



FINANCING OPTIONS FOR A BLUE ECONOMY FOR JAMAICA

May 2023

© 2023 International Bank for Reconstruction and Development / The World Bank

1818 H Street NW

Washington DC 20433

Telephone: 202-473-1000

Internet: www.worldbank.org

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute, or be construed, or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

Table of Contents

Acknowledgements	6
Abbreviations	7
Executive Summary	9
1. Introduction.....	13
2. Jamaica's current blue economy investment landscape.....	15
2.1. Introduction.....	15
2.2. Government of Jamaica	15
2.3. Public Financial Institutions	18
2.4. Development Partners	19
2.4.1. International DFIs	19
2.4.2. Multilateral funds.....	21
2.4.3. Bilateral donors	23
2.5. Private Sector.....	24
2.6. Summary.....	25
3. Barriers to blue economy investment	27
3.1. Investment by the Government of Jamaica.....	27
3.1.1. Generic barriers	27
3.1.2. Blue economy specific challenges	29
3.2. Private investment	30
3.2.1. Generic barriers	30
3.2.2. Barriers: fisheries, mariculture & aquaculture	32
3.2.3. Barriers: sustainable tourism	33
3.2.4. Barriers: bioprospecting	34
3.2.5. Barriers: marine energy.....	35
3.2.6. Barriers: maritime transport	36
3.2.7. Barriers: ecosystem protection and restoration	36
4. Sovereign finance options.....	39

4.1. Introduction.....	39
4.2. Blue bonds.....	39
4.2.1. Description, design options and precedents.....	39
4.2.2. Opportunities and challenges.....	43
4.3. Debt for nature swaps.....	44
4.3.1. Description, design options and precedents.....	44
4.3.2. Opportunities and challenges.....	46
4.4. Dedicated taxation	47
4.4.1. Description, design options and precedents.....	48
4.4.2. Opportunities and challenges.....	50
4.5. International development partners	50
4.5.1. Description, design options and precedents.....	50
4.5.2. Multilateral sources	51
4.5.3. Bilateral sources	54
4.5.4. Opportunities and challenges.....	55
4.6. Other options to improve sovereign flows of finance towards blue economy	56
4.7. Summary.....	58
 5. Supporting private sector investment flows.....	 60
5.1. Blended finance options	60
5.1.1. Domestic blended finance opportunities	61
5.1.2. International blended finance opportunities	62
5.1.3. Opportunities and challenges.....	66
5.2. Government Policy	66
5.2.1. Overarching policies, regulations, measures and institutional framework	67
5.2.2. Fiscal incentives and market-based support.....	67
5.2.3. Increasing awareness	68
5.2.4. Supporting necessary training in new industries	68
 6. Thirteen priority next steps	 69
 7. Closing remarks	 72

List of Figures

Figure 1	Jamaican government expenditure expended to expand in coming years	16
Figure 2	Jamaican government capital budget by key Ministry	17
Figure 3	Jamaica's public debt is projected to fall significantly in the near future.....	28
Figure 4	Jamaica's debt is held by a balance combination of domestic and international investors and multilateral institutions	29
Figure 5	On many governance indicators, Jamaica performs as well as or better than its regional and income group peers	30
Figure 6	More than 50% of Jamaican firms report barriers to credit access as an obstacle to firm performance.....	31
Figure 7	More than 30% of Jamaican firms report that the cost of finance is a barrier to firm performance	32
Figure 8	The Seychelles Blue Bond was supported by a range of international partners	42
Figure 9	Trilateral debt-for-nature swaps involve NGOs reducing debt servicing costs associated with international bonds	45
Figure 10	Key steps in a blue economy PER	57
Figure 11	Concessional funding can unlock private capital	61
Figure 12	Bermuda's Blue Investment Facility will use blended finance to develop and support a pipeline of blue economy projects.	62
Figure 13	The grant and investment funds work in tandem to develop a sustainable policy pipeline	65

List of Tables

Table 1	Jamaica blue economy finance roles and active sectors to date	25
Table 2	Fisheries and conservation have been the focus of sovereign blue bond issuances... ..	41
Table 3	A range of multilateral funds could offer financing to the Jamaican government to support its blue economy efforts	51
Table 4	Options for the GOJ to raise finance to support the blue economy	58

Acknowledgements

This Report was prepared by a team of experts from the World Bank and Pengwern Associates, with significant contribution from the Planning Institute of Jamaica (PIOJ).

The core team of PIOJ was led by Claire Bernard and included Patrine Cole and Farrah Murray supported by a multi-agency Technical Review Committee including Mona Webber, Anthony McKenzie, Monique Curtis, Capt. Sydney Innis, Sandra Williams, Stephen Smikle and Ian Jones.

The Pengwern Associates team was led by John Ward and included Jack Rogers, Ed Day and Pieter Sayer.

Maja Murisic (World Bank) provided inputs and managed the technical assistance project under which this report was prepared. The technical assistance was financed by PROBLUE, a Multi-Donor Trust Fund, housed at the World Bank, that supports the development of integrated, sustainable and healthy marine and coastal resources.

The team wishes to sincerely thank the staff and experts from the various ministries, departments and agencies of the Government of Jamaica who shared their practical insights through meetings, interviews, and review of this Report.

Abbreviations

ADB	Asian Development Bank	MPAs	Marine Protected Areas
AF	Adaptation Fund	MSME	Micro small and medium sized enterprises
BE	Blue Economy	MW	Megawatts
BPE	Business process engineering	NAP	National Adaptation Plan
CEO	Chief Executive Officer	NCS	Natural climate solutions
CIF	Climate Investment Funds	NCST	National Commission on Science and Technology
CMU	Caribbean Maritime University	NDC	Nationally Determined Contribution
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation	NEPA	National Environment And Planning Agency
CPI	Climate Policy Initiative	NFA	National Fisheries Authority
CSR	Corporate Social Responsibility	NGO	Non-Governmental Organization
DBJ	Development Bank of Jamaica	OCPP	Ocean Country Partnership Programme
DCA	Development Credit Authority	ODA	Overseas Development Assistance
DFI	Development Finance Institution	ODI	Overseas Development Institute
DPF	Development Policy Framework	OECD	Organisation for Economic Cooperation and Development
ESG	Environmental and Social Governance	ORRAA	Ocean Risk and Resilience Action Alliance
FX	Foreign Exchange	P4	Public Private Partnership and Privatization (initiative of DBJ)
GCF	Green Climate Fund	PER	Public Expenditure Review
GDP	Gross Domestic Product	PIOJ	Planning Institute of Jamaica
GEF	Global Environment Facility	PLL	Precautionary and Liquidity Line
GFCR	Global Fund for Coral Reefs	PPCR	Pilot Program for Climate Resilience
GOJ	Government of Jamaica	PPEF	Palau's Pristine Paradise Environmental Fee
GSRJ	German Ship Repair Jamaica Limited	PPP	Public Private Partnership
GVA	Gross Value Added	RSF	Resilience and Sustainability Fund
GW	Gigawatts	SDG	Sustainable Development Goals
HEART / NSTA	Human Employment and Resource Training /National Service Training Agency	SeyCCAT	Seychelles Conservation and Climate Adaptation Trust
IBRD	International Bank for Reconstruction and Development	SME	Small and medium sized enterprises
ICMA	International Capital Markets Association	SOF	Sustainable Ocean Fund
ICT	Information and communications technology	SPV	Special Purpose Vehicle
IDB	Inter-American Development Bank	SRC	Scientific Research Council

IFI	International Financial Institution	STATIN	Statistical Institute of Jamaica
IMF	International Monetary Fund	tCO2e	tons carbon dioxide equivalent
IRP	Integrated Resource Plan	TEF	Tourism Enhancement Fund
JAMPRO	Jamaica Promotions Corporation	TNC	The Nature Conservancy
JSIF	Jamaica Social Investment Fund	UK-CIF	UK Caribbean Infrastructure Fund
MDB	Multilateral Development Bank	UNEP FI	United Nations Environment Program - Finance Initiative
MDTF	Multi-Donor Trust Fund	UNGC	United Nations Global Compact
MEGJC	Ministry of Economic Growth and Job Creation	WASH	Water, Sanitation and Hygiene
MoFPS	Ministry of Finance and Public Service	WB	World Bank

Executive Summary

This report provides analysis and evidence that the Government of Jamaica and other stakeholders can use as they consider how to support finance and investment flows into the blue economy. The blue economy is already a crucial component of Jamaica's economy: the gross value added (GVA) of sectors associated with the blue economy already account for around 20% of the country's gross domestic product (GDP). However, the potential for further growth - in sectors as diverse as fisheries, sustainable tourism, marine energy, marine transport - is significant. This growth is held back by a number of factors, of which difficulties associated with making new investments is particularly important. In recognition of this, the (draft) Blue Economy Roadmap commits the Government of Jamaica to develop a 'blue economy finance and investment framework'. The purpose of this report, in particular, is to provide analysis and materials that can assist in the development of this framework.

There are already important investment flows supporting the blue economy. In the public sector, around 9% of the Government of Jamaica's current budget is allocated to ministries and agencies that play a critical role in the blue economy. In addition, international financial institutions support business environment and market development reforms relevant to blue economy actors, while a number of multilateral and bilateral funds provide concessional financing for specific blue economy activities and projects. However, this spending is somewhat fragmented and uncoordinated, while there have been few efforts to take broader development programs implemented by domestic and international financial institutions and target them specifically to the blue economy. The private sector has shown a willingness to invest in the blue economy - such as the German Ship Repair Jamaica project - but a number of activities are still in their infancy and have not been tried at scale.

There are a number of challenges that the government faces in raising additional finance and allocating them to the blue economy. The most important of these is the country's macroeconomic and fiscal stabilization program. This effort to ensure that the program - which ensures that the government has sufficient fiscal flexibility to deal with future shocks - is proving successful and has been widely praised by organizations such as the IMF and the World Bank. However, this inevitably means that it is difficult to find public funding to support new blue economy initiatives. This challenge is compounded by data weaknesses - which make it difficult to make investment decisions - and a lack of policy frameworks and coordination mechanisms - which means there can be a lack of clarity about who and which parts of government should be making different blue economy investment decisions.

Private sector investment in the blue economy is constrained by both generic (economy-wide) and sector specific barriers. Of the generic barriers, difficult access to finance is critical, alongside barriers relating to security, the outward migration of university students, and complex business procedures. Some of the most important sector specific barriers include the absence of management plans for key fish stocks, limited awareness of sustainable tourism, underdeveloped policy frameworks for bioprospecting and marine energy, a lack of specialized skills to support marine transport offerings, and the lack of frameworks for monetizing and/or valuing the services provided by ecosystems.

The report explores a number of (innovative) financing mechanisms that the Government of Jamaica could consider to raise public resources for the blue economy. These are:

- blue bonds: debt instruments where proceeds are allocated exclusively to activities in the blue economy;

- debt for nature swaps: where one or more creditors forgive a portion of a debtor nation's debt in exchange for the debtor's commitment to use a portion of the savings to fund blue economy climate/conservation projects;
- levying new taxes or fees and ring fencing the proceeds for blue economy purposes; and
- accessing funding from international development partners.

These options are more or less relevant for different parts of the blue economy and they present both opportunities and challenges for the Jamaican government. Table ES1 summarizes.

Table ES1 Strengths and weaknesses of different sovereign finance options for the blue economy

Option	Most relevant BE sub-sector(s)	Opportunities	Challenges
Blue bonds	Ecosystem protection and restoration & fisheries	<ul style="list-style-type: none"> • Signaling GoJ to blue economy • Allows GoJ to diversify investor base • May generate price discount compared to conventional debt • Maturing product that Can raise substantial levels of capital 	<ul style="list-style-type: none"> • Need to identify project/activity pipeline • Lack of standardized definitions can make it difficult to know what activities/projects to focus on • Demonstrating compliance with use of proceeds can be demanding • Likely to require reliance on IFIs • May threaten debt sustainability
Debt for nature swaps	Ecosystem protection and restoration	<ul style="list-style-type: none"> • Supports debt sustainability and blue economy • Strong track record of projects to build on • Mainstreams blue economy across many actors 	<ul style="list-style-type: none"> • Creditor buy-in can be difficult to secure • Technical capacity requirements are significant with possibly large transaction costs • May have a negative impact on credit rating • Additional resources can only be used for some activities
Dedicated taxation	All	<ul style="list-style-type: none"> • Unilateral mechanism, no reliance on other actors • Modest rates can generate substantial revenues 	<ul style="list-style-type: none"> • Political economy concerns
International development partners	Ecosystem protection and restoration &	<ul style="list-style-type: none"> • No/low financing burden 	<ul style="list-style-type: none"> • Restricted eligibility requirements from specific funds

	marine energy	<ul style="list-style-type: none"> • Financing often complemented with technical assistance • Exclusive focus on blue economy 	<ul style="list-style-type: none"> • Relatively small amounts of funding available per transaction • Many allocation processes are competitive • Competing domestic priorities for funding • Relatively high transaction costs
--	---------------	---	--

There are also a number of other actions that the government could consider to **mainstream the importance of the blue economy into the budget setting and related decision-making processes**. These include conducting a blue economy public expenditure review (PER) and introducing blue economy budget tagging, or integrating blue economy considerations into ongoing climate expenditure reviews and climate budget tagging activities; including reference to the blue economy in annual budget circulars; publishing blue economy statements as part of the budget documentation; allowing dedicated parliamentary scrutiny of how budgets affect the blue economy; and developing a set of natural capital accounts.

A key way to support private sector investment in the blue economy is through the use of blended finance, either structured through domestic or international initiatives.

Domestically, the Government of Jamaica could support feasibility studies and preparatory work for public-private partnerships in the blue economy, complemented by market development activities. More ambitiously, it could consider the development of a Blue Economy Investment Facility specifically focused on incentivizing early-stage investment in blue economy ventures. Internationally, there are a number of blended finance vehicles that could support private sector investment in the blue economy in Jamaica, including the Global Fund for Coral Reefs, Blue Invest, Althelia Sustainable Ocean Fund, and Blue Finance. The appeal of blended finance is that it helps to reduce the need for public funding, with a growing number of relevant funds. However, it can be resource intensive to structure a blended finance transaction and careful analysis is required to identify those transactions for which it is appropriate.

A number of policy reforms could also help stimulate private sector investment in the blue economy, including:

- the development of overarching policies, regulations and institutional frameworks, particularly in relation to fisheries and aquaculture, mariculture, marine energy, and bioprospecting and nutraceuticals;
- fiscal incentives such as tax relief for investment and R&D in the blue economy and minimum guaranteed prices;
- awareness building, for example in the sustainable tourism sector to raise the profile of the sector and build confidence in the credibility of its claims; and
- supporting training to build new skills.

The report identifies a series of 13 priority next steps for the Government of Jamaica to consider as it looks to develop its blue economy finance and investment framework:

1. Develop a pipeline of blue economy activities prioritizing those where public funding is essential and/or can most effectively leverage private capital.
2. Build capacity of existing agencies and financing vehicles to promote blue economy investment opportunities
3. Working with relevant international partners as appropriate, and taking account of the country's debt management and macroeconomic framework, take a strategic decision regarding whether to explore a blue bond issuance in more detail.
4. Undertake further discussions to explore the attractiveness and feasibility of a debt for nature swap.
5. Prioritize multilateral and bilateral concessional funding and engage with external funders and domestic stakeholders to scope blue economy opportunities.
6. Work with development finance institutions, especially the World Bank and IDB, as well as the Development Bank of Jamaica and Caribbean Development Bank, to explore opportunities for programs to prioritize blue economy sectors.
7. Take a strategic decision on whether to develop a domestic blue economy investment facility that would support private sector investment in the blue economy.
8. Increase awareness/act as a broker between private sector representatives and international blended finance opportunities.
9. Develop/enhance foundational policies and regulations in key sectors of the blue economy.
10. Explore the feasibility of providing fiscal incentives for some blue economy investments
11. Help raise awareness of the opportunities of, and benefits from, investments in the blue economy.
12. Identify skills gaps and develop an explicit strategy for how to best help meet the skills needs of the blue economy.
13. Consider undertaking a blue economy public expenditure review, or incorporate blue economy considerations into a broader climate change PER.

1. Introduction

The blue economy seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while ensuring environmental sustainability of the oceans and coastal areas.¹ It relates to decoupling of socioeconomic development from oceans sectors - such as tourism, fisheries, waste management, transport and logistics, and energy - from environmental and ecosystems degradation. It builds on the concept of the green economy but recognizes the distinctive challenges and opportunities associated with ocean and coastal environments and ecosystems.

The blue economy is already of significant importance to Jamaica and offers huge opportunities for the future. Blue economy activities represent a significant economic contribution, with its gross value added (GVA) estimated to be equivalent to just under 20% of GDP in 2020, and accounting for over 500,000 jobs, 37% of the employed labor force. This significant economic contribution was made despite the impact of the Covid-19 pandemic constraining the role of tourism, a key blue economy sector. Moreover, there are many benefits derived from the blue economy that are not captured in these types of statistics: for example, Jamaica's mangroves play a crucial role through food provisioning, flood protection and the remediation of pollution.

The Government of Jamaica is in the process of finalizing a Blue Economy Roadmap. This sets out a series of specific actions that the country can take, both in the short and longer term, to harness the inclusive and sustainable economic development potential that the blue economy provides, while helping to manage climate change and other stressors that threaten this potential.

One of the key actions identified in the Roadmap recommendations is to develop a 'blue economy finance and investment framework'. The development of such a framework is crucial because, although the blue economy offers great potential, the full realization of this potential will require the mobilisation of significant amounts of public and private finance. While a range of innovative products have been proposed or have emerged in recent years that might help facilitate these financial flows, many of these remain relatively untested. Moreover, Jamaica must seek to catalyze investment into the blue economy in a context in which it is also delivering an ambitious macroeconomic and fiscal stabilisation program that will inevitably constrain what can be achieved through conventional government financing.

The purpose of the report is to provide an independent analysis that can help inform Government of Jamaica (and other stakeholders) in the development of this finance and investment framework. The intention is to illustrate options to support finance flows and investment in Jamaica's blue economy, relevant to both the public and private sectors, and in the case of the latter to explore what actions the public sector could pursue to support these. This report seeks to identify the potential that each option offers across different parts of the blue economy, what might make each option attractive as well the risks and challenges that may be encountered in pursuing these options. It is an independent report prepared by Pengwern Associates to support and inform decision-making by the Government of Jamaica - it does not present the views or opinions of the government.

¹ World Bank (2018) The Potential of the Blue Economy, [Link](#)

The remainder of the report is structured as follows:

- **Section 2** provides a high-level overview of recent blue economy investment in Jamaica, to help understand the relative importance of different actors and to illustrate that important investments in the blue economy are already happening.
- **Section 3** assesses some of the key barriers holding back greater investment in the blue economy in Jamaica. It considers investment both by the government and investment by the private sector or others expecting a financial return and, in each case, assesses constraints that hold back any investment by these actors in the Jamaican economy, as well as those barriers that are specific to the blue economy (or specific sectors within the blue economy).
- **Section 4** looks at the options that are available to increase *government* financial flows towards the blue economy. It mainly focuses on options that might provide additional financial resources that can be earmarked towards the blue economy i.e. ‘raising finance’ options. These include blue bonds, debt-for-nature swaps etc. However, it also considers the options for using budgetary policymaking tools to increase the flow of existing resources to the blue economy priorities i.e. options to change the way in which the government ‘spends finance’.
- **Section 5** considers options to increase private sector investment into the blue economy in Jamaica. This includes both options for using public resources to leverage further private sector investment i.e. blended finance. It also considers other policies, incentives and regulations that might support private sector investment into blue economy opportunities in Jamaica.
- **Section 6** provides a series of key conclusions and recommendations for future action.

