20</sup>

- facilitates equitable access to resources,
- promotes the fair distribution of benefits, and
- safeguards the most vulnerable from further risks or harm.

Investments should therefore at least avoid

- violation of human rights, including rights of indigenous communities;
- reduction or loss of access to sustainable and inclusive livelihoods;
- increased likelihood of injury, disease or loss of life; and
- inequality of opportunities based on age, sex, disability, race, ethnicity, origin, religion or economic or other status.

Blue projects can have social co-benefits including fair labor conditions, gender equity, social inclusion, health, poverty reduction, and economic empowerment. Social aspects within the SBE can also be directly addressed by financing social projects with a social bond or as part of a sustainability bond. Furthermore, social KPIs can be included to support an issuer's social strategy with an SLB.

The [SBP](#) define social bonds as “any type of bond instrument where the proceeds, or an equivalent amount, will be exclusively applied to finance or re-finance in part or in full new and/or existing eligible Social Projects and which are aligned with the four core components of the SBP” (equivalent to the GBP).

Social projects directly aim to tackle or alleviate specific social issues and/or seek to achieve positive social outcomes primarily but not exclusively for (a) target population(s). A social issue threatens, impedes, or damages the well-being of society or a specific target population.

Issuers can issue a social bond to raise finance for eligible social projects in the blue economy related to, for example, health, education, employment generation, and food security. Issuers should further specify a target population(s) benefiting from the outcomes or impacts of the social projects. Examples of social projects that can be found in the blue economy are targeted at those living below the poverty line, excluded and/or marginalized populations and/or communities, people with disabilities, migrants and/or displaced persons, undereducated, and underserved, owing to a lack of quality access to essential goods and services.

Issuers of SLBs who would like to support the implementation of social aspects in their strategy related to the SBE can find illustrative examples of social KPIs in ICMA's KPI registry.<sup>21</sup> Potential KPIs could be related to diversity, access and affordability, or working conditions.

Appendix 1 includes some examples of social co-benefits for the blue project categories in Table 1.

<sup>20</sup> [High Level Panel for a Sustainable Ocean Economy](#)

<sup>21</sup> ICMA. 2023. [Sustainability-Linked Bond Principles. Voluntary Process Guidelines](#).

# V “Blue Bond” Issuance Process

The issuance of a publicly traded bond in the capital markets is a complex process that is subject to securities laws and dedicated regulators that are specific to each jurisdiction. Bourses and exchanges also have their own requirements and rules. It is imperative that issuers hire appropriate financial and legal advisers to guide them through the process. Accordingly, the purpose of this section is to identify the specificity of the issuance of a UOP instrument such as a “blue bond” rather than summarize the various steps of a debt security transaction. In this, issuers will need to reflect the voluntary guidance of the Principles provided by ICMA.

## Pre-issuance

### A. Create a Bond Framework to Finance the SBE

A bond (or sometimes financing) framework is the foundation of sustainable bond issuances. The framework is a publicly available document that outlines how the issuer will ensure that its “blue bond” is aligned with the four core components of the Principles:

- (i) Use of proceeds,
- (ii) Process for project evaluation and selection,
- (iii) Management of proceeds, and
- (iv) Reporting (Allocation and Impact Reporting).

The green (blue) bond framework can also reflect how the bond is intended to contribute to global sustainability targets such as the SDGs. The framework should describe the issuer’s overarching sustainability objectives, policies, and strategy. Investors will consider the bond framework when deciding to invest in a bond. The framework is typically developed jointly with the issuer’s advisers, including the specialized team of its lead underwriting bank as well as environmental consultants when needed.

Useful ICMA resources in addition to the Principles

- [Pre-issuance checklist](#) for green (blue) bonds;
- [Guidance Handbook](#) provides additional information in form of Q&As on how to interpret the Principles especially for their practical application for transactions, as well as in the context of market development and complementary initiatives;<sup>22</sup> and
- mapping of the SDGs, which seeks to offer a broad frame of reference by which issuers, investors and bond market participants can assess the financing objectives of a given green (blue), social, or sustainability bond program in relation to the SDGs.<sup>23</sup>

<sup>22</sup> ICMA. [Guidance Handbook](#). The latest version should be referred to as the Guidelines undergo regular updates.

<sup>23</sup> ICMA. [Mapping of the Sustainable Development Goals](#). The latest version should be referred to as the Guidelines undergo regular updates.

## B. Define and Confirm Project Categories

Eligible blue projects can cover the financing or refinancing of investments and other related and supporting expenditures, as well as physical and financial assets including bank loan portfolios. Issuers can refer to the non-exhaustive list of eligible project categories under the GBP. This Guidance provides additional guidance on eligible blue project categories in Appendix 1 below.

