



T.RowePrice

Blue bonds: A growing resource for sustainability financing

In the Spotlight
November 2023

Key Insights

- Under stress from a variety of sources and severely underfunded, many water resources are in dire need of investment.
- Blue financing could support projects spanning regions, sectors, and asset classes, offering possibilities for fixed income diversification.
- Blue bonds are used exclusively for funding or refinancing ocean-friendly and other clean water projects.

Issuance of sustainable debt has exploded over the past 10 years as investors seek investment returns by allocating capital toward sustainability efforts. This trend is likely to continue as climate change-related challenges become increasingly frequent and disruptive, and several governments have responded by deploying increasing amounts of capital to sustainable projects.

Increasing degradation of inland water and ocean ecosystems have created an urgent need for solutions. Blue bonds are

becoming an innovative means to finance marine projects as well as for water resource management. Blue financing is an emerging area of sustainable finance, with growing interest from investors and issuers alike. A subset of green financing, blue bonds and loans provide funds for ocean and water resource management projects while green bonds finance a broader set of environmental projects.

To contextualize the cost of ocean decline in economic terms, the United Nations (UN) Environment Programme Finance



Matt Lawton, CFA
Portfolio Manager, Global Impact Credit Strategy



Tongai Kunorubwe, CFA
Head of ESG, Fixed Income

Initiative estimates that ocean-linked sectors contribute USD 2.5 trillion in value to the global economy and support over 30 million jobs. Additionally, the ocean provides a vital source of protein to 3 billion people, and its ecosystems are significant mitigators of climate change.

Access to safe, clean, and accessible water is in short supply for billions of people. Shortages are exacerbating agricultural challenges and hindering humanitarian efforts. Meanwhile, oceans generate oxygen, absorb excess heat and

The sustainable debt market

(Fig. 1) The main types of sustainable debt



As of November 2023.
Source: T. Rowe Price.

carbon emissions produced by human activity, and support vital ecosystems. Yet they are under threat from climate change, pollution, overfishing, and habitat damage, among a host of other pressures.

Blue bonds in sustainable finance

The sustainable bond market comprises green, blue, social, sustainability, and sustainability-linked bonds. The sustainable bond market has experienced rapid growth in recent years, both in terms of size, surpassing USD 1 trillion annually, and the breadth of impact themes. Despite this, it remains quite small compared with traditional debt markets. Moreover, the UN has stated that sustainable projects have been underfunded, estimating that a USD 5–7 trillion annual investment is needed to meet Sustainable Development Goals (SDGs), underscoring the urgency and need for additional investment.

Blue bonds could help accelerate the growth of the sustainable bond market while facilitating capital flow to address this funding gap, and recent industry guidance can help investors direct capital toward projects aligned with SDGs. Asset managers, in their role of enabling investors to deploy capital at scale, can act as a catalyst for positive change in the sustainable development and preservation of finite shared water resources.

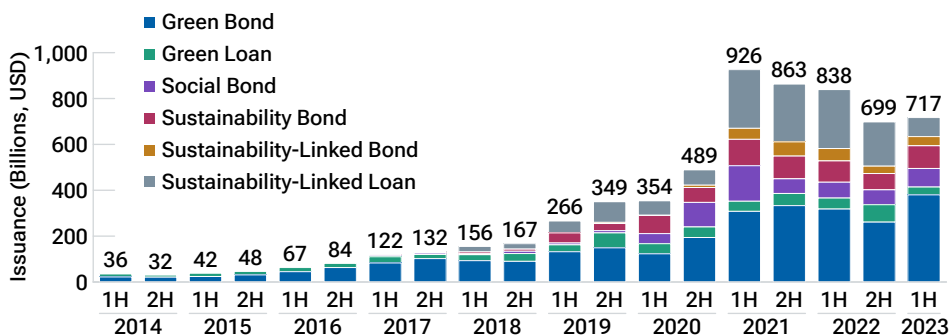
Frameworks for sustainable projects

All UN members adopted the 17 SDGs in 2015 that defined specific targets to be met by 2030. The SDGs provide a blueprint of global goals to achieve a sustainable future for all. Though progress has been slow, issuance of investments aligned with SDGs has picked up.

Importantly, the International Finance Corporation, a member of the World Bank Group, generated guidelines for blue finance, building on the International Capital Markets Association's principles and guidelines for sustainable bond issuance. These guidelines help to inform issuers and investors alike about expectations to be met to use the blue bond label and avoid the potential for "bluewashing"—the inadvertent or intentional misrepresentation of the blue and broader sustainability characteristics of a financial product and/or of the sustainable commitments and/or achievements of an issuer. Currently, the vast majority of labeled sustainable bonds align with these guidelines. Blue bonds and loans are used exclusively for financing ocean-friendly or clean water projects. Sovereigns, development banks, quasi-sovereigns, and corporate issuers, among others, can finance projects that align with UN SDG 6 (clean water and sanitation) and SDG 14 (life below water) via blue bonds or loans.

The sustainable debt market has increased

(Fig. 2) Annual sustainable debt issuance by instrument type



As of June 30, 2023.

Sources: BloombergNEF and Bloomberg L.P.

Water resource pressure points

A variety of challenges—chiefly water scarcity, pollution and degradation, and risks to marine ecosystems—are stressing global water resources and limiting global growth.