2. Jamaica's current blue economy investment landscape

2.1. Introduction

This section provides a high-level overview of key investment flows into the blue economy in Jamaica. It considers the key actors who (can) finance the blue economy - covering the Government of Jamaica, national development finance institutions, various types of international development partners and the private sector - and summarizes what is easily available from public domain sources regarding their recent investment in the blue economy. This is presented as a high-level overview to provide context for the financing options presented in subsequent sections of this report. A more detailed, comprehensive 'landscape assessment' could be developed in future to provide a vital information source to understand gaps and to further help inform future policy priorities.²

Nonetheless, this high-level assessment serves a number of purposes including:

- To illustrate the range of different actors that can contribute to investment in the blue economy and to provide an indicative assessment of their relative importance, both overall and to different parts of the blue economy.
- To demonstrate where there is already investment so as to provide concrete evidence that the investment opportunity of the blue economy can be realized.
- To highlight gaps, where investment (or initiatives to support investment) may be active in areas adjacent to the blue economy but which are not yet being harnessed by actors in relation to the blue economy.

2.2. Government of Jamaica

The Government of Jamaica's annual budget is expected to be J\$ 998 billion (US\$ 6.6 billion) in 2022/23.^{3,4} This comprises J\$ 621 billion (US\$ 4.1 billion) of non-debt recurrent expenditure, J\$ 64 billion (US\$ 0.4 billion) of capital expenditure, and J\$ 314 billion (US\$ 2.1 billion) of debt servicing. **Error! Reference source not found.** shows a modest increase in expenditure in 2023/24 and beyond, driven by increases in recurrent and capital expenditure, as debt servicing costs fall. As described in Section **Error! Reference source not found.** below, the fiscal space in Jamaica is relatively constrained, although it has improved substantially in recent years.

The absence of budget tagging of blue economy activities (see Section 4.6) means that it is only possible to derive high level estimates of government support to the blue economy.

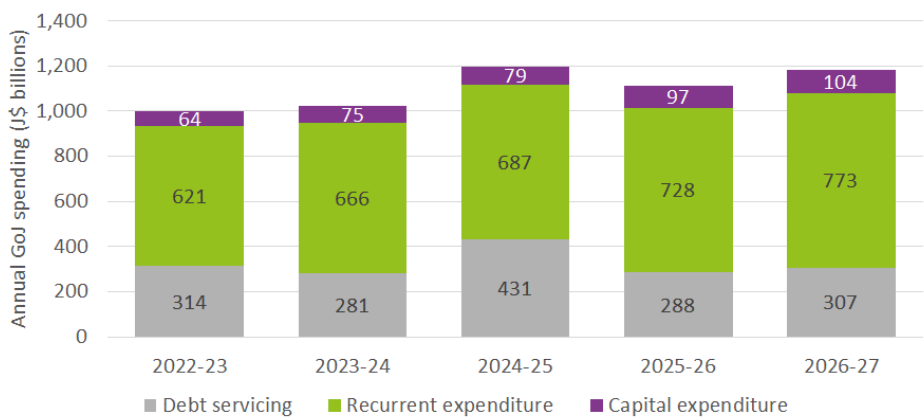
² These assessments are most common in relation to climate investment. See, for example, CPI (2021) *The Landscape of Climate Finance in Kenya*, [Link](#)

³ Throughout this report Jamaican Dollars converted to US Dollars at the 2021 average rate of 150.79, [Link](#)

⁴ Government of Jamaica (2023), *Estimate of Expenditure 2023/2024*, [Link](#)

Looking across the ministries and agencies with a direct link to the blue economy,⁵ this spending appears to be slightly in decline, falling from an allocation of 8.7% in 2022-23 to a forecasted 6.9% by 2026-27. This decline appears to result from a relatively slower growth in recurrent expenditure allocations to the MEGJC, MOT, and NEPA, although this is slightly compensated by relatively larger increases in expenditure to MOAF, MSET, PIOJ and STATIN.

Figure 1 Jamaican government expenditure expected to expand in coming years



Source: Government of Jamaica (2023) “Estimates of Expenditure 2023/24”

Looking at some of the ‘core’ blue economy line ministries provides further insight on where the government is already supporting activities related to the blue economy (as well as potential gaps):

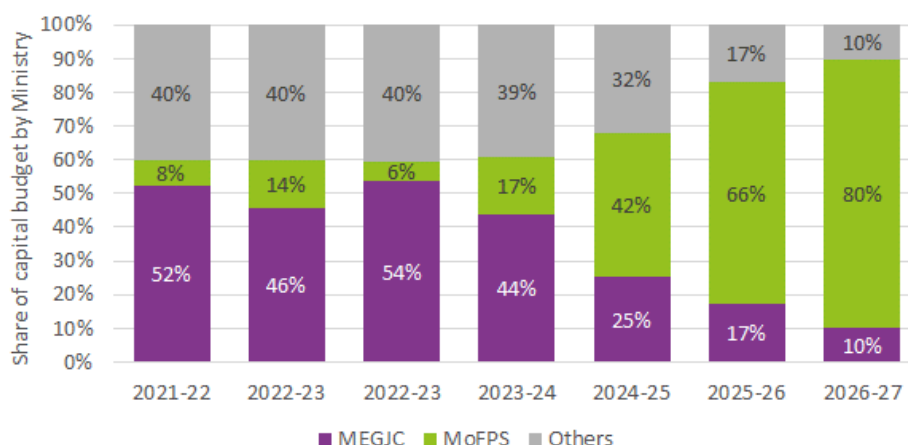
- **The Ministry of Agriculture and Fisheries** has a recurrent expenditure budget of around J\$ 12.5 billion (US\$ 83 million), with J\$ 672 million (US\$ 4.5 million) earmarked for ‘fisheries development’. This includes the management and development of aquaculture, promotion and marketing of key species such as tilapia, development of ‘capture fisheries’, sustainable management of fisheries resources, licensing and regulatory compliance etc. All of these are blue economy priorities.
- **The Ministry of Economic Growth and Job Creation** has an allocation of J\$ 11.8 billion (US\$ 78 million) per year, include significant resources earmarked for environment-related projects. For example, J\$ 612 million (US\$ 4.1 million) is allocated for ‘*Environmental Management and Climate Change*’, spanning climate change mitigation and adaptation, environmental risk management, water supply services, and water policy monitoring. While this comprises only around 5% of the MEGJC’s overall budget, it demonstrates existing financial and human capacity to manage resources dedicated to blue economy related activities.
- **The Ministry of Tourism** has a stable recurrent expenditure budget of around J\$ 12 billion (US\$ 80 million) per year, including some specific, but modest, allocations towards sustainable tourism related activities. Of the J\$ 12 billion (US\$ 80 million)

⁵ Here, as an indication, we look at the Ministry of Tourism, MEGJC, NEPA, PIOJ, STATIN, Ministry of Agriculture and Fisheries, and the Ministry of Science Energy and Technology

total, around J\$ 5 billion (US\$ 33 million) is earmarked for general “Tourism Development”. The dedicated financing line for sustainable tourism measures is lower however, at J\$ 10 million (US\$ 66,000). There is also just under J\$ 500 million (US\$ 3.3 million) allocated to support tourism investments, spanning the ‘Small and Medium Lending Scheme loan facility’, the ‘tourism innovation town facility’, ‘community tourism activities’, and ‘eco-tourism development to sustain protected areas’, all of which are well aligned with blue economy objectives.

Some of the key ministries with responsibility for managing the blue economy have significant capital budget allocations. For example, the Ministry for Economy Growth and Job Creation (MEGJC) has the largest share of the capital budget allocations (see Figure 2), including for major infrastructure related agencies relevant to the blue economy such as port development, water and sanitation etc. However, it also covers major infrastructure that may not necessarily be blue economy related (e.g. roads). Across the key blue economy ministries (described above), in 2023-24 the capital budget allocation amounted to 55% of the total. A significant proportion of the total capital budget allocation derives from international development partners (see section 2.4 below)

Figure 2 Jamaican government capital budget by key Ministry⁶



Source: Government of Jamaica (2023) Estimates of Expenditure 2023/24

The Government of Jamaica also makes a significant contribution using its own budgetary resources to capital expenditure projects in the blue economy. While a review of the listed planned capex projects by implementing governmental agencies suggests that many of those relevant to the blue economy are ultimately funded by international development partners (discussed in section 2.4 below), there are some examples of projects where the GOJ is making a significant direct contribution to the budget, such as:

⁶ Increase in MoFPS capital spending is in the contingency provision line which increases from J\$ 8 billion in 23/24 to \$ 83 billion in 26/27. This line item is to provide budgetary support for new projects approved under the Public Investment Management System but have not yet received Cabinet approval at the tabling of the budget.

- **Enhancing the Resilience of the Agricultural Sector and Coastal Areas.** A J\$ 1.8 billion (US\$ 11.6 million) project, under the Ministry of Finance and Public Service, funded by a combination of the Government of Jamaica and the Adaptation Fund (see below). The Government of Jamaica provided J\$ 253 million⁷ (US\$ 1.6 million) to this project. Just over half of the project's total budget is dedicated to protecting Negril's beaches from coastal erosion caused by intense storms and sea level rise.
- **Improving Water, Land and Ecosystems Management.** A J\$ 443 million (US\$ 2.9 million) project under the National Environment and Planning Agency (NEPA), co-funded by the Government of Jamaica and the Global Environment Facility. The Government of Jamaica provided J\$ 81 million (US\$ 550,000) to this project, c.18% of the total project budget.

2.3. Public Financial Institutions

The Development Bank of Jamaica aims to provide opportunities to all Jamaicans to improve their quality of life. It does this by supporting entrepreneurs at all levels, through access to low-cost finance, partial loan guarantees, technical assistance and providing opportunities to broaden entrepreneurship and ownership of businesses in Jamaica.⁸

To help meet these objectives, it offers a range of financing solutions to support the growth of Jamaican businesses. These include:

- **Various grants and technical assistance**, with funding often provided by development partners. This includes grants for energy audits, grants to SMEs that help to strengthen key parts of the supply chain that support large anchor firms⁹ and innovation grants and related assistance for entrepreneurs.¹⁰
- **Credit Enhancement Facility**, a risk-sharing facility under which DBJ offers partial guarantees to financial institutions to support lending to SMEs and has helped unlock J\$ 12 billion (US\$ 80 million) of investment supported by J\$ 3 billion (US\$ 20 million) of guarantees.
- **Public-private partnerships and Privatization (P4).** Four deals reached commercial or financial close in the year 2019-20. Previous privatization transactions have included blue economy related projects, for example, the sale of the Government of Jamaica's majority stake in Pegasus Hotels of Jamaica Limited in 2010.
- **Loan portfolio**, comprising over \$9 billion (US\$ 60 million) new loans approved in 2019/20, of which 36% went to the service and transport industries, 27% to ICT/BPE, 20% to distribution businesses, 14% to agriculture and agri-industries, and just 2.4% to manufacturing, and only 0.1% to tourism.

⁷ McIntosh (2022). "Strengthening Resilience Of Agricultural Sector And Coastal Areas". [Link](#).

⁸ Development Bank of Jamaica, "Annual Report 2019-20", [Link](#)

⁹ Through the Jamaica Business Fund, a component of the US\$ 25m Foundations for Competitiveness and Growth Project (FCGP) funded by the World Bank

¹⁰ Including through the Innovation Grant for New Ideas To Entrepreneurship (IGNITE), and the Boosting Innovation Growth and Entrepreneurship Ecosystems (BIGEE), financed by the IDB.

Indicatively, it appears that there is significant potential for the Development Bank of Jamaica to support the blue economy, but that this potential is not yet fully being exploited. A high-level review of DBJ annual reviews and project examples profiled on the DBJ website does not reveal any significant transactions directly related to the blue economy. This may partly reflect that the blue economy concept is relatively nascent, while it is also possible that the institution finances projects that are relevant to the blue economy without this being badged. Indeed, a number of the products and services offered by the DBJ are likely to have high potential to support the blue economy. For example, innovation grants and related assistance for entrepreneurs could have particular value in overcoming barriers related to business model development that hold back investment in sustainable tourism or bioprospecting (see sections 3.2.3 and 3.2.4). Similarly, the model of supporting energy audits could be adapted to support investments in other areas where a lack of information holds back investment, such as ecosystem conservation and restoration (see section 3.2.7).

2.4. Development Partners

The analysis of the role of development partners in supporting the blue economy is divided into three subsections: financing provided by international financial institutions; financing provided on concessional and grant terms by multilateral funds; and bilateral support. This reflects both the different relationships that the GoJ has with these different development partner types as well as their different risk appetite and return expectations.

2.4.1. International DFIs

Both the World Bank and IDB are currently financing a number of projects that are relevant or adjacent to the blue economy. This section focuses on those projects financed directly by the balance sheet of these organizations. Those blue economy projects that are implemented by these organizations, but which receive some or all of their finance from additional third party resources, are covered separately below, as these arrangements signify that the activities require greater concessionality and/or risk appetite.

The World Bank Group's relevant projects tend to have a broader development focus but with the potential to be relevant to stakeholders in the blue economy. For example:

- **Jamaica Foundations for Competitiveness & Growth**, a J\$ 9 billion (US\$ 60 million)¹¹ program begun in 2014 and extended with a number of objectives including facilitating large scale private investments and strengthening SME capabilities. It includes components on enhancing competition in the business environment; facilitating strategic private investments by support to prepare and close large strategic investment transactions with private sector participation; and a SME financing component which provides a combination of supply chain support and skills upgrading and finance. The program has financed various blue economy related sub-projects, including e.g. (1) development plans for water supply and sewage systems of various communities, (2) a study on the Logistics Hub Initiative, and (3) the German Ship Repair divestment. These are interventions that are very relevant to the barriers faced in

¹¹ Original project had a US\$ 50 million budget, [Link](#). Additional US\$ 10 million budget committed in 2021, [Link](#).

engaging the private sector in Jamaica's blue economy. This program, which received additional financing in 2021, is scheduled to finish in 2024 but the pipeline project, Jamaica Sustainable and Resilient Recovery DPF, is expected to have a somewhat similar focus.

- **Access to Finance for MSMEs**, a J\$ 1.9 billion (US\$ 13 million) program which started in 2018 with the objective of improving access to finance through a combination of support to facilities offering guarantees, the establishment of a SME fund for risk capital financing and improving the enabling environment for access to finance. This is germane to a number of the barriers faced by firms in the blue economy as discussed further in section 3 below. This project is expected to close in January 2024.
- **Second Rural Economic Development Initiative**, a J\$ 6 billion (US\$ 40 million) program which started in 2020 which includes objectives on agricultural and community tourism investments for rural enterprises, as well as capacity building at various public entities relevant to the blue economy such as the Ministry of Agriculture and Fisheries to promote in inclusive rural development. The project is scheduled to run until 2025.
- **Jamaica Disaster Vulnerability Reduction project**, a J\$ 4.5 billion (US\$ 40 million) project which started in 2015 with the objective of enhancing Jamaica's resilience to disaster and climate risk.¹² An element of this is establishing or improving coastal protection measures, relevant to various blue economy objectives. The project is currently scheduled to run until 2024.
- **Kingston Waterfront Improvement Project**, is a project in the WB pipeline (at 'Decision Meeting' point) for a total of J\$ 1.9 billion (US\$ 12 million) pipeline project to expand economic development opportunities and enhance institutional capacity to enable future private sector-led redevelopment.¹³ This will include supporting green, resilient, and inclusive waterfront development, and high-quality amenities to encourage private sector investment. The project schedule is still being finalized.

The IDB is active in a number of areas which contribute to the blue economy enabling environment and to attracting finance¹⁴. Ongoing projects include:

- **Boosting Innovation Growth and Entrepreneurship Ecosystems**, a DBJ implemented J\$ 3.7 billion (US\$ 25 million) program which commenced in 2020 with the goal of providing financing to established MSMEs and scalable start ups with high growth potential. IDB committed a \$3.5bn loan to this program, which could potentially support enterprises in blue economy related areas, given the focus on sustainable growth. In particular, this year the project has targets around executing training for one business accelerator and one business incubator program, which could potentially be targeted at blue economy related enterprises. The project is expected to run until 2025.
- **Public Sector Transformation Implementation Project**, a J\$ 7.4 billion (US\$ 49 million) program started in 2018 designed to improve the quality of transactional

¹² World Bank (2022). "Project detail". [Link](#).

¹³ World Bank (March 2023), "Project Information Document (PID)", [Link](#)

¹⁴ This discussion focuses on project where the financing amount exceeds US\$ 1m.

services and improve the efficiency of public spending. IDB committed a J\$ 6.3 billion (US\$ 42 million) loan to this program which included the implementation of a Fisheries Licensing & Registration system, with a particular focus on making sport fishing more accessible to tourists. The project is currently scheduled to run until 2024.

- **Credit Enhancement Program**, a J\$ 2.5 billion (US\$ 17 million) project started in 2017 with the goal of promoting productive investments in MSMEs by enhancing access to financing. The IDB committed \$ 2.5 billion (US\$ 17 million) to this program which has the potential to support private sector investment flows into blue economy related enterprises. The project is currently expected to finish in September 2023.
- **Global Services Skills Project**, a J\$ 2 billion (US\$ 13 million) project which began in 2019 with the objective of promoting growth in the Global Services Sector, particularly in higher value-added segments, by undertaking training and hence increasing Jamaica's capacity to attract Foreign Direct Investment. There is scope for blue economy related industries to benefit from this training program. The IDB committed a J\$ 2 billion (US\$ 13 million) loan to this project, which is currently scheduled to run until 2024.

The IDB has also provided support through a number of technical cooperations in blue economy related sectors. This funding is typically for less than US\$ 1 million. Recent technical cooperations include; Tourism Strategy and Action Plan for Jamaica (2018), Building Resilience through Climate Adaption Technologies (2020) and Support for Investment Promotion (2022).

The Caribbean Development Bank is also active in Jamaica but none of its current investments link closely to the blue economy. Its current portfolio is more heavily focused on agricultural development.

2.4.2. Multilateral funds

A number of multilateral funds support activities that are or could be relevant to the blue economy in Jamaica. This includes the PPCR, the Adaptation Fund, GEF and GCF, while Jamaica is also benefiting from technical assistance resources provided through ProBlue. In addition, the recently reached agreement on concessional financing from the IMF's Resilience and Sustainability Fund could also benefit Jamaica's blue economy.