**Environmental and social risks.** The focus of green (including blue) bonds is on the eligible projects rather than on the issuer itself. It should nonetheless be noted that the GBP recommend that issuers clearly communicate to investors their environmental sustainability objectives overall, and how they identify and manage potential environmental and social risks associated with the selected projects. Examples of projects that should be excluded are listed in Appendix 1. Further specific detail on exclusions can be found in the UNEP FI publication [“Recommended Exclusions for Financing a Sustainable Blue Economy.”](#)

## C. Obtain an External Review

The Principles recommend that issuers appoint (an) external review provider(s) to assess, through a pre-issuance external review, the alignment of their green (blue) bond or green (blue) bond program and/or framework with the four core components of the GBP. While there are multiple types of external reviews, the most common approach is to seek a second party opinion (SPO) on the bond framework and make it publicly available on the issuer’s website. This is generally done by the issuer contracting an SPO provider.<sup>24</sup> SPOs are important to disclose to both potential investors and other key stakeholders of the company, country, or institution.

## Post-issuance

### D. Management of Proceeds

An essential feature of the Principles with respect to UOP bonds is the focus on management and allocation of proceeds. It is important to note that market practice has moved increasingly to the simpler tracking of “equivalent amounts” of net proceeds rather than the other methods mentioned in the GBP. It is crucial to underline the recommendation for issuers to use an external auditor, or a third party, to verify the internal tracking method and the allocation of funds derived from the net proceeds.

### E. Allocation and Impact Reporting

The Principles recommend annual reporting of both allocations to projects and their expected impact. Impact reporting is also essential as investors want to be informed of positive outcomes of their investments. While there is no globally accepted list of impact metrics for SBE projects given that they span from seafood to tourism and to marine protected areas, ICMA’s Harmonised Framework for Impact Reporting nevertheless includes explicit indicators for reporting of the impact of “blue bonds,” under several project categories, including Biodiversity, Climate Change Adaptation, and Living Natural Resources.<sup>25</sup> Appendix 1 of this Guidance provides a list of examples that issuers could use to report on outputs and impacts of “blue bonds.”

### F. Obtain an External Review

Post-issuance, it is recommended that an issuer’s management of proceeds be supplemented using an external auditor, or a third party, to verify the internal tracking and the allocation of funds from the green (blue) bond proceeds to eligible green (blue) projects.

<sup>24</sup> More details on types of external review and how to manage the review process can be found in [ICMA’s Guidelines for External Reviewers](#), which provides voluntary guidance relating to professional and ethical standards for external reviewers, as well as to the organization, content and disclosure for their report, and [ADB’s Guidance on Issuing Green Bonds](#).

<sup>25</sup> ICMA’s Harmonised Frameworks for Impact Reporting of both green and social bonds outline general core principles and recommendations for reporting to provide issuers with a reference as they develop their own reporting: ICMA. 2022. [Handbook: Harmonised Framework for Impact Reporting](#).

# Appendix 1: Examples of Exclusions and Reporting on Outputs and Impacts of “Blue Bonds”

Based on the blue project categories in Table 1, examples of activities that should be excluded, project outputs, and impact indicators are provided here for the following:

- (i) Coastal Climate Adaptation and Resilience
- (ii) Marine Ecosystem Management, Conservation, and Restoration
- (iii) Sustainable Coastal and Marine Tourism
- (iv) Sustainable Marine Value Chains
  - (a) Sustainable Marine Fisheries Management
  - (b) Sustainable Aquaculture Operations
  - (c) Sustainable Downstream Operations, Including Transparency and Traceability Across Supply Chains
- (v) Marine Renewable Energy
- (vi) Marine Pollution
  - (a) Wastewater Management
  - (b) Solid Waste Management
  - (c) Resource Efficiency and Circular Economy
  - (d) Non-point Source Pollution
- (vii) Sustainable Ports
- (viii) Sustainable Marine Transport

Note that these outputs and indicators are by no means an exhaustive and fully comprehensive list—rather the following tables are meant to provide a list of examples for each category.

1. COASTAL CLIMATE ADAPTATION & RESILIENCE	
EXCLUSIONS:	
<ul style="list-style-type: none"> <li>Grey infrastructure in ecologically sensitive areas</li> </ul>	
Impact Reporting	
Example Project Outputs	Example Impact Indicators
Nature-based solutions to coastal protection implemented	Area benefiting from improved climate resilience and disaster risk management (ha) Reduction in land-loss from coastal erosion (km <sup>2</sup> )
Hybrid (“grey green”) solutions to coastal protection implemented (e.g., combination of grey structures like groins, breakwaters, and seawalls with green solutions like restoration of vegetation on seawalls)	Area benefiting from improved urban environment, climate resilience, and disaster risk management (ha)
Coral reefs protected or restored to help protect coastal communities from disaster impacts	Area of protected or restored habitat (ha) Maintenance and safeguarding (km <sup>2</sup> ) and increase (%) of protected area/other effective area-based conservation measure/habitat Changes in CO <sub>2</sub> , nutrient, and/or pH levels for coastal vegetation, and coral reefs (%)
Mangrove forest sustainably managed, conserved, or enhanced to reduce the impact of waves and reduce storm surge and flood depth	Mangrove forest under improved conservation and/or restoration (ha)
Integrated coastal zone management plan developed and/or implemented	Coastal area improved through integrated coastal zone management (ha)
Beach restored through artificial breakwater and dune planting	Area of newly restored beach as a result of investment (ha)
Potential Social Co-Benefits	
Improved early warning systems	Number of people and/or enterprises (e.g., companies or farms) benefiting from measures to mitigate the consequences of floods and droughts