Water scarcity

While water covers over 70% of the Earth's surface, increasing demand and unpredictable supply have led to significant accessibility challenges for an estimated 2 billion people. Clean water is essential to health, food security, poverty reduction, and economic stability.

Additionally, climate change has exacerbated the unpredictability of water availability, spurring water management challenges globally. The impacts of water scarcity are made worse by pollution contaminating water sources, making it unusable for many purposes. Pollution from oil spills, the shipping industry, chemical and industrial waste, and runoff from agriculture are degrading the marine ecosystem. Trash, notably from plastic, is another form of pollution. In 2016, the World Bank estimated that USD 114 billion is needed each year through 2030 to achieve its clean water goal (SD6).

Biodiversity

The severe deterioration of biodiversity—the forms of life in an ecosystem—is in part evidenced by the rapid acceleration in the extinction of species. We believe that preserving biodiversity is essential to the long-term social and economic development of humanity and that biodiversity loss and climate change are fundamentally interlinked twin crises. The UN included SDG 14 (life below water) in response to concerns about stress on marine ecosystems. To date, it is the least funded SDG.

Oceans are the world's largest natural carbon sinks, which can absorb more carbon than they produce. Carbon sinks play a key role in controlling climate change as they absorb significant amounts of human-generated greenhouse gas emissions. By absorbing carbon from the atmosphere, the ocean is growing more acidic and directly harming some marine animals.

Addressing pressure points

The blue economy comprises activities associated with preserving the ocean and using them in a sustainable way to develop economies and improve livelihoods. Blue bonds may provide a tool for investors seeking to contribute to better environmental outcomes. As with any fixed income investment, blue bonds carry

“Clean water is essential to health, food security, poverty reduction, and economic stability.”

investment risks, which include credit risk and interest rate risk. Emerging markets are less established than developed markets and therefore involve higher risks.

The world's policymakers, governments, investors, and individuals alike all have an important role to play in the blue economy. The finance industry can provide some of the much-needed capital through innovative solutions such as blue bonds to help support and enhance ocean sustainability, mitigate against the threats of climate change, and improve access to clean water. These projects historically have been underfunded. As the urgency to face these struggles increases, so, too, does the need for investment. While a nascent market today, blue bonds offer an opportunity for investors seeking to

diversify their portfolios and invest directly in issuers and projects seeking to generate positive and measurable impact.

While blue bonds can support projects anywhere, we see heightened pressures in developing economies where capital is most scarce, spanning regions and sectors. Northern Africa and Western Asia are water-stressed regions, while Latin America's needs are more focused on aquaculture and agriculture, and Asia must contend with elevated levels of plastic pollution.

In addition to regional considerations, projects that support water resources and can be financed using blue bonds and loans span many sectors.



Blue financing mobilizes capital to projects addressing some of the challenges facing global water resources.

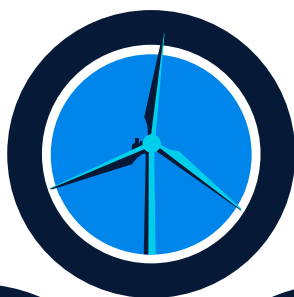
How blue bonds support the blue economy

(Fig. 3) Estimated costs of identified activities to support water resources by sector.



Transportation

Nearly 80% of international trade of goods is transported by ship. Transitioning the sector to low carbon could require over USD 1 trillion in investment.¹



Renewable Energy

Offshore wind energy provides an alternative energy source that produces sharply lower carbon emissions and is expected to expand notably, at an estimated cost of USD 840 billion.²



Aquaculture

In order to keep up with demand, sustainable aquaculture will need nearly USD 200 billion in capital investments over the next 10 years.³



Utilities

As the global population grows, the demand for clean, reliable water and effective wastewater management increases. Estimated needs are in excess of USD 20 trillion by 2050.⁴

¹ Source: UNCTAD (2023).

² Source: International Energy Agency (2019).

³ Source: Nature Conservancy (2019).

⁴ Source: World Water Council and OECD (2015).

INVEST WITH CONFIDENCE®

T. Rowe Price identifies and actively invests in opportunities to help people thrive in an evolving world, bringing our dynamic perspective and meaningful partnership to clients so they can feel more confident.

Important Information

This material is provided for informational purposes only and is not intended to be investment advice or a recommendation to take any particular investment action.

The views contained herein are those of the authors as of November 2023 and are subject to change without notice; these views may differ from those of other T. Rowe Price associates.

This information is not intended to reflect a current or past recommendation concerning investments, investment strategies, or account types, advice of any kind, or a solicitation of an offer to buy or sell any securities or investment services. The opinions and commentary provided do not take into account the investment objectives or financial situation of any particular investor or class of investor. Please consider your own circumstances before making an investment decision.

Information contained herein is based upon sources we consider to be reliable; we do not, however, guarantee its accuracy.

Past performance is not a reliable indicator of future performance. All investments are subject to market risk, including the possible loss of principal. All charts and tables are shown for illustrative purposes only.

T. Rowe Price Investment Services, Inc.

© 2023 T. Rowe Price. All Rights Reserved. T. ROWE PRICE, INVEST WITH CONFIDENCE, and the Bighorn Sheep design are, collectively and/or apart, trademarks of T. Rowe Price Group, Inc.