The IMF has approved US\$ 968 million under the Precautionary and Liquidity Line (PLL) and a further US\$ 764 million under the Resilience and Sustainability Fund (RSF).¹⁵ The RSF is not ringfenced for specific spending lines or activities, but is conditional on progress along three pillars: (1) building fiscal and physical resilience to natural disasters and climate change, (2) strengthening mitigation and promoting renewable energy, (3) greening the financial sector.¹⁶ The RSF provides *"affordable, longer-term finance and to support government policy*

¹⁵ IMF Press Release 23/57 (2nd March 2023), "IMF Executive Board Approves US\$968 Million under the Precautionary and Liquidity Line and US\$764 Million under the Resilience and Sustainability Facility for Jamaica", [Link](#)

¹⁶ Centre for Global Development Policy Paper 289 (March 2023) "IMF Lending Under the Resilience and Sustainability Trust: An Initial Assessment", [Link](#)

reforms” to tackle long term challenges such as climate change and response to the Covid-19 pandemic.¹⁷

The Pilot Program for Climate Resilience (PPCR), part of the Climate Investment Funds, has provided around \$30m¹⁸ concessional funding support to undertake adaptation and enhance climate resilience. Implemented through the World Bank and the IDB, the two projects of greatest relevance to the blue economy are:

- **Promoting Community Based Climate Resilience in the Fisheries Sector,**¹⁹ a J\$660m program approved in 2015, and extended to March 2023.²⁰ Implemented by the World Bank, this has the aim of enhancing resilience to climate change among target fishing and aquaculture communities of Jamaica, including strengthening of the policy and regulatory framework, and diversification of fisheries-based livelihoods. This project and the program have supported a wide range of blue economy related initiatives in the fisheries and aquaculture sectors, including the recently announced Tilapia Hatchery.
- **Adaptation Program and Financing Mechanism for the Pilot Program for Climate Resilience in Jamaica.** Implemented by the IDB, this J\$ 2.1 billion program was approved in November 2014 and included the development of five aquaponics systems.²¹ Other components of the program include creation of financial mechanisms, such as the special climate change adaptation fund (SCCAF) administered by the Environment Foundation of Jamaica (call for projects closed in 2018).

The Adaptation Fund provided a grant of just under US\$ 10 million (J\$789m) to a project for ‘Enhancing the Resilience of the Agricultural Sector and Coastal Areas’. The project commenced in 2012 and was subsequently extended. The objectives of the project are highly aligned to the development of the blue economy, including: strengthening climate resilience of the coastline, erosion and flood control, and improving water management for the agricultural sector. The project, implemented by the Planning Institute of Jamaica, also seeks to make sure all Jamaicans benefit, including helping women adapt to climate change and improve their livelihoods.²²

The Global Environmental Facility (GEF) has financed over US\$ 25 million (around J\$ 308 billion) in national projects.²³ Of this, projects most closely related to the blue economy include: a US\$ 1.6 million (J\$ 250 million) grant to a project to promote biodiversity and sustainable management of mangroves,²⁴ and a US\$ 6 million (J\$ 900 million) grant to support a project to conserving biodiversity and reduce land degradation through an integrated landscape approach.

¹⁷ WEF (2023). “What is the IMF’s new climate fund and how does it work?”. [Link.](#)

¹⁸ With a further \$2.7m of co-finance provided by the Government of Jamaica. There has been no co-finance provided from the balance sheet resources of the IDB and World Bank.

¹⁹ CIF (2022). “Promoting community-based climate resilience in the fisheries sector in Jamaica”. [Link.](#)

²⁰ World Bank (2023). “Promoting Community-based Climate Resilience in the Fisheries Sector (P164257) - Implementation Status & Results Report”, [Link.](#)

²¹ PPCRJA (n.d.). “Adaptation Programme and Financing Mechanism”. [Link.](#)

²² Adaptation Fund (2016). “Adaptation Fund in Jamaica: Women in Agriculture”. [Link.](#)

²³ See GEF national project database available at [Link.](#)

²⁴ GEF (2022). “Jamaica Mangroves Plus”. [Link.](#)

The GEF has also provided US\$ 119 million (J\$ 18 billion) in support to multi-national projects in the region, many of which have a focus on the blue economy. For example, including for example:

- a US\$ 15 million (J\$ 2.3 billion) grant, approved for implementation in December 2022, to support a UNDP regional program for *‘Protecting and Restoring the Ocean’s natural Capital, building Resilience and supporting region-wide Investments for sustainable Blue socio-Economic development (PROCARIBE+)’*,
- A US\$ 7 million (J\$ 1 billion) grant approved for implementation in June 2022 to support a UNEP project to ‘reduce marine plastics and plastic pollution in Latin American and Caribbean cities through a circular economy approach’, spanning Jamaica,
- A US\$ 6 million (J\$ 900 million) grant, approved for implementation in November 2022, to support the *“‘BE-CLME+”: Promoting National Blue Economy Priorities Through Marine Spatial Planning in the Caribbean Large Marine Ecosystem Plus’* regional project.
- a US\$ 2.4 million (J\$362 million) grant for a project begun in 2016 Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States with the objective to restore historical hydrological and other physical processes in the Negril Great Morass.

The Green Climate Fund (GCF) is the anchor investor in the recently launched Global Fund for Coral Reefs. This began implementation in mid-2022 and is described further in terms of potential to support Jamaica’s blue economy in Section 5.

Jamaica is also benefiting from support from the PROBLUE Multi-Donor Trust Fund (MDTF) administered by the World Bank. This is designed to help countries chart a course towards a blue economy approach with a focus on the sustainable management of fisheries and aquaculture; addressing and preventing the threats posed to ocean health by marine pollution, including litter and plastics; supporting the sustainable development of key oceanic sectors such as coastal tourism, maritime transport and offshore renewable energy; and helping governments build their capacity to manage their marine and coastal resources in an integrated fashion.

2.4.3. Bilateral donors

The European Commission is an important source of grant funding to Jamaica and has previously provided support to blue economy related projects. The “A Jamaican Path from Hills to Ocean Project” is a US\$ 6.8 million (J\$ 1.05 billion) project which began in 2021 and is scheduled to run until 2028. The project covers three watershed management units, restoration of wetlands and hydrological function in two marine protected areas and a sea grass assessment in a number of bays and marine parks. It also includes upstream ecosystem restoration and land management activities, which will have positive impact on coastal areas.

Another bilateral partner supporting the blue economy in Jamaica is the UK, in particular through the UK Blue Carbon Fund. The fund reached project approval in 2018 and is expected to run until 2024, offering technical assistance and finance with a budget of US\$ 2.6 million (J\$ 360 million) to support ‘blue carbon restoration in Clarendon’, in partnership with the University of the West Indies. The core objective of the project is to restore mangrove

ecosystems in southern Clarendon along the south coast of Jamaica,²⁵ although progress has been slower than expected as a result of the Covid-19 pandemic.²⁶ Section 4.5 - which focuses on future opportunities for financing support for the blue economy - discusses these and related funding windows in more detail.

2.5. Private Sector

Tracking information on private sector investment in the blue economy in Jamaica is inherently more challenging than for public sector actors. There are a large number of investments made by the private sector across all sectors of the blue economy for which there is no readily accessible data. In some cases, moreover, these investments may be in sectors relevant to the blue economy but may be inconsistent with the goals of social inclusion and environmental sustainability that underpin the concept (e.g. private sector activities which contribute to over-fishing and unsustainable management of fisheries resources).

Despite these data challenges, there are examples which serve to illustrate the potential for private sector investment in the blue economy:

- The German Ship Repair Jamaica facility is a recent example of a private sector led investment in a blue economy related industry²⁷. This investment was announced in early 2023, after a number of years of preparation, and brought together various private sector partners from around the globe but also from within Jamaica. The project will provide dry docking for commercial vessels up to 20,000 tons, and a range of maintenance and repair services.
- Algix Jamaica Limited, an aquaculture firm, opened its multimillion-dollar investment facility in St. Elizabeth for Basa production in 2017²⁸. It aimed to produce 100 tons of Basa monthly for the local and export market, alongside its existing Tilapia production. Algix's team visited Vietnam prior to opening the facility to learn how to cultivate the Basa fish.
- In 2021 work started on an underwater sculpture park at Montego Bay²⁹. The project is being developed in partnership by Montego Bay Marine Park Trust (an environmental NGO and registered non-profit) and Smilozone Waste Management Ltd., a private sector firm and the largest waste management company serving Jamaica's tourism industry. The attraction serves two purposes; i) the sculptures will eventually become coral reefs and habitats for marine life and ii) the park will provide a new tourist attraction.

There are also a number of promising early-stage blue economy start ups in Jamaica, who have largely been financed by private sector investors. As an example, Kee Farms is a start up focused on seaweed and oyster cultivation, and appears to have been financed to date by a mixture of grants and private sector financing.

²⁵ UK Govt (2019) "Blue Carbon Fund - Jamaica Project Proposal", [Link](#)

²⁶ UK Govt (2021) "UK Blue Carbon Fund - 2020-21 Annual Review", [Link](#)

²⁷ Anderson (2023). "Multibillion-Dollar Shipyard Project Launched". [Link](#).

²⁸ Fraser (2017). "Jamaican aquaculture firm wants to compete with Vietnam for EU basa market". [Link](#).

²⁹ Henry (2022). "Work in progress on Jamaica's first underwater sculpture park". [Link](#).

2.6. Summary

In summary, there is already a range of funding initiatives supporting the blue economy in Jamaica. This activity is being undertaken by public and private sectors, and involves both domestic and international investors.

The majority of funding for projects that are most explicitly labelled as relating to the blue economy is currently being provided by multilateral funds and bilateral donors. These partners often have funds that have explicit mandates linked to the blue economy, or the application of their mandates in Jamaica's context tends to lead to a focus on the blue economy (e.g. the funding provided by the Pilot Program for Climate Resilience in supporting Jamaica's fishery sector). Much of this funding is then channeled through projects and programs implemented by, for example, UN Agencies and/or by DFIs as well as, on occasion, national implementing entities such as the PIOJ.

Domestic & International Financial Institutions are implementing broader development programs from which actors in the blue economy can benefit. These projects span from access to finance for MSMEs to improving human capital and professional skills in Jamaica. Blue economy participants will likely meet eligibility criteria for support under these schemes. However, to date, with very few exceptions, these projects have not been designed to provide an explicit focus or component related to the blue economy.

The Government of Jamaica also commits substantial financial resources to blue economy related sectors, and to providing the institutional set up and regulatory functions that it needs to thrive. This includes the activity of the National Fisheries Authority, whose responsibilities include the management and development of aquaculture and licensing and regulatory compliance in the fisheries sector; The Ministry of Economic Growth and Job Creation, which has a particular mandate for climate change, and which has an explicit financing line for sustainable tourism. As such much of the public financing architecture for financing key blue economy sectors and activities is in place, but may need to be better targeted and strategically prioritized to maximize blue economy potential.

There is active interest from the private sector across various areas of the blue economy. The German Ship Repair Jamaica project is an example of collaboration both between Jamaican and International investors, and between the private and education sectors, with key training in ship repair skills being provided by the Caribbean Maritime University (CMU). The underwater sculpture ark at Montego Bay is also an example of a partnership between a non-profit and a private sector firm for a first-of-its-kind sustainable tourist attraction in Jamaica.

While these activities from partners and the private sector provides a base to build on, there is an absence of strategic planning and coordination of blue economy activities. As described in Section 3.1.2, one of the key barriers to unlocking public and private finance for the blue economy at scale is the absence of a strategic plan and coordinating framework. This risks incoherence. As such, while the availability of funds from bilateral and multilateral donors, alongside domestic and international financial institutions provides a firm entry point for supporting blue economy development, there is a need for this to become more structured.

Table 1 summarizes the current activity of a range of key stakeholders and their roles in supporting financing flows for the blue economy.

Table 1 Jamaica blue economy finance roles and active sectors to date

Actor	Current Approach and Role	Active sectors to date
Government of Jamaica	<p>Promotion of key areas of the blue economy</p> <p>Providing institutional and regulatory/enforcement function across the blue economy</p> <p>Implementation of specific blue economy projects, including material funding in some instances</p>	<ul style="list-style-type: none"> ✓ Cross sector in implementation ✓ Directly supported projects focused on ecosystem protection and restoration
Domestic public financial institutions	Various schemes (usually funded by international DFIs) to improve access to finance	<ul style="list-style-type: none"> ✓ Cross sectoral
International DFIs	Financing of projects related to a broad swathe of development priorities	<ul style="list-style-type: none"> ✓ Cross sectoral
Multilateral funds	Targeted projects in sectors which align with development and environmental objectives	<ul style="list-style-type: none"> ✓ Ecosystem protection and restoration ✓ Fisheries and aquaculture ✓ Renewable energy
Bilateral donors	Targeted projects in sectors which align with development and environmental objectives	<ul style="list-style-type: none"> ✓ Ecosystem protection and restoration ✓ Renewable energy
Private sector	Projects which meet a desired return on investment threshold	<ul style="list-style-type: none"> ✓ Maritime transport ✓ Sustainable tourism ✓ Fisheries and aquaculture

3. Barriers to blue economy investment

This section considers some of the key barriers that constrain investment in Jamaica's blue economy. It explores key barriers to investment from the perspective of (1) the Government of Jamaica, and (2) the private sector. These two perspectives recognize the critical role of public funding as a catalyst for blue economy spending in terms of supporting seed investments, de-risking new markets etc.; but also that public funding alone will not be enough to meet blue economy investment needs and that efforts are needed to scale-up private capital as well:

- **Barriers that prevent the Government of Jamaica investing** more of its own resources towards the blue economy. The Government of Jamaica could potentially raise the resources from international capital markets, international lenders or from additional tax revenues.
- **Barriers that prevent private sector actors investing** in (different sectors of) the blue economy. The private sector might generate these resources either from internal cashflows, private bank lending and other capital market institutions and investors or, potentially, from national or international public institutions and funds that aim to make it easier for private sector actors to make investments.

In each case, the analysis focuses first on the barriers that apply to any/all investments by these actors, and then at the key barriers that apply to their investment in the blue economy.

3.1. Investment by the Government of Jamaica

The Government of Jamaica has an indispensable role to play in the blue economy. Section 2 demonstrates how it provides the policy framework and supports the development of a wide range of sectors of relevance to the blue economy including fisheries and tourism. Its role in setting and enforcing environmental standards is also essential to the sustainable development of the blue economy. In addition to this, and often working alongside, and making use of the finance provided by, international financial institutions, it is making investments in discrete projects and assets of relevance to the blue economy including some conservation and restoration activities, harbor and waterfront upgrades or, potentially in the future, marine energy infrastructure. It is therefore essential to understand the barriers and challenges that it faces in relation to investing in the blue economy.

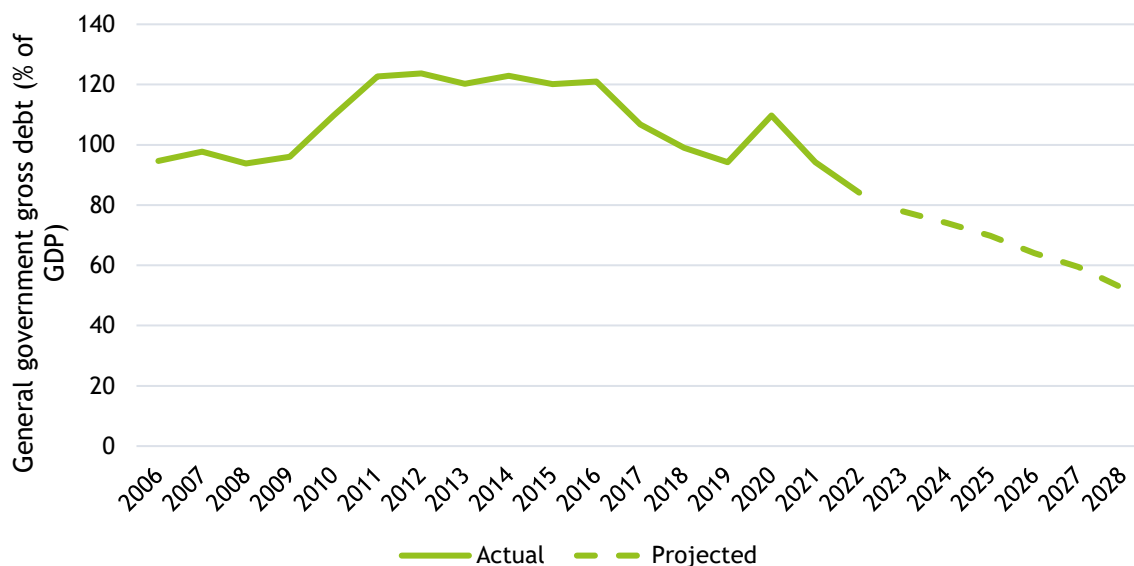
3.1.1. Generic barriers

The government of Jamaica has embarked on an ambitious macroeconomic and fiscal stabilization program. In the early part of the 2010s, Jamaica's public debt position reached nearly 125% of GDP (Figure 3) leading to concerns over macroeconomic stability and large debt servicing costs: in 2010, interest payments exceeded 17% of GDP. Since 2013 the country has embarked on an aggressive program of economic reform and fiscal stabilization³⁰. This is

³⁰ The government relaxed elements of this program in order to contend with the fallout of the Covid-19 pandemic,

reflected in the Fiscal Responsibility Framework which has set the objective of a debt:GDP target of 60% by 2027/28.

Figure 3 Jamaica's public debt is projected to fall significantly in the near future



Source: IMF (2023) Jamaica: 2022 Article IV Consultation-Press Release; Staff Report and Staff Statement

This program is proving successful. In its recent Article IV consultation, the IMF judged Jamaica's public debt position to be 'sustainable' with medium term risks to be 'low' and long-term risks to be 'moderate'. The report praised the country's 'strong fiscal consolidation efforts and prudent debt management' and noted the country's strong 'policy track record'³¹.

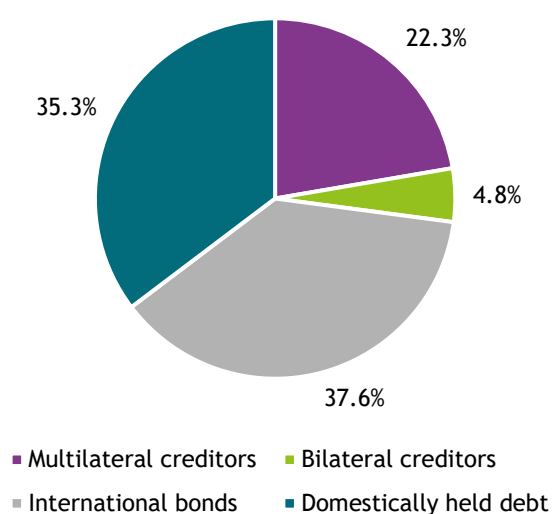
However, continued progress requires strong fiscal discipline; macroeconomics risks remain. To deliver this magnitude of debt reduction, the central government primary balance (the difference between the amount of revenue the government collects and spends on public goods and services) is expected to exceed 5% of GDP every year between now and 2027/28. The IMF notes the prudence of these efforts in a context in which current account deficit is expected to remain high as global commodity prices remain elevated and the risks that tightening of global financing conditions could place additional pressure on the country's exchange rate (and hence the cost of servicing foreign denominated debt).

These macroeconomic conditions mean that new public sector financial obligations need to be carefully justified. Any new public sector spending commitments related to the blue economy will need to demonstrate that they both represent good value for money and support the government's macroeconomic objectives.