2. MARINE ECOSYSTEM MANAGEMENT, CONSERVATION, AND RESTORATION	
Example Project Outputs	Example Impact Indicators
Marine Protected Areas established, or management strengthened	Marine Environment with improved management (ha)
Marine Spatial Plans (MSPs) developed with the appropriate MSP tools in place	Marine Environment with improved management (ha)
Critical ecosystems (e.g., mangrove forests, coral reef, seagrass meadow, coastal wetland, river embankment, or salt marsh) sustainably managed, conserved or restored	Coastal or marine area under improved management, conservation, or restoration (ha) Increase in area of fragile and sensitive habitat/ecosystem (%)
Invasive species eradication or control programs implemented	Reduction in invasive species populations (biomass) (outcome)
Management, monitoring, and enforcement systems utilizing high-level and digital technologies developed (including data management tools)	Coastal or marine area under improved management, conservation, or restoration (ha)
Potential Social Co-Benefits	
Community benefit from a funded project	Target population represented in decision making processes and structures over resource access and use (number)

### 3. SUSTAINABLE COASTAL AND MARINE TOURISM

#### EXCLUSIONS:

- Destination development with negative environmental, social, and governance impacts within protected areas, critical habitat for endangered, threatened, and protected (ETP) species, or areas providing vital ecosystem services such as coastal flood defense
- Involuntary displacement of local communities
- Air pollution including GHG emissions
- Water pollution

Example Project Outputs	Example Impact Indicators
Sustainable tourism management policies, plans, or regulations developed to national, regional, or global standards	Policies, plans, or regulations drafted (number)
Managing, conserving, or restoring critical ecosystems	Revenues generated from permitted visitors Operators (number) certified to GSTC-accredited sustainable tourism certifications
Energy and water efficiency programs for coastal tourism facilities and destinations implemented	Entities with improved management of energy and water resources (number) (outcome)
Solid waste and wastewater management capacity for coastal tourism destinations improved	Additional wastewater management and solid waste management capacity installed or implemented (liters/ tons) Absolute or percentage reduction in local pollutants
Potential Social Co-Benefits	
Behavior change campaign to increase environmentally sustainable behaviors by tourists (or community) implemented	Behavior change campaigns completed (number); fundamental knowledge, action and/or behavior improved (survey results) (outcome)

#### 4. SUSTAINABLE MARINE VALUE CHAINS

a. Sustainable Marine Fisheries Management		b. Sustainable Aquaculture Operations	
<b>EXCLUSIONS:</b> <ul style="list-style-type: none"> <li>Species on the International Union for Conservation of Nature (IUCN) Red-list for Endangered, Threatened, or Protected Species (ETP)</li> <li>Lack of compliance with local, national, or international laws and regulations</li> <li>Destructive and illegal fishing practices</li> <li>Lack of bycatch avoidance/mitigation measures.</li> </ul>		<b>EXCLUSIONS:</b> <ul style="list-style-type: none"> <li>Farm siting illegal or impacting on key ecological areas</li> <li>Use of harmful chemicals</li> </ul>	
Example Project Outputs	Example Impact Indicators	Example Project Outputs	Example Impact Indicators
Ecosystem-based fisheries management plans developed and implemented	Management plans developed and adopted (number)	Development of new, or upgrades to existing infrastructure for sustainable aquaculture, algaculture, and/or mariculture	Production of sustainable aquaculture, algaculture, and/or mariculture (tons) (outcome)
Agreements on regional cooperation for reforming fisheries standards and improving compliance developed, particularly about illegal, unreported, and unregulated fishing	Vessel compliance (%)	Development of new technologies to reduce pollution from aquaculture systems	New technologies developed (number)
Integration of by catch exclusion devices in fishing fleets	Avoided bycatch (tons) (outcome)	Research and development of alternative (not wild-caught) feeds for aquaculture	New feeds identified for testing (number)
Fishing gear modification programs, policies, and plans to reduce ghost fishing implemented	Solutions to reduce ghost fishing implemented (number)	Development of restorative aquaculture projects to improve water quality, carbon capture, and sustainable supplies of aquatic foods	Reduction of nutrient concentrations in marine waters (% or mmol)
<b>Potential Social Co-Benefits</b>		<b>Potential Social Co-Benefits</b>	
Improved labor policies and measures to prevent forced and child labor	Management plans developed and adopted (number)	Development of national sustainable aquaculture policies and plans	New policies or plans (number)
		Food security for vulnerable populations enhanced	Reduction in malnutrition among target population (%)
c. Seafood Supply Chain Sustainability			
<b>EXCLUSIONS:</b> <ul style="list-style-type: none"> <li>Labor or human rights abuses</li> <li>Workforce discrimination</li> </ul>			
Example Project Outputs	Example Impact Indicators		
Cold storage and processing facilities, certification schemes, traceability, marketing, and other initiatives established or improved. (To increase value of sustainably caught or farmed seafood)	Revenue to fishers increased (\$) (outcome) Sustainably harvested fish as percentage of total supply chain		
Using policy and technology to strengthen traceability of seafood supply chains	Supply chains in which traceability has been strengthened (number)		
Enhancing energy efficiency of seafood processing centers	Total GHG emissions reduction (tCO <sub>2</sub> e/ year) (outcome)		

## 5. MARINE RENEWABLE ENERGY

### EXCLUSIONS:

- Located in areas with high ecological value or that endanger habitats of ETP species
- Seabed disturbance and impacts
- Significant noise pollution
- Air Pollution including GHG

Example Project Outputs	Example Impact Indicators
Offshore wind farm installation	Annual GHG emissions reduced/avoided in tons of CO <sub>2</sub> e Annual renewable energy generation in MWh/GWh (electricity) and GJ/TJ (other energy)
End-of-life decommissioning of offshore wind farm installation	Third-party verification that the decommissioning process was completed using best practice standards
Physical design improvements implemented to increase efficiency of renewable energy installation and surrounding infrastructure	Average energy generation increased (%) Averaged energy usage decreased (%)
Research and development into coastal renewable energy generation, to increase efficiency, reduce costs, and minimize or enhance nature impacts	Number and scale of projects financed/outcomes Number of new technologies produced
Potential Social Co-Benefits	
Regional training programs to build capacity and skills in renewable energy development and management	Local jobs created for target population (number)
Re-staffing from oil and gas (polluting) industries to renewable energy of employees with similar skills' needs (e.g., offshore platforms)	Target population that gain "X" qualification after participating in the program (number)



## 6. MARINE POLLUTION

**EXCLUSIONS:**

- Built-in obsolescence
- Lack of compliance with policies and regulations

a. Wastewater Management	
Example Project Outputs	Example Impact Indicators
Wastewater collection and treatment systems built or upgraded	Wastewater treatment capacity added or improved (m <sup>3</sup> /day)
Policies and regulations to improve wastewater collection and treatment	Annual absolute (gross) amount of wastewater discharge avoided before and after the project in m <sup>3</sup> /a and p.e./a and as % (outcome)
Potential Social Co-Benefits	
Lower exposure of coastal communities and ocean users to health hazards of chemical and sewage pollution	Target population benefiting from lower rates of pollution-related issues after exposure to coastal marine environment

b. Solid Waste Management	
Integrated solid waste management systems and infrastructure (including “reduce, reuse, and recycle” approaches) improved	Waste prevented, minimized, reused, or recycled before and after the project (% of total waste and/or in absolute amount in tons per annum) (outcome)
Coastal or riverside landfills or open dumps rehabilitated to improve containment	Rehabilitated landfills or open dumps (number)
Urban stormwater management systems improved to prevent plastics and other waste from entering waterways during floods	Stormwater management systems improved (number)
Regional or subregional technical standards for plastics types, recycled plastics, and plastic products developed	Regional standards developed (number)  Amounts of plastic materials properly collected and disposed, or recycled, per year (tons)
Policy and regulatory measures (e.g., market-based instruments and fiscal incentives) to increase collection rates developed	Policies and regulations drafted (output) and adopted (number) (outcome)
Potential Social Co-Benefits	
Evidence that waste infrastructure development and improvement plans integrate informal waste sector workers	Plans for inclusion (number)

c. Resource Efficiency & Circular Economy	
Innovative technologies or approaches that reduce single-use plastic production or consumption, or that keep plastics out of the ocean, developed and/or piloted	Solutions to enhance plastic pollution control and resource efficiency implemented (number) (outcome)
Capacity-building programs on circular economy implemented	Entities incorporating circular economy principles (number) (outcome)  Waste that is prevented, minimized, reused, or recycled (% of total waste) or (absolute amount in tons per annum)

d. Non-Point Source Pollution	
Sustainable agriculture programs that reduce inputs of fertilizer and agrochemicals developed	Fertilizer and agrichemical use that is prevented (tons per annum) (outcome)
Soil erosion along rivers that flow to the ocean reduced through forest protection, reforestation, and increasing vegetation in riparian zones	Protected forest, reforestation, and planted riparian zones (ha)
Land use planning, policies, and regulations developed to reduce non-point source pollution (e.g., putting sustainable land and water resources management systems in place)	Area covered by sustainable land and water resources management practices (ha) (outcome)
New technologies to reduce agricultural pollution developed	New technologies developed (number)
Potential Social Co-Benefits	
Improved safety standards and working conditions for agricultural workers	Target population benefiting from improved safety standards (number)  Target population benefiting from improved safety training (number and type)  Lost time incidents per 100 person years (days/100 person years)