³¹ IMF (2023) Jamaica: 2022 Article IV Consultation-Press Release; Staff Report and Staff Statement, [Link](#)

The strengthened financial position has also been supported by active liability management in recent years. Figure 4 shows the composition of Jamaica's public debt. It is now a much more evenly distributed creditor base than historically with a balance between domestic debtholders, multilateral loans and international bonds. Moreover, the debt restructurings in 2010 and 2013 and a Government of Jamaica debt buy back in 2019 mean that much of the debt is now much longer dated than in the recent past, which has helped to reduce short term debt servicing costs. Any publicly financed support for the blue economy is likely to need to be broadly aligned to this financing strategy, with the IMF also noting that the public debt risk profile would also benefit from plans to reduce reliance on FX-denominated borrowing, while further developing the local currency bond market over the medium term.

Figure 4 Jamaica's debt is held by a balance combination of domestic and international investors and multilateral institutions



Source: IMF (2023) Jamaica: 2022 Article IV Consultation-Press Release; Staff Report and Staff Statement

3.1.2. Blue economy specific challenges

Beyond the challenging - albeit improving - macroeconomic climate and public finance challenges, there are three main challenges which hinder the Government of Jamaica investing in the blue economy:

- Data limitations.** There is a lack of key data, analysis, and dissemination in some key blue economy areas that means decision makers do not have sufficient information to fully understand the value and importance of investing in the blue economy. There is then a further lack of data on what is needed to foster blue economy development, for example identifying the skills needed to develop inclusive and sustainable blue economy activities etc. This makes mobilizing investment capital challenging, as there is a lack of information on where financial resources should best be targeted, what the bankability of blue economy projects may be, or to demonstrate value for money for the use of (limited) public funding available.
- Nascent institutional organization, and absence of a policy framework and implementation strategy.** While there is a broad umbrella of institutions, laws, and

regulations relevant to the blue economy, and the MEGJC has been assigned responsibility for the blue economy in recent years, there is no clear operational set of institutional responsibilities to coordinate on and drive blue economy development. There is also no unifying policy framework or strategic implementation plan. This makes identifying priorities and allocating budget to them a challenge.

- **Need for cross-sectoral coordination.** The blue economy spans 13 ministries and 41 agencies, so any commitment to public spending can only be effective if implementation is coordinated across all relevant departments. Enhanced coordination will maximize the effectiveness and efficiency of financial and human resources.

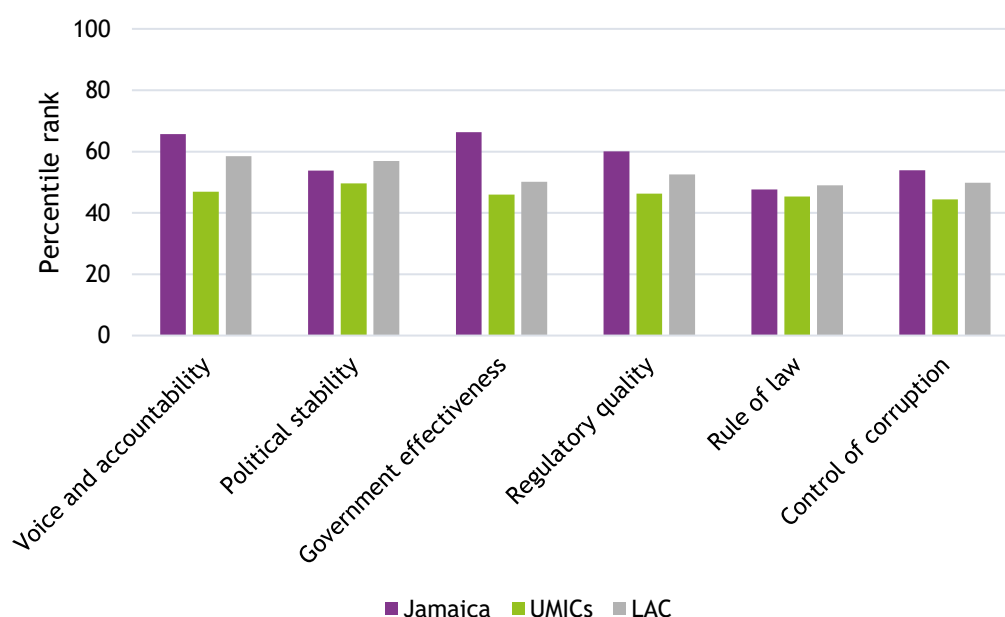
3.2. Private investment

The public sector alone cannot provide the investment needed for a healthy, productive, and inclusive blue economy. Many of the investment opportunities in the blue economy are within sectors that are already dominated by the private sector. Section 2 demonstrated that there are a number of specific examples of blue economy investments that are already being made by the private sector. The sub-sections below explore both the generic barriers that constrain private sector investment in Jamaica, as well as areas of relatively strong performance. The discussion then focuses on some more specific barriers associated with different sectors within the blue economy.

3.2.1. Generic barriers

Jamaica performs strongly on many aspects concerning the enabling environment for private sector investment. Figure 5 below compares Jamaica's percentile ranking on a series of governance indicators, relative to that of both upper middle-income countries and the Latin America and Caribbean regional average. It shows that Jamaica's score is generally equivalent to, or better than, these peers, with particularly strong scores in relation to government effectiveness, voice and accountability, and regulatory quality.

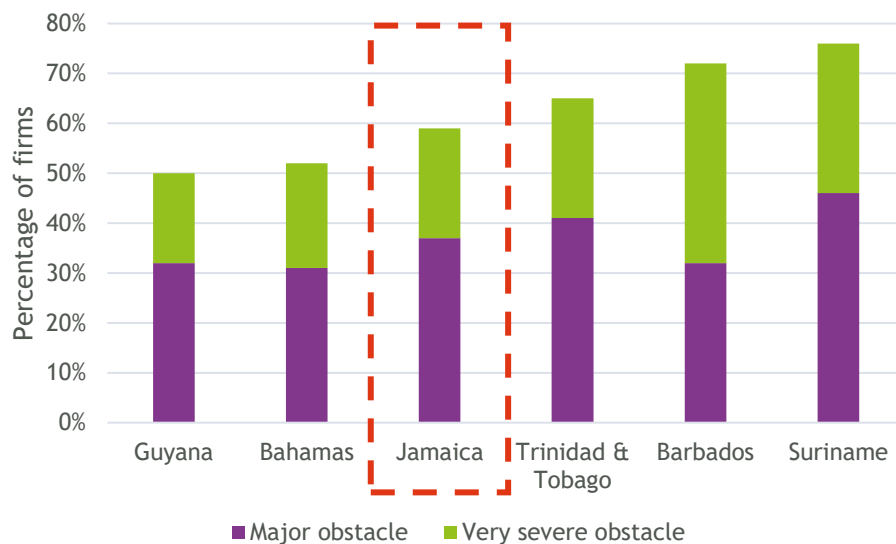
Figure 5 On many governance indicators, Jamaica performs as well as or better than its regional and income group peers



Source: Kaufmann and Kraay (2022) World Governance Indicators

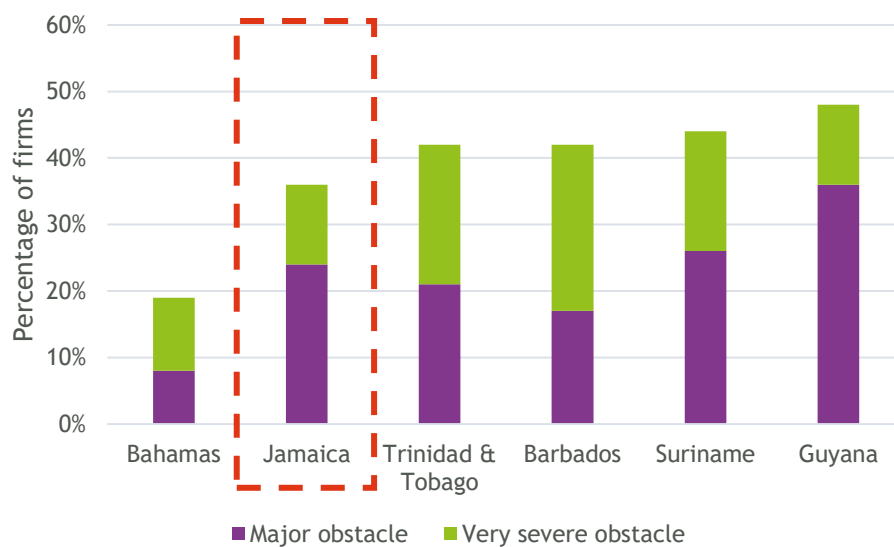
However, access to finance is a challenge for many Jamaican businesses. Figure 6 provides the results of survey analysis from 2020 examining the number of businesses in different countries in the Caribbean that report that credit access requirements, such as collateral requirements, represent a barrier to their business operations. Jamaica's score is mid-ranking across the countries sampled, with notably more Jamaican businesses expressing concern than their counterparts in Guyana and the Bahamas. On the cost of finance, Figure 7, Jamaica's performance is somewhat better, with 36% of firms reporting challenges, lower than the other countries in the sample with the exception of the Bahamas. While there are challenges for many Jamaican firms in accessing finance at costs they consider reasonable, IMF data shows that the proportion of non-performing loans in Jamaica's banking sector is very low with capital buffers that are well above the minimum and sufficient to absorb potential losses.

Figure 6 More than 50% of Jamaican firms report barriers to credit access as an obstacle to firm performance



Source: Mooney et al (2022) Finance for Firms - Options for Improving Access and Inclusion

Figure 7 More than 30% of Jamaican firms report that the cost of finance is a barrier to firm performance



Source: Mooney et al (2022) *Finance for Firms - Options for Improving Access and Inclusion*

In addition to access to finance challenges, a number of further barriers hold back the productivity of Jamaican firms including those with an actual or potential role in the blue economy (International Monetary Fund, 2023):

- High crime rates - Jamaica has the third highest violent crime rate of any country in the world - which increases security costs and deters tourism foreign investment and investment in education.
- Insufficient schooling and outward migration of university graduates.
- Poor infrastructure, especially in relation to logistics and energy.
- Complex business procedures.

3.2.2. Barriers: fisheries, mariculture & aquaculture

There is significant potential for private sector investment in Jamaica's fisheries, mariculture and aquaculture sectors. Despite its large ocean zone, Jamaica is still heavily reliant on fishery imports, with imports accounting for 79%³² of all products consumed domestically. There are also opportunities for investments that support other aspects of the blue economy including, for example, encouraging sport fishing by tourists under the new digital licensing system.

However, various challenges need to be overcome to foster greater private sector investment in this sector:

³² Fisheries Division, Ministry of Industry, Commerce, Agriculture and Fisheries (2017), Environmental and Social Management Framework, [Link](#).

- There is uncertainty around key variables - especially on prices of both inputs (e.g. fuel³³) and outputs (commercial terms for produce) - that will determine the attractiveness of investment in the sector.
- Linked to this, key policies³⁴ in the sector and some management plans³⁵ related to specific species are yet to be completed. Investors may await finalization of these policies before investing in the sector, as any new operations will need to adhere to these policies.
- Building on the generic barrier discussed above, it can be difficult for early-stage ventures to access the capital needed to develop and grow their businesses. There are numerous early-stage ventures in Jamaica focused on areas such as seaweed and oyster cultivation but these businesses can find it difficult to access the growth capital they need to support their growth.
- Erratic weather conditions and exposure to climate change impacts inhibit fishing operations in the region³⁶. extreme weather conditions are projected to become more frequent, which means that fisheries, mariculture and aquaculture investments may become less attractive.
- The lack of enforcement of fisheries, mariculture & aquaculture laws & regulations can make investment unattractive. In particular, the theft of stock has previously been cited as an issue by failed mariculture operations in Jamaica. For example, Caribbean Aquaculture Limited shut down its marine shrimp farm in 2013, calculating that 10-15 percent of its stock was being lost to theft³⁷.

3.2.3. Barriers: sustainable tourism

Tourism is a major economic sector for Jamaica. Its direct and indirect contribution amounts to 34% of GDP, 31% of employment, and over 50% of exports.³⁸ In recognition of this importance, there are already a range of ongoing initiatives to encourage private sector investment in sustainable tourism development. For example, the government has also put in place a Tourism Enhancement Fund (TEF), which levies US\$ 20 on every inbound air traveler, and US\$ 2 for cruise travelers,³⁹ There is also a departure tax of US\$ 35 for airline passengers. The TEF is used to help fund improvements in resort development, product development, and beautification etc.⁴⁰ Furthermore, the government has recently launched the Tourism Innovation Incubator which offers up to US\$ 650,000 to successful applicants to support

³³ Jamaica Observer (2022). “Fisherfolk reeling from pollution, high gas prices”. [Link](#).

³⁴ Notably the mariculture policy and the National Fisheries and Aquaculture policy.

³⁵ Various species management plans as outlined in the [Medium Term Socio-Economic Policy Framework](#).

³⁶ Fisheries division, Ministry of Industry, Commerce, Agriculture and Fisheries (2017), Environmental and Social Management Framework, [Link](#).

³⁷ Gordon (2013). “Second shrimp farm goes out of business”. [Link](#).

³⁸ The ‘direct’ contribution of tourism to GDP and employment was 10.5% and 9.4% respectively.

³⁹ TEF (n.d.) “Our Story - Tourism Enhancement Fund”. [Link](#).

⁴⁰ JIS (2007). Tourism on Sustainable Development Path”. [Link](#).

inclusive grassroots ideas.⁴¹ These initiatives are underpinned by strong political commitment to sustainable development, as reflected in the commitment made by the Tourism Minister, Hon. Edmund Bartlett to developing environmental compliance standards for the tourism sector.⁴² .

Nonetheless, a number of challenges can make it difficult for the private sector to make investments in the sector, including:⁴³

- **Limited awareness among consumers.** There is relatively limited awareness among many travelers about Jamaica’s actual and potential sustainable tourism offering, meaning that those investing in the sector may fear there will be insufficient demand to justify their investment.
- **Price premium.** This limited awareness may be compounded by the higher costs, and hence prices, associated with sustainable tourism, in what is a relatively price-sensitive market given the alternatives in the region.
- **Low confidence around sustainability claims.** Travelers may also be unwilling to pay for higher-cost sustainable tourism if they are unsure of the claims being made around sustainability.
- **Sustainability offerings are in their relative infancy.** Defining and putting in place eco-friendly and sustainable tourism projects remains relatively new worldwide. In Jamaica there is a sustainable tourism plan in development, and some leading project examples of sustainable tourism.⁴⁴ However, there are specific guidelines on or definition of what qualifies as “sustainable” or “eco” tourism in the Jamaican context.

In addition, many of the barriers that hold back investment in ecosystem restoration and protection mean that there is insufficient investment in the habitats that sustain many eco-tourism initiatives. This is discussed further in section 3.2.7 below.

3.2.4. Barriers: bioprospecting

Jamaica has strong biodiversity, with 52% of the world’s established medicinal plants present in the island and its surrounding waters.⁴⁵ The country has great potential to harness private sector investment that would allow these natural resources to be used for product development across a wide range of industries, including pharmaceuticals and nutraceuticals. The island also has an abundance of Sargassum seaweed; of interest to numerous companies around the world that are looking at transforming Sargassum into various products such as fertilizers and emulsifiers (while managing environmental risks, such as arsenic content).

⁴¹ Henry (2023). “Jamaica Uniquely Positioned to Capitalise on Tourism Industry’s Growing Demands”. [Link](#).

⁴² Williams (2023). “Environmental Compliance Standards Critical in Tourism Sector - Minister”, [Link](#).

⁴³ Based on several sources, including World Economic Forum blog (9th November 2022) “*The promise and challenge of sustainable travel products*”, [Link](#)

⁴⁴ See for example [link](#).

⁴⁵ JAMPRO (2018), “Jamaica Investment Opportunities in the Nutraceutical / Wellness Sector”, [Link](#).

However, private sector investment in this sector is currently being impeded by a lack of regulatory uncertainty which compounds the high risks that are typical for opportunities that still require research and development. Product development in this emerging sector is inevitably high risk as further research is needed to understand what and how to sustainably harness bioprospecting's potential. However, in the case of Jamaica, these challenges are exacerbated by limited regulations, standards and structures that would help give investors with more confidence to invest in this emerging sector. For example, there is likely to be a need to amend the Food and Drug Act (currently in progress) to incorporate the classification and registration of nutraceutical products.

3.2.5. Barriers: marine energy

Jamaica has a firm commitment to increasing the penetration of renewable energy generating technologies. The Integrated Resource Plan (IRP) requires procurement of a further 1.6 Gigawatts (GW) of total new generating capacity over the next 20 years, of which 959 MW from solar or wind, and 597 MW from fossil fuel generation sources. The Government of Jamaica has also committed to achieving 33% per cent of electricity generation from renewables by 2030, having already progressed from 4.5% in 2008 to 11% by 2018.⁴⁶

Marine energy presents a significant potential resource for Jamaica. According to a World Bank technical potential assessment, the coast around Jamaica could provide 53 GW of offshore wind, of which 20GW could be fixed and 33GW could be floating.⁴⁷ There may also be potential for ocean thermal energy conversion (OTEC) which should be explored.⁴⁸

However, there may be significant challenges to private sector investment in marine energy technologies in Jamaica. Some of these barriers apply around the world, others are challenges that are particularly pronounced in Jamaica.

- The relatively smaller scale of projects in Jamaica, and other small island nations in the Caribbean, may mean that it is hard to secure components and services and the scale efficiencies achieved by these other projects may not be available for Caribbean nations.
- The country's relatively high level of exposure to extreme weather (e.g. hurricanes) which would require potentially costly technology adjustments (upfront capital expenditure) and/or increased maintenance and repair budgets (ongoing operational expenditure).
- While Jamaica has clear targets in relation to renewable energy overall, marine energy remains at a scoping stage and is not explicitly recognized in the current IRP, increasing regulatory uncertainty.
- Initial projects are likely to be complex and with long leads times, and require skillsets that may not be widely available in Jamaica.

⁴⁶ Government of Jamaica (2020) "Integrated Resource Plan", [Link](#)

⁴⁷ ESMAP (2020), "Offshore Wind Technical Potential in Jamaica", [Link](#)

⁴⁸ See for example Loy & Coviello (2005) "Renewable energies potential in Jamaica", Prepared in collaboration with the Ministry of Commerce, Science and Technology of Jamaica, [Link](#)

- Concerns around impacts on biodiversity, fisheries and coastal tourism need to be assessed and, where necessary, mitigated which could further increase deployment costs.

3.2.6. Barriers: maritime transport

Jamaica geo-strategic location provides it with an opportunity to attract private sector investment that would allow it to become a logistics hub in the Caribbean. Each year Jamaica receives around 3,000 port calls while approximately 180,000 vessels operate within the region⁴⁹. There is great potential to increase services provided to these vessels. The ongoing German Ship Repair Jamaica (GSRJ) Shipyard project in Kingston (as discussed in section 2.5) illustrates the potential for investment, and may serve as a catalyst for further investment by others. The project is a multi billion-dollar ship repair and maintenance facility that will provide dry docking for vessels up to 20,000 tons, with a range of maintenance and repair services available.