## 7. SUSTAINABLE PORTS

### EXCLUSIONS:

- Ports with air pollution fines
- Non-compliance with the International Convention for the Prevention of Pollution from Ships (MARPOL), International Maritime Organization (IMO), national regulations, and best practice for solid and chemical waste/runoffs from ports into sea
- Evidence of oil spills and non-compliance with MARPOL, IMO, national regulations and best practice for oil transfer and management
- Loss of critical IUCN red-listed habitats and species in the development and implementation of the port
- Building on greenfield sites

Example Project Outputs	Example Impact Indicators
Port environmental management systems developed or improved	Ports with improved environmental management (number)
Oil spill disaster management plans with training programs for port workers implemented	Entities with improved planning, policies, and regulations (number) Oil spill disaster protocols established (number) and successfully tested (number) in simulated disasters
Port renewable energy generation systems built or upgraded	Total GHG emissions reduction (tCO <sub>2</sub> e/year) (outcome)
Port waste reduction and recycling initiatives implemented	Port-generated waste that is prevented, minimized, reused, or recycled (% of total waste and/or in absolute amount in tons per annum) (outcome)
Integration of sustainable ports into wider sustainable development plans and marine spatial plans	Spatial management and operational policies in place to protect marine species
Potential Social Co-Benefits	
Community and stakeholder support for port operations	Development of a Community Benefits Agreement (CBA) that outlines publicly accepted benefits the community will receive from the operations of the port.

## 8. SUSTAINABLE MARINE TRANSPORT

### EXCLUSIONS:

- Vessels running fully on fossil fuels including LNG
- Vessels exceeding limit values for SO<sub>x</sub>, NO<sub>x</sub>
- Companies in violation of IMO Ballast Water Treaty or lacking hull treatments against biofouling
- Companies that are not in compliance with IMO and MARPOL regulations relating to waste disposal at sea, or that are disposing of toxic and quantifiably high levels of any waste into the sea

Example Project Outputs	Example Impact Indicators
Retrofitting vessels for decarbonization and emissions reduction, energy efficiency, or improved ballast management	Ships with new measures (number) Annual GHG emissions reduced (tCO <sub>2</sub> e)
Commissioning vessels that utilize alternatives to heavy fuel oil, provide improved fuel efficiency, leverage alternative technologies for low-carbon transport, or present significantly lower emissions profiles	Ships with new measures (number) Annual GHG emissions reduced (tCO <sub>2</sub> e)
Sustainable vessel deconstruction and recycling (or scrapping)	Shipping companies using responsible shipbreaking practices (number) (outcome)
Integration of maritime transportation with marine spatial planning and integrated zone management	Spatial management and operational policies in place to protect marine species
Potential Social Co-Benefits	
Percentages of female seafarer recruits and of female seafarers in senior management	Percentage over x%

CO<sub>2</sub> = carbon dioxide, GHG = greenhouse gas, GJ = giga joules, GSTC = Global Sustainable Tourism Council, GWh = gigawatt-hour, ha = hectare, km<sup>2</sup> = square kilometer, LNG = liquefied natural gas, m<sup>3</sup> = cubic meter, m<sup>3</sup>/a = cubic meter per annum, MWh = mega watt hour, NO<sub>x</sub> = nitrogen oxide, p.e./a = private equity per annum, SO<sub>x</sub> = sulfur oxide, tCO<sub>2</sub>e = ton of carbon dioxide equivalent, TJ = terajoule.

Source: Author's own compilation.

# Appendix 2: Examples of “Blue Bond” Issuance Aligning with the Green Bond Principles and Sustainability-Linked Bond Principles

## UOP “Blue Bonds”

<b>Issuer</b>	<b>Asian Development Bank— Multisector</b>
<b>Size</b>	A\$208 & NZ\$217 c. \$300 million
<b>Year</b>	September 2021
<b>Description</b>	First MDB issue under a green and blue bond framework. Complementing ADB’s Healthy Ocean Action Plan, sectors that are eligible for financing include fisheries, aquaculture, agriculture, wastewater and sanitation, solid waste management, marine renewable energy, and green ports and shipping where investments will contribute to ocean health through ecosystem and natural resource management, pollution control, sustainable coastal and marine development, and ocean finance.
<b>SPO</b>	Center for International Climate and Environmental Research - Oslo (CICERO) <a href="https://www.adb.org/sites/default/files/related/366261/cicero-shades-spo-adb-20210810.pdf">https://www.adb.org/sites/default/files/related/366261/cicero-shades-spo-adb-20210810.pdf</a>
<b>Framework</b>	<a href="https://www.adb.org/sites/default/files/publication/731026/adb-green-blue-bond-framework.pdf">https://www.adb.org/sites/default/files/publication/731026/adb-green-blue-bond-framework.pdf</a>
<b>Other Links</b>	Framework based on the ADB Ocean Finance Framework <a href="https://www.adb.org/sites/default/files/publication/777461/adb-ocean-finance-framework.pdf">https://www.adb.org/sites/default/files/publication/777461/adb-ocean-finance-framework.pdf</a>

<b>Issuer</b>	<b>BDO Unibank Inc— Multisector</b>
<b>Size</b>	\$100 million
<b>Year</b>	May 2022
<b>Description</b>	First “blue bond” issued by the private sector in Southeast Asia. This issuance will expand financing for projects that help prevent marine pollution and preserve clean water resources, while supporting the country’s climate goals. The blue bond has a tenor of 7 years.
<b>SPO</b>	<a href="https://www.sustainalytics.com/frameworks/bdo-sustainable-finance-framework-second-party-opinion">BDO Sustainable Finance Framework Second-Party Opinion (sustainalytics.com)</a>
<b>Framework</b>	<a href="https://www.bdo.com.ph/news-and-articles/BDO-Unibank-Blue-Bond-USD-100-million-first-private-sector-issuance-southeast-asia-IFC-marine-pollution-prevention-clear-water-climate-goals-sustainability">BDO-Sustainable-Finance-Framework-May2022.pdf</a>
<b>Other Links</b>	<a href="https://www.bdo.com.ph/news-and-articles/BDO-Unibank-Blue-Bond-USD-100-million-first-private-sector-issuance-southeast-asia-IFC-marine-pollution-prevention-clear-water-climate-goals-sustainability">https://www.bdo.com.ph/news-and-articles/BDO-Unibank-Blue-Bond-USD-100-million-first-private-sector-issuance-southeast-asia-IFC-marine-pollution-prevention-clear-water-climate-goals-sustainability</a>

<b>Issuer</b>	<b>KEXIM Bank - Maritime Transportation</b>
<b>Size</b>	\$1 billion
<b>Year</b>	January 2023
<b>Description</b>	KEXIM, the government-run bank issued 3-year foreign currency bonds worth \$3.5 billion. As part of this offering, \$1 billion in 10-year global bonds were issued in the form of the Republic of Korea’s first “blue bond,” or a special-purpose bond, limited to use in marine ecosystem-friendly projects. KEXIM supplemented their existing Sustainable Finance Framework from September 2021.
<b>SPO</b>	<a href="https://www.dnv.com/industry/energy-and-transportation/marine">DNV</a>
<b>Framework</b>	<a href="#">[Updated] Sustainable Finance Framework(2023)</a>
<b>Other Links</b>	<a href="https://www.kedglobal.com/banking-finance/newsView/ked202301060002">https://www.kedglobal.com/banking-finance/newsView/ked202301060002</a>

<b>Issuer</b>	<b>BRK Ambiental Região Metropolitana de Maceió S.A—Wastewater</b>
<b>Size</b>	R\$ 1.95 billion c. \$365 million
<b>Year</b>	November 2022
<b>Description</b>	The proceeds of this 20-year issuance will allow the universalization of sanitation services that will benefit more than 1.5 million people who live in the capital city of Maceió and 12 other surrounding cities (in northeast Brazil). These sanitation services had been granted to BRK on the first auction structured by the BNDES and carried out after the approval of the Sanitation Regulatory Framework, in year 2020. The issuance, oversubscribed by 1.6x, included the banks Bradesco, ItaúBBA, Santander, UBS/Banco do Brasil, Safra, and XP, as part of the syndicate led by BTG Pactual.
<b>SPO</b>	<a href="#">Sustainalytics</a>
<b>Framework</b>	Sustainable Financing Framework <sup>a</sup>
<b>Other Links</b>	<a href="https://api.mziq.com/mzfilemanager/v2/d/9ffe3afc-e8e3-4e62-9f49-04166095f065/5f60181c-772c-70b7-8564-9bcc0f300924?origin=1">https://api.mziq.com/mzfilemanager/v2/d/9ffe3afc-e8e3-4e62-9f49-04166095f065/5f60181c-772c-70b7-8564-9bcc0f300924?origin=1</a>

## Sustainability-Linked Bonds

<b>Issuer</b>	<b>Thai Union—Aquaculture and Fisheries</b>
<b>Size</b>	THB5 billion c. \$152 million
<b>Year</b>	July 2021
<b>Description</b>	This 7-year, senior unsecured bond was the first SLB in Thailand and also the first globally to introduce step-up and/or step-down facilities related to the achievement of SPTs. These targets include remaining in the Dow Jones Sustainability Index Emerging Markets and ranking in the top 10 companies for the Dow Jones Sustainability Index Food Products Industry Index, reducing Thai Union's Scope 1 and Scope 2 carbon emissions from manufacturing operations by 4% annually (carbon intensity), and increasing the monitoring and surveillance of Thai Union's wild-caught tuna supply chains, whether electronically and/or through the use of human observers at sea. Investors in the bond will be entitled to a lower or higher coupon should the company achieve or fail to achieve these SPTs in 2023 and 2026.
<b>SPO</b>	<a href="#">Sustainalytics</a>
<b>Framework</b>	<a href="#">tu-sustainability-linked-july-2021.pdf (thaiunion.com)</a>
<b>Other Links</b>	<a href="#">Thai Union Launches Thailand's First Sustainability-Linked Bond   Thai Union</a>

ADB = Asian Development Bank, BDO = Banco de Oro, BNDES = National Bank for Economic and Social Development, DNV = Der Norske Veritas, KEXIM = Export—Import Bank of Korea, MDB = multilateral development bank, SLB = sustainability-linked bond, SPO = second party opinion, SPT = Sustainability Performance Targets, UOP = use of proceeds.