However, further investment in this sector is constrained by a lack of specialized skills. There is a need to meet human capital requirements so that maintenance and repair services can be undertaken to international standards, for example, the GSRJ partnered with the Caribbean Maritime University to undertake its skills training program as part of the ongoing project.⁵⁰ The CEO of the GSRJ project identified the training component as crucial to the project's success.

Further work may be needed to ascertain the market demand for new services. There may also be opportunities to provide services to non-commercial vessels, for example in the yachting sector, but further work would need to be undertaken to establish the extent of Jamaica's competitive advantage in this space.

3.2.7. Barriers: ecosystem protection and restoration

Many of the benefits of ecosystem protection and restoration - such as increased flood protection - are difficult to monetize and so may be financed using national or international public finance. This, for example, is the model being pursued in the project for blue carbon restoration in southern Clarendon, where financing is provided by the UK's Blue Carbon Fund.

However, the emerging landscape of (voluntary) carbon markets and crediting of natural climate solutions (NCS) may also open up the potential for private sector investment in this sector. Under these arrangements, developers undertake activities that are able to demonstrate a quantified reduction in emissions and/or increase in carbon sequestration. These emission changes, following verification, are reflected as carbon credits, that can then be sold to a range of different buyers including corporates and others in the voluntary carbon market; airlines operating under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) scheme and others facing regulatory constraints on emissions that allow the use of credit to meet these constraints; or even to countries to help them meet their NDC

⁴⁹ Anderson (2023). Multibillion-Dollar Shipyard Project Launched. [Link](#).

⁵⁰ Brown (2019). "Ship Repair Company Partners with CMU to Undertake Skills Training Programme". [Link](#).

obligations. The prospect of revenues from the sale of carbon credits may be sufficient to attract private sector investment to the underlying activity, especially if the ecosystem protection or restoration also offers additional revenue schemes.⁵¹

While this mechanism has supported significant private sector investment into ecosystem protection and restoration in recent years, there remain a number of constraints that can be difficult to overcome⁵²:

- Credit prices can be volatile and are heavily influenced by policymakers in the jurisdictions where buyers are located. Investors in ecosystem protection and restoration projects may be reluctant to be exposed to price risk that it is very difficult for them to control.
- A number of concerns have been raised about the quality/integrity of the carbon credits emerging from this process. This could expose investors in these activities to considerable reputation risk and also lead to a rapid erosion in the value of the credits generated. This may be particularly pronounced for blue carbon activities where there is currently greater scientific uncertainty surrounding the quantification of emissions changes from these activities.
- Depending on the specific ecosystem protection or restoration activities undertaken, there can be a long lag between when the initial activities are undertaken and when revenues from credit sales can be realized. This may be off-putting to investors who have competing investment opportunities.

These opportunities (and concerns) regarding carbon credits from ecosystem protection and restoration could also be relevant for the Government of Jamaica. An alternative model for generating credits to that discussed above would involve the government taking responsibility for financing and then delivering the relevant activities and selling the associated credits. Typically, this would be done at a larger ‘jurisdictional’ scale rather than the project scale that private sector investors engage. The most likely customers for these credits being other countries seeking to use the credits to meet their NDC. Such transactions would typically be undertaken pursuant to Article 6.2 of the Paris Agreement. Under this model, the Government of Jamaica would need to consider the risks such as price volatility when deciding whether to engage in this type of initiative. It would also need to ensure that sales did not impinge on its ability to meet its NDC.

Finally, both public and private investment in ecosystem protection and restoration is hampered by the lack of natural capital accounting. Natural capital accounting involves assigning a monetary value to a country’s environmental assets, where this monetary value captures the ability of the environmental assets to generate a future flow of services that are

⁵¹ Private sector investment to these activities could also be incentivized through the development of a domestic payment for ecosystem services scheme.

⁵² It is also important that - especially in the voluntary carbon market - credit purchases do not displace own emission reductions that it is economically and practically feasible for buyers to make themselves, as this may threaten long-term climate stabilization goals. There is growing guidance and market pressure on buyers - for example, through the Science Based Targets Initiative - to ensure this.

of importance (have value) to society⁵³. The absence of natural capital accounts makes it easy for decision-makers to overlook the importance of natural capital. They may make decisions that fail to protect an ecosystem that, if a system of natural capital accounts were in place, would turn out to be value-destroying from the perspective of the country as a whole.

⁵³ Even if that flow of value cannot be monetised.

4. Sovereign finance options

4.1. Introduction

There are many areas where additional resources from the Government of Jamaica could help to advance the country's blue economy ambitions. This includes resourcing the development of essential policy frameworks, regulation, standards and enforcement bodies. It can also invest in specific projects, activities and assets where returns are unlikely to be sufficient to attract private investor including, for example, some conservation and restoration activities and public infrastructure relevant to the blue economy.

There is value in exploring innovative financing mechanisms to finance these activities. Section 3 described the challenging fiscal context in which Jamaica currently operates. This means that relying on standard budgetary tools (general taxation, borrowing on international capital markets) to finance these policies and actions may not be feasible; it might risk either adding too much to Jamaica's debt servicing obligations or crowding out existing government spending. This raises the importance of more innovative mechanisms that either provide new sources of revenue for the government (thereby allowing blue economy spending to not crowd out other government spending) or that have the potential to not add as much to the country's debt service obligations as traditional financing approaches. At the same time, the growing international interest in the blue economy means that an increasing number of such mechanisms are being designed and implemented.

This section explores four innovative financing mechanisms (in subsections 4.2 to 4.5 respectively):

- Blue bonds.
- Debt for nature swaps.
- Dedicated taxation.
- Exploring the blue economy finance initiatives of international development partners.

In addition to options for 'raising' new finance, the government can also explore ways to change the processes by which it 'spends' its revenues, so that they better support the blue economy. Subsection 4.6 looks at how budgetary policymaking tools could be used to ensure government spending reflects its growing policy commitment to blue economy.

4.2. Blue bonds

4.2.1. Description, design options and precedents

Blue bonds are similar to green bonds with the difference being that they are focused on marine and ocean-based projects rather than climate and environmental projects more broadly. The bonds can be issued by governments (as well as by development banks or others) and raise capital from international capital markets in the same way as traditional debt instruments. However, in order for them to be classified as 'blue', the proceeds of the bond must be allocated to activities which meet a pre-agreed set of 'blue' criteria. These criteria seek to ensure that the supported projects will support economic, environmental and climate objectives for the blue economy.

A wide range of different bodies have issued guidelines to support prospective issuers of blue bonds. This includes UNEP FI,⁵⁴ the Asian Development Bank,⁵⁵ UN Global Compact,⁵⁶ and the IFC. The IFC's Guidelines for Blue Finance,⁵⁷ which builds on best practice guidance set out for green bonds, sets out that the proceeds from a blue bond should be allocated to finance or refinance activities in the following areas:

1. Water supply
2. Water sanitation
3. Ocean-friendly and water-friendly products
4. Ocean-friendly chemicals and plastics related sectors
5. Sustainable shipping and port logistics sectors
6. Fisheries, aquaculture, and seafood value chain
7. Marine ecosystem restoration
8. Sustainable tourism services
9. Offshore renewable energy production

Further guidance to support blue bond issuance is expected in the near future. The International Capital Market Association (ICMA), UN Global Compact, IFC, ADB and UNEP-FI are collaborating to draft a global practitioner's guide on how to use sustainable bonds to provide and access financing for blue economy projects and strategies.⁵⁸ This guidance is unlikely to differ substantially from the current IFC guidelines but will likely constitute the most complete set of blue bond guidance when it is released later in 2023. Of all sustainable bonds issued in 2021, 98% were aligned with ICMA principles illustrative of the influence of ICMA in this asset class.⁵⁹

A number of sovereigns have issued blue bonds, with a strong focus on fisheries and conservation. Increasing marine protected areas (MPAs) to cover 30% of ocean area has been used as an impact metric for all three of the sovereign issuances in Table 2. For fisheries, the targets tend to be less concrete with proceeds targeted at improving governance frameworks and sectoral sustainability in a broader sense. Despite the focus in these two sub-sectors, IDB's Invest Blue Bond (I) demonstrates how a much wider range of blue economy activities can also be eligible for blue bond financing.

⁵⁴ UNEP-FI's 'Sustainable Blue Economy Finance Principles' sets out 14 principles which could be used as a criteria to judge a project's suitability for blue bond financing. [Link](#).

⁵⁵ The ADB's 'Green and Blue Bond Framework' sets out criteria for use of blue bond proceeds. [Link](#).

⁵⁶ UN Global Compact's 'Practical Guidance to Issue a Blue Bond' provides a step-by-step guide around the practicalities of meeting standards, setting KPIs and integrating second party opinions. [Link](#). Also, UN Global Compact's 'Sustainable Ocean Principles' sets out 9 principles which could be used as criteria to judge a project's suitability for blue bond financing. (UNGC, n.d.). [Link](#).

⁵⁷ IFC (January 2022) "Blue Finance Guidelines - Guidance for financing the Blue Economy, building on the Green Bond Principles and the Green Loan Principles", [Link](#).

⁵⁸ The Economist (2022). "A breakthrough for blue bonds at the UN Ocean Conference". [Link](#).

⁵⁹ Ibid.

Table 2 Fisheries and conservation have been the focus of sovereign blue bond issuances

Issuance	Seychelles (2015)	Belize (2021)	Barbados (2022)	IDB Invest Blue Bond (I) (2021)
Conservation	✓	✓	✓	
Fisheries	✓	✓		✓
Vessel maintenance / repair	✓			
Offshore Renewables				✓
Tourism				✓
Logistics / shipping				✓
WASH				✓

Note: The Bahamas also issued a blue bond in 2022 but the use of proceeds is unclear.

Beyond the use of proceeds, design considerations are largely the same as those for the issuance of a traditional bond. Considerations of fixed versus variable rates and maturities are driven by the same factors as would the case for traditional debt financing.

Many blue bonds have been issued in collaboration with international financing institutions (IFIs) and other partners. Indeed, only one government entity issued a blue bond with no financial institution support between 2018 and 2022 and that was the Chinese Province of Hainan.⁶⁰ This support is partly as technical assistance to support the bond design and identify and provide assurance on the use of proceeds. However, in addition, in some transactions, guarantees and/or concessional loans have complemented the blue bond issuance to help reduce the coupon rate on the bond and/or reduce the financing needs met by the bond. This support helps investors gain comfort with what is a relatively novel instrument and also allows countries that might otherwise struggle to tap international capital markets to develop blue bonds. Box 1 gives an example of how different partners supported the issuance of the Seychelles Blue Bond.

For any specific issuer, it is too early to say if blue bonds benefit from a pricing benefit in the same way as green bonds can do. Of the 21 blue bonds issued between 2018-2022, 15 had a fixed rate. The median and mean coupon rates for these 15 issuances were both 3.15% which is considered to be on par with conventional bond issuances during the period.^{61,62}

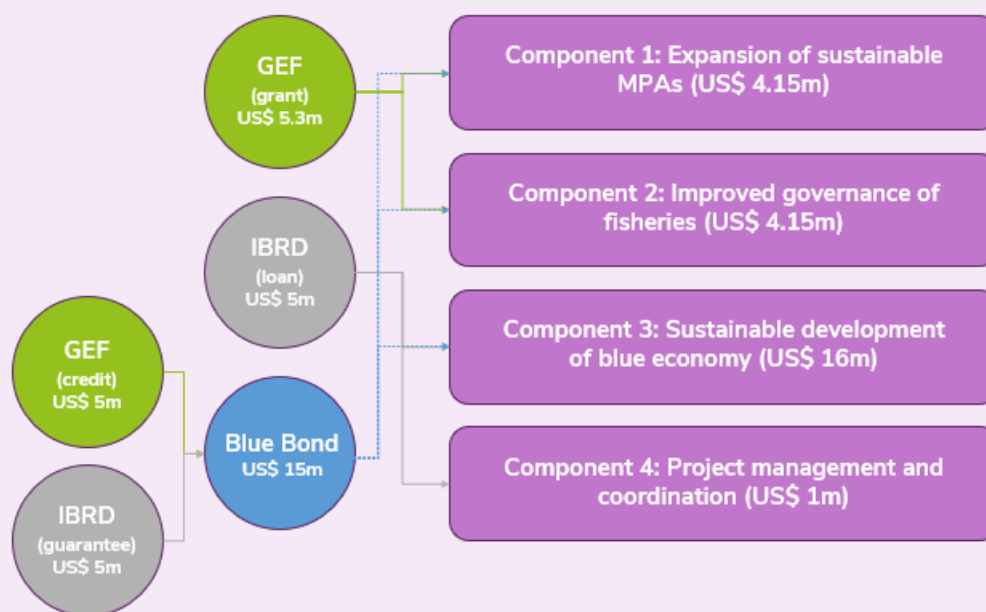
⁶⁰ Bosmans & de Mariz (2023). “The Blue Bond Market: A Catalyst for Ocean and Water Financing”, [Link](#)

⁶¹ Bosmans & de Mariz (2023) “The Blue Bond Market: A Catalyst for Ocean and Water Financing”, [Link](#)

⁶² The extensive use of credit enhancement for blue bonds, despite the evidence that pricing terms for blue bonds are comparable to standard bonds, reflects the fact that many blue bond issuers have difficulty access international capital markets.

In 2018 the Government of the Seychelles issued the world's first sovereign blue bond. The US\$ 15 million (J\$ 2,262m) issuance had a 10-year maturity and a 6.5% coupon rate. In order to improve the terms of the issuance, the Seychelles received support from the IBRD, GEF and the Rockefeller Foundation. The IBRD provided a partial guarantee of US\$ 5 million (J\$ 754m) and GEF provided a concessional loan of US\$ 5 million (J\$ 754m) with an interest of 0.25% which reduced the effective rate for the Seychelles government to 2.8%. The Rockefeller Foundation granted US\$425,000 (J\$ 64m) in assistance to cover the transaction costs of preparing and issuing the bond.

Figure 8 The Seychelles Blue Bond was supported by a range of international partners



The proceeds are largely to be used for conservation activities with eight stated uses:

1. Expansion of sustainable-use marine protected areas (i.e. to increase the protected areas to 30% by 2020).
2. improved governance of priority fisheries
3. Project management and coordination
4. Promotion of sustainable practices
5. Fisheries management planning
6. Education awareness programs
7. Stock rebuilding
8. Refitting fishing vessels

⁶³ CABRI (2019). "Blue Bond: The Seychelles Experience". [Link](#).

The Seychelles bond has been widely cited as a success. The island nation achieved their 30% protection goal by 2020 partly through making use of the proceeds raised through the bond.

4.2.2. Opportunities and challenges

There are a number of potential benefits from the Government of Jamaica pursuing a blue bond issuance:

- **Signal of support to blue economy.** A blue bond issuance would represent an important way for the government to demonstrate that it is committed to the blue economy. This will, in turn, provide greater confidence to the private sector, as well as the government's international partners, that could catalyze further investment and support in the future.
- **Investor diversification.** Blue bonds can provide Jamaica with an opportunity to tap into a set of ESG conscious investors who may not be interested in other forms of Jamaican debt.
- **May benefit from a price discount.** The limited number of issuances to date makes this uncertain at present. However, it has been estimated that green bonds generate a pricing discount for developing countries of around 11.55 basis points driven by the strong investor interest in the instrument.⁶⁴
- **Blue bonds can raise substantial levels of capital.** Compared to some of the alternative blue economy financing mechanisms discussed below, the potential proceeds are significant. The mean size of blue bonds issued between 2018 and 2022 was US\$ 193 million (J\$ 29,102m) with the largest raising just under US\$ 1 billion (J\$ 151b).⁶⁵ However, the size of the capital raise will largely depend on the extent to which the issuer can identify eligible activities.
- **Increasingly mature product.** With over 20 blue bonds having been issued in the past 5 years, the product is becoming increasingly well understood by investors and this could help reduce transaction costs compared to those that have been seen in the past.
- **They can be used to finance debt-for-nature swaps.** These are discussed in section 4.3 below.

At the same time, a number of challenges need to be taken into account:

⁶⁴ Ando et al. (2023). "How Large is the Sovereign Greenium?", [Link](#).

⁶⁵ Bosmans & de Mariz (2023). "The Blue Bond Market: A Catalyst for Ocean and Water Financing", [Link](#).

- **Project pipeline.** It may be challenging to develop a concrete project pipeline suitable for effective deployment of the resources raised via a blue bond issuance. Designing eligible projects requires technical expertise in both the relevant sector and in sustainable bond financing.
- **Lack of standardized definitions.** While the IFC's Guidelines for Blue Finance is perhaps the most widely used set of blue bond guidelines and definitions, it is not ubiquitous. This can mean that there is a risk that activities identified in a blue bond prospectus may not be well-received by investors. Further market standardization is expected later this year, as discussed above.
- **Regulatory compliance.** The monitoring which is required to ensure that the use of the bond proceeds is both transparent and complies with industry good practice principles can be resource intensive and requires a high level of technical capacity. There may need to be development of appropriate national regulatory and institutional arrangements to manage these requirements and ensure a highly-credible issuance which boosts Jamaica's blue economy visibility and reputation.
- **Reliance on IFIs.** The above factors mean that blue bond issuance often requires complementary support from development partners, which may reduce the discretion available to the government or increase procedural costs.
- **Debt sustainability.** Despite the possibility of lower financing costs than standard bond issuance, this would still represent an increase in the Government of Jamaica's liabilities. It would need to be assessed carefully for consistency with the country's overall macroeconomic framework.

4.3. Debt for nature swaps

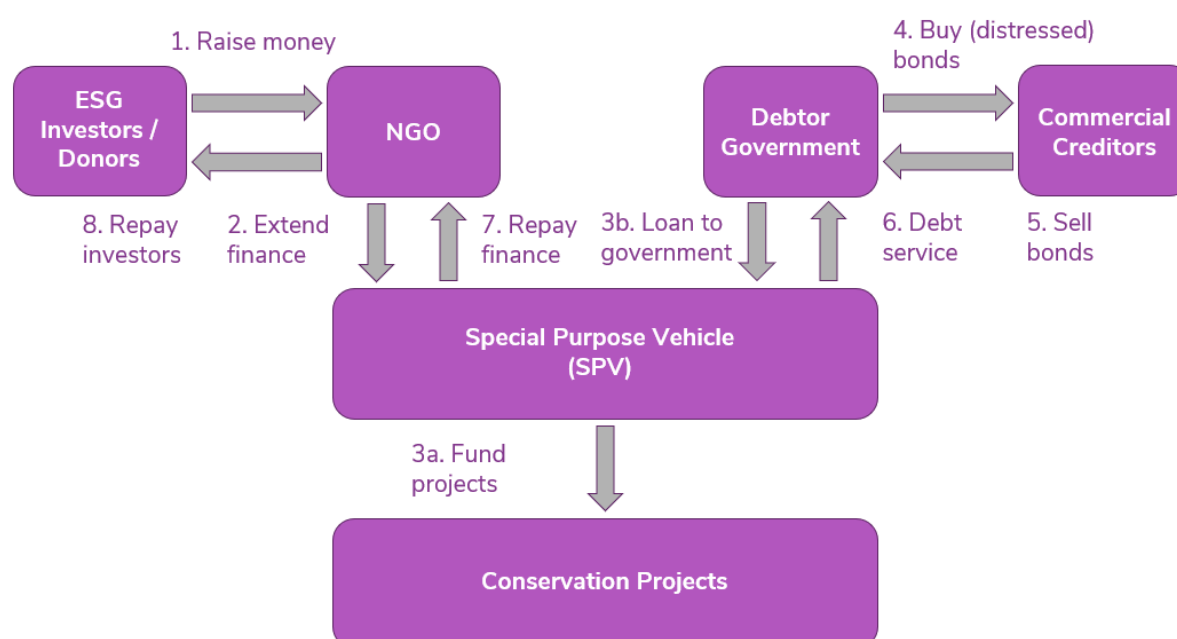
4.3.1. Description, design options and precedents

Debt for nature swaps tackle dual challenges of debt sustainability and increasing investment in climate and conservation. The broad mechanism for the swaps is that one or a series of creditors forgives a portion of a debtor nation's debt in exchange for their commitment to using a portion of the savings to fund climate / conservation projects, which may be focused on the blue economy. There are two main models of debt for nature swap models: a bilateral mechanism and a trilateral mechanism.