<sup>a</sup> = Not publicly available.

Source: Author's own compilation.

# References

- ADB. 2021. *Detailed Guidance for Issuing Green Bonds in Developing Countries*. Manila. <https://www.adb.org/sites/default/files/publication/761056/guidance-issuing-green-bonds.pdf>.
- Asia Pacific Loan Market Association, Loan Market Association, and Loan Syndications & Trading Association. 2022. *Green Loan Principles*. [https://www.lma.eu.com/application/files/4716/7715/0338/Green\\_Loan\\_Principles\\_23\\_February\\_2023.pdf](https://www.lma.eu.com/application/files/4716/7715/0338/Green_Loan_Principles_23_February_2023.pdf).
- \_\_\_\_\_. 2023. *Sustainability-linked Loan Principles*. [https://www.lma.eu.com/application/files/9216/8192/1243/Sustainability\\_Linked\\_Loan\\_Principles\\_23\\_February\\_2023\\_v.2.pdf](https://www.lma.eu.com/application/files/9216/8192/1243/Sustainability_Linked_Loan_Principles_23_February_2023_v.2.pdf).
- Bosman, P. et al., 2023. *The Blue Bond Market: A Catalyst for Ocean and Water Financing*. *Journal of Risk and Financial Management*. 16 (3). p. 184. <https://www.mdpi.com/1911-8074/16/3/184>.
- Brondizio, E. S. et al., eds. 2019. *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Bonn, Germany: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Secretariat. <https://doi.org/10.5281/zenodo.3831673>.
- FAO. 2020. *The State of World Fisheries and Aquaculture 2020. Sustainability in Action*. Rome. <https://doi.org/10.4060/ca9229en>.
- Friends of Ocean Action. 2020. *The Ocean Finance Handbook: Increasing finance for a healthy ocean*, Lisbon. [https://www3.weforum.org/docs/WEF\\_FOA\\_The\\_Ocean\\_Finance\\_Handbook\\_April\\_2020.pdf](https://www3.weforum.org/docs/WEF_FOA_The_Ocean_Finance_Handbook_April_2020.pdf).
- ICMA. 2021. *Green Bond Principles—Voluntary Process Guidelines for Issuing Green Bonds*. <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>.
- \_\_\_\_\_. 2023. *Social Bond Principles—Voluntary Process Guidelines for Issuing Social Bonds*. <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/>.
- \_\_\_\_\_. 2021. *Sustainability Bond Guidelines*. <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-bond-guidelines-sbg/>.
- \_\_\_\_\_. 2023. *Sustainability-Linked Bond Principles - Voluntary Process Guidelines*. <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/>.
- \_\_\_\_\_. 2021. *Guidance Handbook*. <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/guidance-handbook-and-q-and-a/>.

- \_\_\_\_\_. 2022. *Guidelines for External Reviews*.  
<https://www.icmagroup.org/sustainable-finance/external-reviews/>.
- \_\_\_\_\_. 2023. *Mapping of the Sustainable Development Goals*.  
<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/mapping-to-the-sustainable-development-goals/>.
- \_\_\_\_\_. 2023. *Harmonized Frameworks for Impact Reporting*.  
<https://www.icmagroup.org/sustainable-finance/impact-reporting/green-projects/>.
- IFC. 2022. *Guidelines for Blue Finance: : Guidance for Financing the Blue Economy, Building on the Green Bond Principles and the Green Loan Principles*. Washington, DC. [https://www.ifc.org/wps/wcm/connect/industry\\_ext\\_content/ifc\\_external\\_corporate\\_site/financial+institutions/resources/guidelines-for-blue-finance](https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/resources/guidelines-for-blue-finance).
- Michetti, C. et al., 2023. *Sustainable Debt Global State of the Market 2022, Climate Bonds Initiative 2023*.  
<https://www.climatebonds.net/resources/reports/global-state-market-report-2022>.
- Gruber, N. et al., 2019. The Oceanic Sink for Anthropogenic CO<sub>2</sub> from 1994 to 2007. *Science*. 363 (6432). pp. 1193-1199; H.-O. Pörtner et al, eds. 2019. *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. Intergovernmental Panel on Climate Change (IPCC). [https://www.ipcc.ch/site/assets/uploads/sites/3/2019/12/SROCC\\_FullReport\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2019/12/SROCC_FullReport_FINAL.pdf).
- Organisation for Economic Co-operation and Development (OECD). 2016. *The Ocean Economy in 2030*. Paris: OECD. <https://doi.org/10.1787/9789264251724-en>.
- \_\_\_\_\_. 2020. *Reframing Financing and Investment for a Sustainable Ocean Economy*, OECD Environment Policy Papers, 22. Paris: OECD <https://doi.org/10.1787/c59ce972-en>.
- Sumaila, U. R. et al., 2021. Financing a Sustainable Ocean Economy. *Nature communications*. 12 (1). p. 3259.  
<https://doi.org/10.1038/s41467-021-23168-y>.
- UNEP FI. 2022. *Diving Deep: Finance, Ocean Pollution and Coastal Resilience*. Geneva.  
<https://www.unepfi.org/publications/diving-deep/>.
- \_\_\_\_\_. 2022. *Harmful Marine Extractives: Understanding the Risks & Impacts of Financing Non-renewable Extractive Industries*. Geneva. <https://www.unepfi.org/publications/harmful-marine-extractives-deep-sea-mining/>.
- \_\_\_\_\_. 2022. *Harmful Marine Extractives: Understanding the Risks & Impacts of Financing Non-renewable Extractive Industries – Dredging & Marine Aggregate Extraction*. Geneva. <https://www.unepfi.org/publications/harmful-marine-extractives-dredging/>.
- \_\_\_\_\_. 2022. *Harmful Marine Extractives: Understanding the Risks & Impacts of Financing Non-renewable Extractive Industries – Offshore Oil & Gas*. Geneva. [https://www.unepfi.org/wordpress/wp-content/uploads/2022/04/Harmful-Marine-Extractives\\_Offshore-Oil-Gas.pdf](https://www.unepfi.org/wordpress/wp-content/uploads/2022/04/Harmful-Marine-Extractives_Offshore-Oil-Gas.pdf).
- \_\_\_\_\_. 2022. *Recommended Exclusions for Sustainable Blue Economy Financing*, Geneva.  
<https://www.unepfi.org/publications/turning-the-tide-recommended-exclusions/>.
- \_\_\_\_\_. nd. *The Principles*. <https://www.unepfi.org/blue-finance/the-principles/>.