A bilateral mechanism works involves loans provided by specific, typically official, creditors. Under this model, the creditor partly forgives sovereign debt payments with (some of) the avoided debt service payments transferred to an escrow account where they are then used to fund eligible projects and activities. A debt for nature swap of this type was previously agreed between the US government and the Government of Jamaica, leading to around US\$ 21 million of savings which helped establish the Environmental Foundation of Jamaica. Variants of this model would involve refinancing debt at lower interest rate or in local currency rather than full cancellation. As described in section 3.1 around 25% of Jamaican government debt is held by bilateral or multilateral creditors which would be the most suitable debt for this type of swap.

A trilateral mechanism has been popularized by The Nature Conservancy (TNC)⁶⁶ and other NGOs. The central difference between this mechanism and the bilateral version is that a trilateral swap involves the restructuring of commercial debt rather than official debt. The mechanism is set out step by step in Figure 9 as follows: (1) an NGO raises funding from environmental, social, and governance (ESG) investors (loans and/or grants), potentially through issuing using a blue bond; (2) Funding is on-lent to a special purpose vehicle (SPV); (3a) The SPV funds agreed-on projects, and (3b) simultaneously provides a loan, at relatively low rates, to the government, which (4, 5) the government uses to buy back bonds from commercial creditors which it then does not expect payment of. Finally, (6) the lower debt service costs for the government flows back to (6) the SPV, (7) the NGO, and (8) the investors providing the original funding. Some of it may also be retained by the government to enhance its debt sustainability. Box 2 describes how this model was used in Belize.

Figure 9 Trilateral debt-for-nature swaps involve NGOs reducing debt servicing costs associated with international bonds



The sponsors of debt-for-nature swaps have a strong interest in marine conservation, especially supporting the development and enforcement of Marine Protected Areas (MPAs). This means they are unlikely to be relevant to other areas of the blue economy.

Box 2 - TNC Debt for Nature Swap in Belize⁶⁷

In 2021, TNC conducted a debt for nature swap with Belize which reduced the country's external debt by 10% of GDP. A TNC subsidiary lent funds to Belize to buy back the government's entire stock of external commercial debt, US\$ 553 million (J\$ 83,387m) and equivalent to 30 percent of GDP, at a discounted price of 55 cents per dollar. It financed this by issuing US\$ 364 million (J\$ 54,888m) in blue bonds. The bonds have a 10-year grace period and a maturity of 19 years. The favorable terms were, in part, due to the US government's

⁶⁶ TNC (2021). "Blue Bonds: An Audacious Plan to Save the World's Ocean". [Link](#).

⁶⁷ IMF Article (4th May 2022). "Belize: Swapping Debt for Nature", [Link](#).

development bank, the International Development Finance Corporation (DFC), providing insurance.

In return, Belize agreed to almost double its MPAs from 15.9% of its oceans to 30% by 2026. A goal far more ambitious than the 30 by 30 target advocated by the Ocean Alliance⁶⁸. US\$ 4 million (J\$ 603m) a year will be spent on marine conservation until 2041 with an endowment fund of US\$ 23.5 million (J\$ 3,544m) financing conservation after 2040. All of these funds were generated by savings made during the debt restructuring.

The international experience with trilateral debt swaps identifies some additional design features that can be considered:

- **Tax incentives.** Providing national corporations with tax incentives for contributing to the SPV can both increase fund raising and encourage private sector buy in. As an example, in the Seychelles, large national corporations can receive an offset of 0.25% of their CSR tax liability against donations or sponsorships against any donations they make to SeyCCAT (the SPV associated with their TNC debt restructuring).
- **Legal independence of SPV.** Many sponsors of debt for nature swaps prefer arrangements where the SPV is clearly and legally independent from the government's core budget.
- **Consistency with conservation and climate plans.** Linking the activities/projects of the SPV to commitments embedded in National Adaptation Plans (NAPs), NDCs and the SDG commitments can help ensure the credibility of the overall arrangement⁶⁹.

4.3.2. Opportunities and challenges

Debt for nature swaps provide a number of potential opportunities for Jamaica.

- **Support for debt sustainability.** On top of their ability to unlock additional blue finance, swaps can also be a key tool for debt refinancing in credit constrained environments. This is particularly relevant for Jamaica given the macroeconomic context and financing constraints described in section 3.1⁷⁰.

⁶⁸ Oceans 5 (n.d.). "30X30 Ocean Alliance". [Link](#).

⁶⁹ In recent years, there has been growing interest in moving beyond project-based swap arrangements, where the additional resources are allocated to individual projects that align to national plans, to more programmatic arrangements where the additional resources can be allocated to a wide range of activities consistent with an overarching commitment. This is seen as helping to reduce the transaction costs associated with traditional swap transactions. However, to date, there have been no examples of such programmatic swap arrangements. They are likely to be more feasible in relation to climate action (generally) where the NDC can provide the overarching commitment. See Chamon et al (2022) Debt-for-Climate Swaps: Analysis, Design, and Implementation, IMF Working Paper, WP/22/163. [Link](#).

⁷⁰ IMF article (8th February 2023). "IMF Executive Board Concludes 2022 Article IV Consultation with Jamaica", [Link](#).

- **Strong track record.** A number of debt to nature swaps have been successfully conducted in recent years providing confidence that the structure is practical and operationalizable. These include swaps in Belize and Barbados. This also means that there are a series of partners, most notably TNC, with a proven track record of delivering blue debt for nature swaps in the region who can support with technical expertise and guidance.
- **Mainstream blue economy.** The prospect of improved debt sustainability can act as an incentive to further mainstream considerations of blue economy within a debtor country.

However, it also brings a series of challenges:

- **Difficulties in agreeing the terms of the swap.** Especially in the case of bilateral swaps, it may be difficult to get the agreement of creditors. One of the reasons for this difficulty is that, creditors who agree to a swap arrangement at discounted prices are effectively providing a subsidy to those creditors who are not part of the agreement (as those not part of the agreement will be more likely to have their debt repaid in full). This leads to somewhat of a prisoner's dilemma where creditors' expected return is highest if they don't participate in the swap. These challenges will be particularly acute if potential creditors anticipate that Jamaica will have difficulty committing to the conservation activities into the longer term.
- **Technical capacity.** Considerable technical expertise is required for developing an eligible program pipeline, designing financial mechanisms associated with the swap and monitoring project implementation. This in turn leads to high transaction costs which can be especially high in the case of trilateral arrangements. For example, in the case of Belize, transaction costs reached US\$ 85 million (J\$ 12,817m), which is roughly equivalent to 15% of the debt which Belize was able to refinance as part of the swap.
- **Credit rating.** In some instances, a debt for nature swap may increase a debtor's credit rating. Debt relief / restructuring can signal poor fiscal management which can have implications for the perception of creditworthiness during future borrowing attempts. Previous OECD research suggests that debt for nature swaps should not be proposed if the overall macroeconomic situation in the country is improving and the external debt level is not unsustainable (by IMF criteria) - as is the current case in Jamaica - as it can affect the credit rating position of the country and increase the cost of future borrowings.⁷¹
- **Restricted use of proceeds.** Finance generated by debt for nature swaps is almost exclusively allocated to marine conservation efforts which limits the relevance of this tool for Jamaica's blue economy ambitions as a whole.

4.4. Dedicated taxation

⁷¹ OECD (2007). "Environmental Finance - Lessons Learnt from Experience with Debt-for-Environment Swaps in Economies in Transition", [Link](#).

4.4.1. Description, design options and precedents

Levying new taxes or fees and ring fencing the proceeds for blue economy uses is another potential source of blue finance. These taxes and fees can either be an additional levy on an already taxed activity like tourism, or they could be levied on previously untaxed activities.

In cases where an activity is already taxed, an additional levy is likely to be preferable to earmarking existing revenues. Reallocating an existing budget allocation carries significant political economy challenges and so a new tax or fee where revenues can be allocated towards supporting the blue economy represents a more straightforward source of financing.

Tourist taxes are already popular in the region, but they remain largely untapped as a source of blue financing. Tourist taxes are ubiquitous across the Caribbean, either on arrival, departure or on the tourist activities such as car rental or hotel stays. For example, Jamaica already levies a total of US\$ 55 (J\$ 8,293) in arrival and departure taxes per airline passenger (US\$ 20 (J\$ 3,016) on arrival and US\$ 35 (J\$ 5,278) on departure) which raised US\$ 164 million (J\$ 24,730m) in 2019⁷². However, both in Jamaica and elsewhere in the region, these proceeds are rarely ringfenced for blue economy. Box 3 explains how Palau has been able to effectively use an environmental fee on incoming tourists to fund their blue economy.

Additional tourism taxes could be considered but could be difficult to implement given concerns about the impacts on tourism demand, especially in the aftermath of the damage caused by the Covid-19 pandemic to this sector. Jamaica's tourist taxes are already relatively high amongst its peers and so additional tourist taxation could risk reducing demand.⁷³ Indicatively, a meta-analysis of 1,200 price-elasticity estimates found that the average price-elasticity of demand for tourists was -1.281,⁷⁴ meaning that a unilateral 1% increase in prices is associated with a 1.281% decrease in demand. Using this figure, it can be estimated that an additional US\$ 10 (J\$ 1,508) of tourist taxation could lead to a 0.9% decrease in demand.⁷⁵

Box 3 Palau's Pristine Paradise Environmental Fee (PPEF)

Palau provides an example of how substantial blue and green finance can be raised using a visitor fee. Palau's pristine paradise environment fee of US\$ 100 (J\$ 15,079) is included in the price of every international airline ticket into the Republic of Palau.⁷⁶ From the US\$ 100 (J\$ 15,079) collected, the funds are allocated as follows:⁷⁷

- Fisheries Protection Fund - 10%

⁷² OECD (2019). "Details of Tax Revenue - Jamaica". [Link](#).

⁷³ Ibid.

⁷⁴ Peng et al (2014) "A Meta-Analysis of International Tourism Demand Elasticities", [Link](#).

⁷⁵ By dividing the increase in taxes by the average spend per tourist to estimate the percentage increase in prices associated with the tax, the price-elasticity can be used to estimate the impact on the number of visitors. In 2021, the average spend per visit was US\$ 182 per night for 7.9 nights = US \$1,438, US\$ 10 would represent a 0.7% increase in this spending and 0.7% multiplied by the elasticity of 1.281 = 0.9%. ([Source](#))

⁷⁶ Caribank (2018). "Financing the Blue Economy: A Caribbean Development Opportunity". [Link](#).

⁷⁷ Government of Palau (2017). "Tenth Olbiil Era Kelalau". [Link](#).

- State budgets -12.5%
- National treasury (general budget) - 47.5% (25% earmarked for airport operations and maintenance)
- Green fee -30%

The green fee goes into a national account managed by the Protected Area Network Fund (PANF) which is run by an independent non-profit organization called the PAN Fund. The resources generated by the green fee are managed by the Fund, and used to finance conservation projects in both terrestrial and marine environments in Palau.

The Fisheries Protection Fund also directs funds collected through the PPEF towards supporting the blue economy. The fund aims to provide sustainable financing for surveillance, enforcement, training, administration, and eco-tourism in the Palau National Marine Sanctuary (PNMS). The Fisheries Protection Fund received almost US\$ 2 million (J\$ 302m) from PPEF collections during the PPEF's first two years of existence.⁷⁸

Palau is also looking to further augment the contribution of tourists to the blue economy by developing a carbon offset system which allows visitors to offset the emissions associated with their tourism activities by funding blue carbon initiatives. They estimate that the program could raise over US\$ 1 million per year which would be roughly equivalent to the amount of revenue currently raised by the PPEF⁷⁹.

New environmental taxes represent an alternative, and potentially substantial, source of finance towards the blue economy while also helping the GoJ achieve its climate goals. The proceeds of a carbon tax, or the taxation of environmentally damaging activities like waste collection and water abstraction, could be ring fenced for the financing of blue economy projects. For example, it has previously been estimating that replacing existing fuel taxes in Jamaica with a carbon tax of US\$ 35 (J\$ 5,278) could raise an additional 0.4% of GDP in revenue.⁸⁰ The current fuel tax regime does not tax the use of each fuel on the basis of its carbon intensity. This means that certain fuels, particularly those used by industry, are undertaxed from an emissions perspective. Aligning the tax rate with the emissions generated by the use of the fuel through a moderate carbon tax of US\$ 35 per tCO₂e⁸¹ (J\$ 5,278) would both streamline the tax system and generate additional revenues which could be directed towards supporting the blue economy.

Jamaica already has experience of using environmental taxation to fund the blue economy through its conch export levy. The levy requires exporters of conch to pay US\$ 0.50 (J\$ 75) per pound of conch exported and the revenues are used to fund the Fisheries Management and Development Fund. Among other things, the fund supports the monitoring and surveillance of

⁷⁸ PIPAP (2020). "Fisheries Protection Trust Fund approaches \$3 million". [Link](#).

⁷⁹ El Chais (2020). "Project to make Palau a carbon neutral destination launched by Palau Bureau of Tourism, Sustainable Travel International and Slow Food". [Link](#).

⁸⁰ OECD (2021). "Taxing energy use for sustainable development". [Link](#).

⁸¹ US\$ 35 is a low-end estimate of the climate damage caused by each tonne of CO₂ emitted. Ibid.

Jamaican waters to prevent poaching and the sustainable management of fish sanctuaries. In 2016, the levy raised close to US\$ 64 million in revenue⁸².

4.4.2. Opportunities and challenges

There are two main attractions from the use of dedicated taxation to support the Government of Jamaica's blue economy efforts:

- **Taxes and fees can be imposed unilaterally.** Unlike the other mechanisms in this section, implementing taxes and fees does not rely on external support from international institutions or investors.
- **Relatively modest taxes could lead to substantial revenue increases.** A US\$ 35 per tCO₂e (J\$ 5,278) carbon price which replaces existing fuel taxes could raise an additional US\$ 59 million (J\$ 8,897m) per year. An additional US\$ 10 per overnight visitor (J\$ 1,508) increase in the tourist tax might raise around US\$ 24.8 million (J\$ 3,736m) per year.⁸³

However, the introduction of dedicated taxation may need to deal with a key challenge.

- **Political economy concerns.** Both environmental and tourist taxes may be difficult to achieve politically. In the case of environmental taxes, this comes with the same challenges as any tax rise would and would also require negotiations with the private sector. Increasing tourist taxes could lead to concerns around the impact this would have on demand, especially as the sector is still recovering from the impact of the Covid-19 pandemic.

4.5. International development partners

4.5.1. Description, design options and precedents

The blue economy is becoming a priority area for DFIs, multilateral funds and bilateral funds alike. The ADB estimates that international aid for ocean conservation and climate action grew from under US\$ 0.6 billion to US\$ 3.5 billion (J\$ 90b to J\$ 528b) between 2013 and 2019⁸⁴. Furthermore, grant funding has grown as a proportion of total flows from 31% to 58% over the same period which is likely to be particularly attractive for the government. Since 2019 commitments appear to have increased yet further with the US and the EU committing

⁸² JIS (2016). "Fisheries Management Fund in Healthy Position". [Link](#).

⁸³ Ibid.

The estimate of US\$ 24.8 million is based on the 2.5 million overnight visitors which Jamaica received in 2018 and the 0.9% decrease in demand associated with an additional US\$ 10 tax estimated in Section 4.4. Phang et al. (2023). "A review of the blue economy, potential, and opportunities in seven Caribbean nations pre-COVID-19". [Link](#).

⁸⁴ ADB Institute (2022) "Blue economy and blue finance - Toward Sustainable Development and Ocean Governance", [Link](#).

US\$ 6 billion and US\$ 0.9 billion (J\$ 905b and J\$ 134b) to protect the world’s oceans respectively in the first quarter of 2023⁸⁵.

Jamaica has already been the beneficiary of blue finance from development partners in a number of areas. Section 2.4 sets out key examples where Jamaica has already been able to harness international funding sources. However, there are opportunities for Jamaica to both make use of a wider range of funding sources as well as to extend the sectoral focus of those funding sources that it has already been able to access. The discussion below focuses on multilateral funding sources and bilateral partners, as these are likely to offer blue economy financing on the most attractive terms. As noted below, on many occasions these funds may be implemented by international DFIs and, on occasion, these resources can be blended with the conventional financing that these DFIs provide.

4.5.2. Multilateral sources

In 2019, over 98% of blue finance in the region stemmed from multilateral sources.⁸⁶ The primary sources of multilateral blue finance to the Caribbean region are broad climate funds like the GCF or GEF and DFIs’ in-house blue/climate trust funds such as PROBLUE.

Most funds or facilities focus their support on a few areas of the blue economy where they have expertise. The most relevant sources, their areas of focus, and their funding context are set out in Table 3.

Table 3 A range of multilateral funds could offer financing to the Jamaican government to support its blue economy efforts⁸⁷

Fund (Type ⁸⁸)	Amount (funding horizon) ⁸⁹	Eligible BE sub-sectors	Access arrangements ⁹⁰
IMF Resilience and Sustainability Trust ⁹¹ (L)	US\$ 50b (N/A) (J\$ 7,540b)	Marine energy, coastal / marine development and protection.	Jamaica has already accessed US\$764 million ⁹² . It may be possible to allocate some of the funding agreed

⁸⁵ Vallecillos & O’Boyle (2023). “U.S. details \$6 billion in pledges for climate, ocean investments”. [Link](#).

⁸⁶ Author’s calculation based on US\$ 6 million in bilateral funding ([Link](#)) and US\$ 387 million in total funding ([Link](#)).

⁸⁷ In this section we have focused on (a) concessional financing which is targeted at the blue economy and (b) the largest sources of concessional financing for the wider climate agenda. There are also likely to be smaller funds and facilities which may support individual sub-sectors of the blue economy. Renewable energy support which could be used to fund marine renewables is a prime example of this.

⁸⁸ G = Grants and L = Concessional loans.

⁸⁹ Amount refers to the fund’s level of capitalisation unless otherwise specified.

⁹⁰ In cases where individual ministries or departments can apply directly to the funds and facilities listed here, they would still have to obtain MOFPS approval before doing so in line with Jamaican government processes.