- \_\_\_\_\_. 2021. *Turning the Tide: How to Finance a Sustainable Ocean Recovery – A Practical Guide for Financial Institutions*. Geneva. <https://www.unepfi.org/publications/turning-the-tide/>.
- United Nations Global Compact. 2020a. *Practical Guidance to Issue a Blue Bond*. New York City. <https://unglobalcompact.org/library/5798>.
- \_\_\_\_\_. 2020b. *Practical Guidance for the UN Global Compact Sustainable Ocean Principles*. New York City. <https://d306pr3pise04h.cloudfront.net/docs/publications%2FSustainable+Ocean+Principles.pdf>.



**Mangroves along the coast.**

The mangrove ecosystem along the coastal saline and brackish waters of Coron, Palawan helps in stabilizing the coastline and preventing erosion (photo by ADB).



# Bonds to Finance the Sustainable Blue Economy

## A Practitioner's Guide

This report provides guidance to issuers on the key components of launching credible "blue bonds" – green bonds focused on the sustainable use of maritime resources and the promotion of related sustainable economic activities. It aids investors in evaluating the environmental impact of such investments and assists underwriters in ensuring integrity of market transactions. The guidance builds on existing global market standards underlying sustainable bond markets. It offers advice on use-of-proceed bonds to finance projects supporting the Sustainable Blue Economy and ocean health. Additionally, it incorporates insights to expand its relevance beyond bonds to other capital market debt instruments, including loans.

### About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

### About the International Capital Market Association

ICMA, a not-for-profit global trade association, promotes well-functioning cross-border debt capital markets, which are essential to fund sustainable economic growth. It provides industry-driven standards and recommendations, prioritizing three core fixed income market areas: primary, secondary, repo and collateral, with cross-cutting themes of sustainable finance and fintech. ICMA works with regulatory and governmental authorities, helping to ensure that financial regulation supports stable and efficient capital markets. For more information, visit [www.icmagroup.org](http://www.icmagroup.org) / [@ICMAGroup](https://twitter.com/ICMAGroup).

### About the International Finance Corporation

IFC—a member of the World Bank Group—is the largest global development institution focused on the private sector in emerging markets. In 2022, IFC committed a record \$32.8 billion to private companies and financial institutions in developing countries, leveraging the power of the private sector to end extreme poverty and boost shared prosperity. For more information, visit [www.ifc.org](http://www.ifc.org).

### About the United Nations Environment Programme Finance Initiative

The United Nations Environment Programme Finance Initiative (UNEP FI) is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. UNEP FI works with more than 450 members and over 100 supporting institutions to help create a financial sector that serves people and planet while delivering positive impacts. For more information, visit [unepfi.org](http://unepfi.org).

### About the United Nations Global Compact

As a special initiative of the UN Secretary-General, the UN Global Compact is a call to companies worldwide to align their operations and strategies with Ten Principles in the areas of human rights, labor, environment, and anti-corruption. Our ambition is to accelerate and scale the global collective impact of business by upholding the Ten Principles and delivering the Sustainable Development Goals through accountable companies and ecosystems that enable change. For more information, visit [unglobalcompact.org](http://unglobalcompact.org).



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