⁹¹ Gupta & Brown (2023). IMF Lending Under the Resilience and Sustainability Trust: An Initial Assessment. [Link](#).

⁹² IMF (2023). Jamaica: Request for an Arrangement Under the Precautionary Liquidity Line and Request for an Arrangement Under the Resilience and Sustainability Facility. [Link](#).

			towards blue economy priorities.
PROBLUE⁹³ (G)	US\$ 200m (N/A) ⁹⁴ (J\$ 30,158m)	All except maritime transport	‘Relevant federal ministry’ i.e. PIOJ submits proposal.
Ocean Risk and Resilience Action Alliance⁹⁵ (G)	US\$ 500m (2030) (J\$ 75,395m)	Coastal / marine ecosystem protection and restoration, coastal development & fisheries.	Any public sector entity can directly submit a proposal. See Box 4 for more details.
Global Fund for Coral Reefs⁹⁶ (G & L)	US\$ 500m (2030) (J\$ 75,395m)	Marine ecosystem protection and restoration	Public and private entities can directly submit proposals. See Box 6 for more details.
Global Environment Facility (GEF) (primarily G)	Max US\$ 11.5m ⁹⁷ (2026) (J\$ 1,734m)	Marine energy, coastal development and protection.	‘Operational Focal Point’ collaborates with GEF partner agency (such as IDB or World Bank) to develop project pipeline
Green Climate Fund (GCF)⁹⁸ (G & L)	US\$ 10.2b (N/A) (J\$ 1,538b)	Marine energy, coastal development and protection.	Accredited agency submits proposal. This may either be an international accredited entity such as the World Bank, UNEP, UNDP etc. or a nationally accredited entity. JSIF is Jamaica’s accredited entity.
Adaptation Fund (AF) (G)	Max US\$ 20m (N/A) ⁹⁹	Coastal / marine ecosystem	Accredited entity (PIOJ) submits proposal

⁹³ World Bank (n.d.). “PROBLUE”. [Link](#).

PROBLUE exclusively provides funding and technical assistance for capacity building and governance strengthening purposes.

⁹⁴ Jamaica has already received substantial support from PROBLUE and so further funding from the facility would likely only be given to strong proposals which offer synergies with existing World Bank projects in Jamaica and the potential for scalability.

⁹⁵ ORRAA (2022). “Action Report for 2022”. [Link](#).

⁹⁶ GFCR (2023). “Global Fund for Coral Reefs”. [Link](#).

⁹⁷ Jamaica’s GEF-8 allocation. GEF (2022). “Initial GEF-8 STAR Country Allocations”. [Link](#).

⁹⁸ GCF (2022). “Green Climate Fund Board streamlines access to finance in major accreditation review USD 187.7 million also approved for new climate projects”. [Link](#).

⁹⁹ US\$ 20m is available per country with each project having a maximum of US\$ 10m. Adaptation Fund (2021). “Adaptation Fund Doubles the Amount of Funding Countries Can Access, Enhancing Access to Climate Finance Among Most Vulnerable”. [Link](#).

	(J\$ 1,508m)	protection and restoration.	
--	--------------	-----------------------------	--

Other coastal and island nations have shown how the multilateral funds listed in Table 3 could be used to fund new blue economy opportunities in Jamaica.

- In Cabo Verde, PROBLUE has committed US\$ 5 million (J\$ 755m) in investment between 2022 and 2025 to increase diversity and sustainability of the country's tourism sector.¹⁰⁰ The PROBLUE funded activities are part of a wider World Bank project which will also fund the rehabilitation of key tourist infrastructure.
- ORRAA is partnering with TNC to develop the first blue carbon initiative in The Bahamas.¹⁰¹ The initiative is set to allow corporations to offset their carbon footprint by purchasing 'Blue Carbon Resilience Credits'. The proceeds from these credit sales will be used to support resilience by reducing flooding in highly vulnerable coastal areas through the conservation and restoration of coastal wetlands.
- Fiji has been a recipient of US\$ 10 million (J\$ 1,508m) in grant funding from GFCR to improve the state of almost 50,000 hectares of coral reefs.¹⁰² Over the project's 10-year horizon (2021-2030), the funding will be used to establish a local facility to incubate a pipeline of reef-positive business models, encourage reef-positive agricultural practices and support management of Fiji's MPAs.
- A GEF funded initiative in Palau will support the country's fisheries and aquaculture sector to integrate biodiversity considerations into management.¹⁰³ The US\$ 1.5 million (J\$ 226m) grant will fund technical assistance to integrate biodiversity into legal and institutional frameworks as well as pilots of new and innovative approaches to aquaculture which conserve marine biodiversity.
- Between 2015 and 2020, Belize received US\$ 5.5 million (J\$ 829m) in funding from the Adaptation Fund to strengthen the climate resilience of the Belize Barrier Reef System.¹⁰⁴ The funds were used to both expand and improve protection areas and promote viable alternative livelihoods among fishing communities affected by the protection measures.

Box 4 The Ocean Risk and Resilience Action Alliance (ORRAA)¹⁰⁵

The Ocean Risk and Resilience Action Alliance (ORRAA) aims to drive US\$ 500 million (J\$ 75,395m) of investment into pioneering, piloting, and scaling innovative finance

¹⁰⁰ World Bank (2022) "Resilient Tourism and Blue Economy Development in Cabo Verde Project (P176981) - Implementation Status & Results Report", [Link](#)

¹⁰¹ ORRAA article, [Link](#)

¹⁰² GFCR (2021) "2021 Action Report", [Link](#)

¹⁰³ GEF project page, "Facilitating biodiversity conservation by enhancing aquaculture policy, planning, management, and production", [Link](#)

¹⁰⁴ Adaptation Fund (30th March 2021) "Belize Marine Conservation and Climate Adaptation Project (MCCAP): ID-131408 - Project Completion Summary", [Link](#)

¹⁰⁵ ORRAA (n.d.). "What we do". [Link](#).

products that invest in coastal resilience. The alliance is the only multi-stakeholder alliance working in ocean finance that brings insurers, banks, governments, academia and civil society together. The alliance focuses on four key areas: sustainable livelihoods, coastal protection, ocean-based renewable energy, and marine biodiversity conservation.

The alliance is supporting the development of a pipeline of investible finance and insurance product through three work streams:

- **Financial Innovation** - Projects in this area include micro to macro-insurance tools, building financial literacy within coastal communities, blue carbon and resilience credits and technological applications. Projects can be at any stage of the development cycle but their solutions should be replicable and scalable to deliver systematic change - seeding the development of investment grade projects that can be applied across different sectors and regions.
- **Science & Research** - Supporting research and modelling on ocean risk and resilience to inform financial innovation and policy action.
- **Policy & Governance** - By acting as a connector and catalyst for cross-sector collaboration, the alliance aims to inform, advance and drive global action to address ocean risk and improve coastal resilience.

Eligibility criteria varies between calls for proposals. ORRAA's most recent call for proposals, financed by the UK's Blue Planet Fund, is providing grants of up to US\$ 500,000 (J\$ 75m) to test, pilot and scale community-led finance and insurance products that build coastal and ocean resilience¹⁰⁶. These grants are only eligible for public-sector led endeavors.

4.5.3. Bilateral sources

The total flow of bilateral funding into the Caribbean blue economy was just US\$ 5.4 million (J\$ 814m) in 2021¹⁰⁷. The total bilateral funding pool remains limited and, over the past decade, Jamaica has received only 4%, which is a smaller percentage than its proportion of regional GDP. This suggests that there is room for Jamaica to increase their share of this funding stream if they are able to develop an appropriate project pipeline.

Bilateral donor funding tends to provide relatively small amounts of fund making it best suited for pilot projects or for technical assistance especially related to legislative, regulatory and institutional aspects of the blue economy. Between 2012 and 2021 87% of bilateral ODA blue economy investments in the Caribbean were under US\$ 500,000 (J\$ 75m)¹⁰⁸.

Japan accounts for almost half of the bilateral donor flows into the Caribbean blue economy. Between 2012 and 2021, Japan was by far the largest provider of project-based funding with the remaining 51% made up of European governments (40%) and other nations

¹⁰⁶ ORRAA (2023). "ORRAA UK Blue Planet Fund Call for Proposals". [Link](#).

¹⁰⁷ UK FCDO (2022). "Blue Economy Financial Flows: Caribbean Region". [Link](#).

¹⁰⁸ Ibid.

(11%). However, there are three specific UK-funded facilities are currently looking to increase bilateral investment in the Caribbean's blue economy:

- **UK Blue Carbon Fund.**¹⁰⁹ The Fund provides both *technical assistance* and *blended finance* in support of the development of blue carbon markets across the Caribbean and Latin America. The support seeks to promote the sustainable management, conservation and restoration of mangrove habitats and to provide local communities with a sustainable income and assist in moving low-income countries towards low-emission, climate-resilient development. The Fund has yet to allocate US\$ 7.5 million (J\$ 1,136m) of its initial US\$ 18.9 million (J\$ 2,851m) budget and is set to run until at least the end of 2024.
- **Ocean Country Partnership Programme (OCP).**¹¹⁰ The OCP provides *technical assistance* to support partner countries to strengthen marine science expertise, develop science-based policy and management tools, and create educational resources for coastal communities. The programme has US\$ 74 million (J\$ 11,154m) in funding and is set to run until at least 2025.
- **UK Caribbean Infrastructure Fund (UK-CIF).**¹¹¹ The UK-CIF provides *grants* to build new economic infrastructure in the Caribbean. The blue economy sub-sectors which are eligible include sea defenses, seaports, water/sanitation/wastewater, irrigation and offshore energy. The Fund has yet to allocate US\$ 175 million (J\$ 26,440m) of its initial US\$ 479 million (J\$ 72,297m) budget and is set to run until at least 2026.

The United States has recently committed US\$ 6 billion (J\$ 905b) to address threats to address threats to the planet's oceans.¹¹² Up to US\$ 8.6 million has been explicitly earmarked for the Caribbean region but there are likely to be further opportunities for Jamaica to access pockets of this finance as further details of how the funds will be spent become clearer over the coming months.

4.5.4. Opportunities and challenges

There are a number of attractions for the Government of Jamaica making use of concessional support from development partners to support the growth of the blue economy:

- **No/low financing burden.** Grant and concessional funding expands the budget for the blue economy at lower fiscal cost than most other sources of finance.
- **Technical assistance.** Many of these funding sources combine financing with expertise and technical assistance alongside financial support. This can increase the probability

¹⁰⁹ DEFRA (2023). "UK Blue Carbon Fund". [Link](#).

¹¹⁰ DEFRA (2023). "Ocean Country Partnership Programme (OCP)". [Link](#).

¹¹¹ It should be noted that, to date, Jamaica has already received the highest allocation of UK CIF resources in the region and so it may be challenging to access further finance via this mechanism. UK FCDO (2022). "UK Caribbean Infrastructure Fund". [Link 1](#).

UK aid (n.d.). "The UK Caribbean Infrastructure Fund". [Link 2](#).

¹¹² U.S. Mission Panama (2023). "U.S. delegation announced 6 billion USD in commitment to address threats to our ocean". [Link](#).

that any specific assets or projects will be successful and can also enhance capacity within the government, supporting long-term sustainability.

- **Dedicated focus on the blue economy.** The initiatives identified above provide explicit support to (parts of) the blue economy. This reduces/eliminates the risk that funding may be diverted to other activities.

It also comes with a number of challenges or constraints:

- **Restricted eligibility for certain areas of the blue economy.** Some areas of the blue economy that are important to Jamaica, such as ocean transport may not be eligible for funding from these sources.
- **Small scale.** Many of these sources, especially those from bilateral agencies, offer only relatively small amounts of funding, limiting their use cases.
- **Competitive application process.** In cases where funding is allocated competitively, competition can be fierce and so requires a high level of technical capacity and a considerable investment of resources to be successful.
- **Competing domestic priorities.** For donor resources which are available for climate projects more broadly rather than just for the blue economy, applicants also need to compete for funding with other climate programmes on the domestic agenda.
- **Transaction costs.** The application processes as well as the monitoring and evaluation required for donor funded projects can lead to high transaction costs which for, smaller projects, may not be sufficiently outweighed by the benefits generated.

4.6. Other options to improve sovereign flows of finance towards blue economy

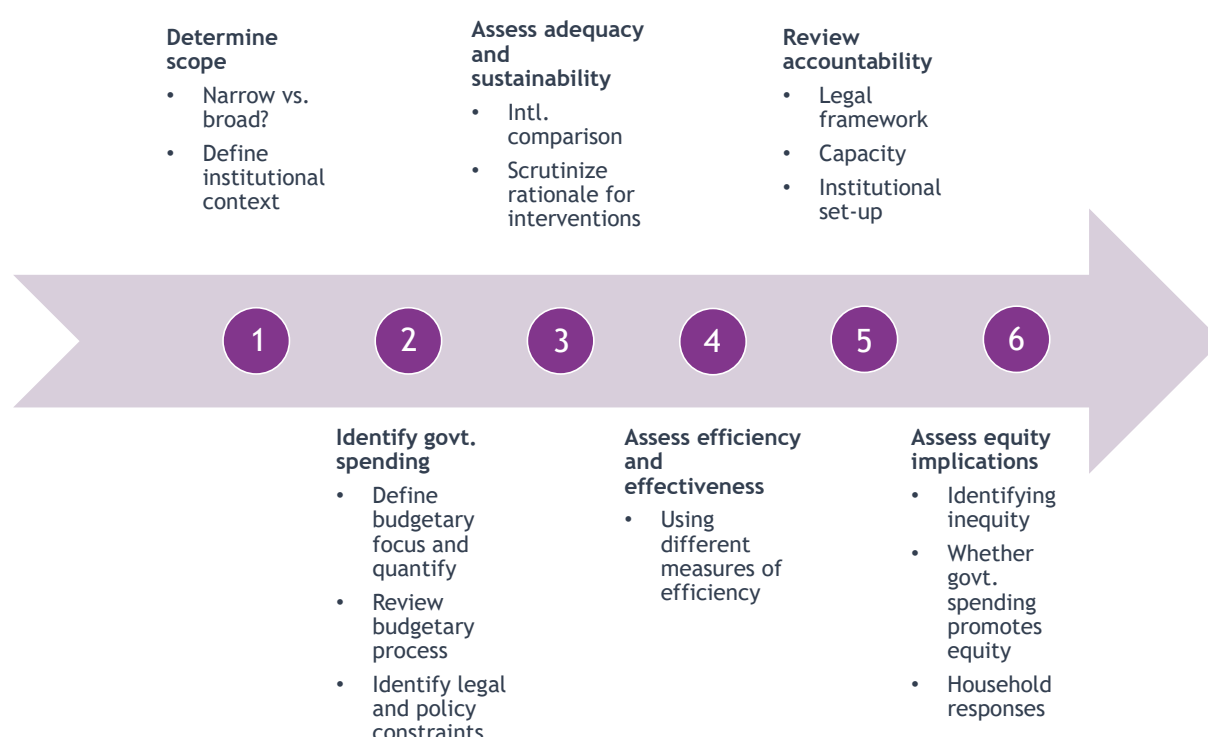
As well as exploring options to *raise* additional public finance for the blue economy, Jamaica can also harness tools to improve the way it *spends* budget on blue economy objectives. These tools apply regardless of the source of the budgetary resources and are all focused on mainstreaming blue economy considerations into public financial management. In all cases, they can be expected to generate useful information about the blue economy and raise awareness of its importance within budgetary policymaking. These benefits will need to be traded off against the additional human resources they require, and the additional complexity that they would introduce into the process of setting and executing budgets.

The first step in this process could be the development of a blue economy public expenditure review (PER). Public expenditure reviews provide a baseline for understanding the extent to which public budgets are supporting a particular cross-cutting priority and the extent to which current efforts may or may not fall short of what is required. They are well-established in relation to climate change where countries as diverse as El Salvador, Colombia, Tanzania, Bangladesh, Philippines and a range of Pacific Islands have undertaken such

reviews¹¹³. They are now also being applied to the blue economy with countries such as Bangladesh exploring their utility in relation to the blue economy.

A recent World Bank Guidance Note highlights the key methodological stages of a blue economy PER¹¹⁴. Figure 10 illustrates these steps. Following an assessment of the appropriate scope for the review and basic institutional set-up, the work quantifies government spending on the blue economy and then scrutinizes this from the perspective of whether spending is adequate and promotes sustainability, whether it is spent effectively and efficiently, and whether it promotes equity. It also considers whether accountability mechanisms related to government spending in the blue economy are adequate.

Figure 10 Key steps in a blue economy PER



Source: World Bank (2021) Blue Public Expenditure Review Guidance Note

The introduction of blue economic budget tagging would consolidate a blue PER and provide a dynamic assessment of the extent to which public spending is supporting the blue economy. This would involve tagging individual budget lines according to whether and the extent to which they support the blue economy, allowing stakeholders to understand the extent of support from the public budget to the blue economy year-by-year. The introduction of a blue economy tagging system has recently been recommended for Antigua and Barbuda¹¹⁵.

¹¹³ They are often accompanied by an assessment of current policy direction and the extent to which institutional arrangements support climate objectives.

¹¹⁴ World Bank (2021) Blue Public Expenditure Review Guidance Note, [link](#)

¹¹⁵ Commonwealth Marine Economies Program (2021) Antigua and Barbuda Maritime Economy Plan. [Link.](#)

In Jamaica’s case, any blue economy tagging could build on recent work to introduce climate budget tagging.

It may be worth considering integrating blue economy PER and potentially budget tagging within broader a broader climate change PER and budget tagging exercise. Recognizing that both public expenditure reviews and budget tagging can be onerous endeavors requiring a substantial commitment of human resources, Jamaica could explore ways to streamline blue economy considerations into a broader climate related PER and budget tagging exercise. This would have the advantage of avoiding duplication of effort, although it would require the teams undertaking the work to have a firm understanding of both climate related budget planning, and the blue economy.

There are a range of further tools that the Jamaican government could consider to mainstream the importance of the blue economy into the budget setting and related decision-making processes:

- Including reference of the importance of the blue economy with the annual budget circular and associated strategic budgetary documents.
- At the budget approval stage, the publication of a blue economy ‘statement’ highlighting how the current budget is expected to promote (or otherwise) Jamaica’s blue economy.
- The creation of a parliamentary select committee¹¹⁶ or equivalent that scrutinizes and ensures accountability in relation to budgetary support to the blue economy. This would be easier to justify if there was a clear and explicit commitment from the government regarding the importance attached to the blue economy. This scrutiny would be easier if blue economy tagging was introduced.
- Develop a system of natural capital accounts for the country so that the impact of investment decisions taken by both government, as well as those by the private sector, on the value of Jamaica’s environmental assets (especially its marine resources) can be monitored.

4.7. Summary

This section has explored a range of different ways in which the Government of Jamaica can access financial resources to support its blue economy ambitions. Table 4 below summarizes the key options in terms of raising finance and the opportunities and challenges they present.

Table 4 Options for the GOJ to raise finance to support the blue economy

Option	Basic mechanism	Most relevant BE sub-sector(s)	Opportunities	Challenges
--------	-----------------	--------------------------------	---------------	------------

¹¹⁶ Or a sub-committee within an existing committee.

Blue bonds	Debt issuance with use of proceeds ringfenced for blue economy.	Ecosystem protection and restoration & fisheries	<ul style="list-style-type: none"> • Signaling • Mature product • Investor diversification • Price discount • Can raise substantial levels of capital • Can finance debt for nature swaps 	<ul style="list-style-type: none"> • Project pipeline • Lack of standardized definitions • Regulatory compliance • Reliance on IFIs • Debt sustainability
Debt for nature swaps	Debt refinancing at favourable terms in exchange for spending on conservation.	Ecosystem protection and restoration	<ul style="list-style-type: none"> • Supports debt sustainability • Strong track record • Mainstreams blue economy 	<ul style="list-style-type: none"> • Creditor buy-in • Technical capacity requirements • Impact on credit rating • Restricted use of proceeds
Dedicated taxation	Additional tourist and/or environmental taxes with ringfenced proceeds.	All	<ul style="list-style-type: none"> • Unilateral mechanism • Modest raises can generate substantial revenues 	<ul style="list-style-type: none"> • Political economy concerns
International development partners	Grant or concessional financing from international donors.	Ecosystem protection and restoration & marine energy	<ul style="list-style-type: none"> • No/low financing burden • Technical assistance • Dedicated to blue economy 	<ul style="list-style-type: none"> • Restricted eligibility • Small scale • Competitive • Competing domestic priorities • Relatively high transaction costs

In addition, it illustrates how there are opportunities to enhance the way in which Jamaica manages the process of spending its budgetary resources, to better mainstream blue economy considerations. This could commence through undertaking a blue economy public expenditure review, which could potentially provide a platform for blue economy budget tagging as well as the use of other tools and processes with the budget setting process.

5. Supporting private sector investment flows

Private investment flows will be vital in Jamaica realizing its blue economy ambitions. As section 2 demonstrates, there are already a number of important examples where investments have been made by private investors that are aligned with the blue economy idea. However, as section 3 shows, there are a range of barriers holding back further investment. Some of these are barriers that common to all private sector investment opportunities in Jamaica, others are more specific to the blue economy. This section discusses some of the key ways in which the Government of Jamaica, supported by international development partners, can help overcome these barriers and so enhance private sector investment into the Jamaican blue economy.

The discussion looks at two broad categories of solution:

- **Blended finance.** This is defined broadly to cover cases in which public funding is provided on grant or concessional terms with the intention of leveraging private investment into activities that generate social returns.
- **Policy and regulatory reforms.** This refers to changes to the policies, (dis)incentives and regulations, and the broader institutional environment in which they are embedded, which will encourage private sector businesses to invest and make it easier for financial institutions to provide finance towards these investment opportunities.

5.1. Blended finance options

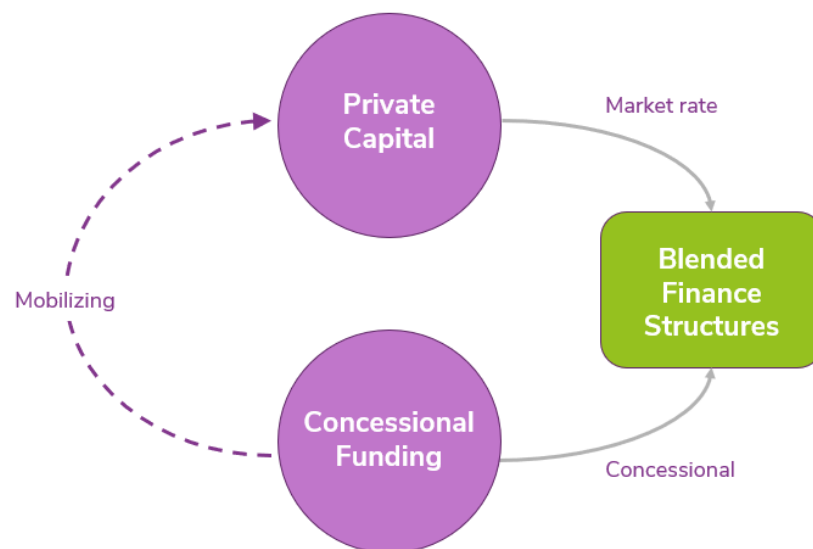
Blended finance can help de-risk private sector investment in the blue economy. By providing public (or philanthropic) finance at concessional rates, blended finance can improve the risk-adjusted return profile of blue economy projects for investors. The mechanism is best displayed in Figure 11. Concessional finance can either be provided by domestic institutions or international donors, the different opportunities available for each of these alternatives are explored in this section. Broadly speaking, international opportunities are likely to be most relevant given the tight fiscal conditions for the public sector in Jamaica.

The rationale behind blended finance is broadly threefold:¹¹⁷

- i. **Increased capital leverage.** Public and philanthropic funding helps to mobilize additional private capital which allows a greater scale or impactful results to be achieved;
- ii. **Enhanced impact.** Combining the skillset, knowledge and resources of public and private investors can unlock all the best aspects of public-private partnerships: increased scope and effectiveness.
- ii. **Improved risk-adjusted returns.** The public sector's concessional finance or first loss guarantee can improve the risk return trade-off for private investors.

¹¹⁷ Caribank (2018). "Financing the Blue Economy". [Link](#).

Figure 11 Concessional funding can unlock private capital



5.1.1. Domestic blended finance opportunities

There are a number of opportunities for the government and domestic financial institutions to support blue economy growth through blended finance opportunities.

The government could undertake feasibility studies for potential public-private partnerships in blue economy related sectors complemented by a range of market development activities. The DBJ already advertises public-private partners via the P4 Portal. The DBJ could prioritize blue economy related projects for future opportunities and conduct necessary preparatory work to attract interest from private sector investments. This could be supported by market development activities such as entrepreneurship and skills training and business linkage programs. These could potentially be run through JAMPRO. For all of these activities, there may be support available from international development partners.

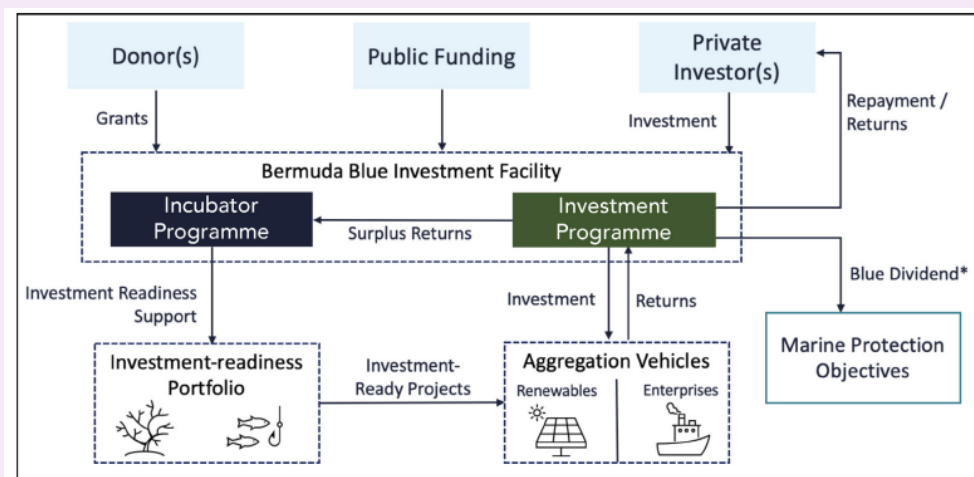
More ambitiously, schemes could be structured to incentivize early-stage investments in blue economy ventures by the private sector. For example, government bodies or domestic financial institutions could top-up funding provided to early-stage blue economy ventures by the private sector through grants or low-interest loans. This could be structured through a national blue investment facility as is being developed in Bermuda (see Box 5 for more). For any domestic blended finance mechanism, ensuring that the mechanism and how returns are distributed is transparent will be key to minimizing concerns around the kinds of moral hazards which are inherent when mixing of private and public funds.

A cornerstone of Bermuda's 2022 Blue Economy Strategy is the development of a **National Blue Investment Facility**. The facility, which is being developed in partnership with Finance Earth, will have two sister programmes:

- **Incubator Programme** - providing investment-readiness grant support and technical assistance for pipeline development to identify and accelerate small-scale blue economy projects and test pilots.
- **Investment Programme** - providing repayable and blended capital into investment ready aggregation vehicles and viable projects at a more mature stage of development. Investment in a range of businesses provides an opportunity to support the growth of the sustainable blue economy in Bermuda.

The full mechanism is outlined in Figure 12.

Figure 12 Bermuda's Blue Investment Facility will use blended finance to develop and support a pipeline of blue economy projects.



Bermuda's facility remains in the development phase but it is anticipated that just US\$ 2.5 million (J\$ 377m) in grant funding could kickstart the Incubator Programme. The Incubator Programme would then develop a more extensive pipeline of opportunities for investment, building the case to private investors to capitalize the Investment Programme.

5.1.2. International blended finance opportunities

Between 2019 and 2021, 5% of global blended finance transactions (US\$1.37 billion / J\$ 207 billion) were classified as supporting SDG 14: Life below water.¹¹⁹ Blended finance flows in support of the blue economy have risen considerably in recent years. Total transactions doubled from US\$ 0.1 billion to US\$ 0.2 billion (J\$ 15b to J\$ 30b) for fisheries and aquaculture

¹¹⁸ Government of Bermuda (2022). "Draft Blue Economy Strategy". [Link](#).

¹¹⁹ Convergence (2022) "State of Blended Finance 2022 - Climate Edition", [Link](#)

and rose from approximately zero to US\$0.2 billion (J\$ 30b) for tourism between 2016-18 and 2019-21.

One important global blended finance vehicle is the Global Fund for Coral Reefs (GFCR).

This is described in more detail in Box 6. The German, French, British, and Canadian governments are collaborating with private foundations to provide US\$ 125 million (J\$ 18,849m) in grants for pipeline building, research, and impact assessments to support coral reef conservation. In addition, the Green Climate Fund (GCF) has provided a further US\$ 125 million (J\$ 18,849m) anchor investment to provide guarantees, concessional loans, and early equity investments to the underlying projects. The Fund has already supported projects in the Bahamas and the Dominican Republic.¹²⁰

In 2021, Latin America and the Caribbean was the most targeted region for blue economy blended finance deals, making up 31% of global transactions.¹²¹ A significant portion of these deals have been supported by regionally focused blended finance facilities. Regionally focused facilities which are still within their funding window are:

- **Blue Invest** is a technical assistance and investment facility aimed at supporting blue economy projects in waste management, environmental protection and biodiversity, fisheries and aquaculture, sustainable energy, and tourism in the Eastern Caribbean.¹²² The facility has leveraged US\$ 28 million (J\$ 4,222m) of private and public sector capital off the back of US\$ 350k (J\$ 53m) in initial funding.
- **Althelia Sustainable Ocean Fund (SOF)** is an impact investment fund focused on contributing to the targets of SDG 14 which allocates 40% of its funds to the Latin America & Caribbean region.¹²³ The US\$ 132 million (J\$ 19,904m) facility funds activities related to sustainable seafood, circular economy and marine conservation. The fund has executed a risk sharing guarantee through USAID's Development Credit Authority (DCA) that provides loan guarantees directly to portfolio investments made by the SOF.
- **Blue Finance** is a blended finance facility for Marine Protected Areas (MPAs). The US\$ 22 million (J\$ 3,317m) facility is funded by the Government of Canada and will provide up-front and early-stage capital for the management of sustainable MPA networks in the Global South.¹²⁴ The project will contribute to the effective management and the financial sustainability of these MPAs.

¹²⁰ GFCR (2021) "2021 Action Report", [Link](#)

¹²¹ Convergence (2022) "State of Blended Finance 2022 - Climate Edition", [Link](#)

¹²² Joint SDG Fund (n.d.). Blue Invest. [Link](#).

¹²³ Mirova (2022) "Althelia Sustainable Ocean Fund - Impact Report 2021", [Link](#)

¹²⁴ ORRAA (n.d.). Establishing a blended finance facility for Marine Protected Areas (MPAs) - Blue Finance. [Link](#).

Box 6 The Global Fund for Coral Reefs¹²⁵

The GFCR is GCF's first at-scale private sector program in the blue economy. The program aims to encourage investments in the blue economy which protect coral reefs by addressing critical financing and investment barriers.

The program provides capital to businesses and activities that ameliorate or eliminate existing local stressors in the coral reefs. The fund is active in 17 countries in Africa, the Asia-Pacific, Latin America and the Caribbean (including Jamaica) and is set to run until at least 2030.

Investments are made in the following sectors:

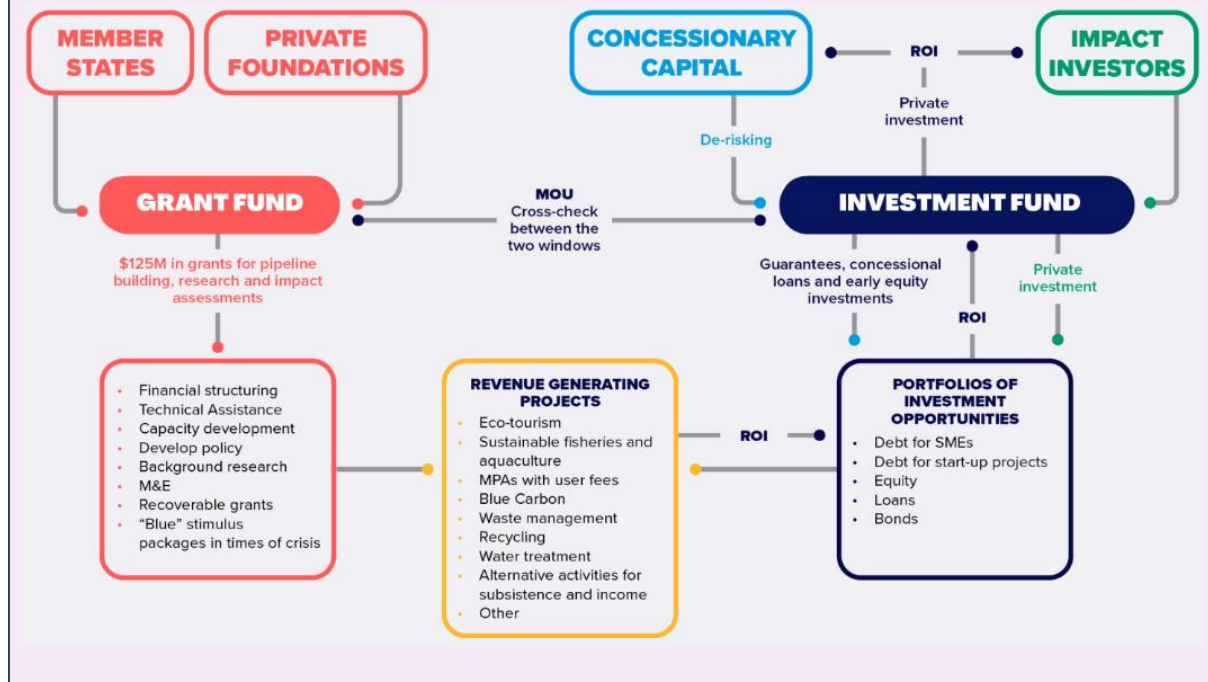
- **Sustainable ocean production:** supporting sustainable fisheries, mariculture, and aquaculture.
- **Sustainable ecotourism:** measures include supporting sustainable hotel and tourism businesses that incentivize the protection of coral reef ecosystems; and
- **Sustainable infrastructure and waste (pollution) management:** this includes improved plastic waste management, improved treatment of sewage and wastewater, and the adoption of organic fertilizers.

The fund is two-pronged and consists of a US\$ 125 million (J\$ 18,849m) grant facility as well as a US\$ 500 million (J\$ 75,395m) private equity investment facility. GCF is the anchor investor for the private equity facility and provided US\$ 125 million (J\$ 18,849m) with the remaining US\$ 375 million (J\$ 56,546m) raised from MDBs and other sources.

- The **grant fund** aims to promote an enabling environment at policy, institutional and regulatory levels and seed a pipeline of investment ready projects.
- The **investment fund** provides guarantees, concessional loans and early equity investments to de-risk investment opportunities and 'crowd-in' private capital.

¹²⁵ GCF (2022). "Global Fund for Coral Reefs Investment Window (GFCR)". [Link](#).

Figure 13 The grant and investment funds work in tandem to develop a sustainable policy pipeline¹²⁶



Multilateral climate funds like GEF and GCF are also important sources of blended finance.

- The GEF blended finance initiative has provided more than US\$ 215 million (J\$ 3.2 billion) in funding since 2008¹²⁷. Most recently, GEF has acted as an anchor investor of the Meloy Fund, an impact fund focused entirely on community small scale fishing. The fund will finance unbanked enterprises to acquire the fixed assets they need to enable financial growth, job creation, and resilience to economic shocks.
- The GCF already invests approximately 4% of its funds towards the blue economy, above the ODA average of 0.1%¹²⁸. In addition to its support for the Global Fund for Coral Reefs as described above, it is currently funding the development of ‘Blue Co Caribbean’ a regional blended finance facility partnership to invest further in blue shipping, marine protection, waste management and circular economy, coastal livelihood and offshore energy¹²⁹. The facility is intended to be a ‘one-stop shop’ which can provide support for developing the enabling environment all the way through to project investments and coordination and knowledge sharing.

Blended finance has a wide range of use cases for the blue economy but, most often, it has been used to finance sustainable seafood, conservation and offshore energy. These investment themes either involve significant technology risk or are activities where many of the social returns are difficult to monetize. In both cases blended finance plays an important role in helping to match risk-adjusted returns to investor requirements.

¹²⁶ GFCR (n.d.). “How we work”. [Link](#).

¹²⁷ GEF (2019). “Advances in Blended Finance”. [Link](#).

¹²⁸ GCF (2022). “Blue Co: The blue economy co investment platform”. [Link](#).

¹²⁹ Caribbean Regional Heads of Government (2022). “In preparation for COP 27”. [Link](#).

5.1.3. Opportunities and challenges

The use of blended finance holds a number of attractions when considering how to scale up investment in the blue economy:

- **Reduces public finance requirement.** By leveraging private sector finance, blended finance allows the public sector to do more with its limited resources. This is particularly true for ventures which are close to being viable and so only require a small injection of blended finance to make them investment ready.
- **Availability.** There are a wide array, and ever increasing, number of international funds looking to provide concessional public capital to eligible blue economy projects.
- **Signal of Government of Jamaica commitment.** The development of national blue economy blended finance vehicle such as being developed in Bermuda would help further demonstrate Government of Jamaica commitment to the blue economy, in itself helping to provide comfort to private sector investors.

There will also be a number of challenges that need to be contended with:

- **Resource intensive.** Finalizing a blended finance package can be time consuming as there are typically multiple financing instruments and institutions or entities involved.

In addition, considerable technical capacities are required to structure, manage and execute these types of arrangements in ways that serve the public interest and take into consideration the social and environmental impacts of projects¹³⁰. This is particularly important if Jamaica wishes to consider developing its own national blue economy blended finance vehicle.

- **Restricted project pipeline.** There is an inherent limitation to the number of projects which are in blended finance 'sweet spot'. On the one hand, many transactions are already bankable without the need for blended finance; on the other hand, some transactions are so far from bankability that implausible amounts of blended finance would be required to enable them to proceed. This may help to explain why a number of reviews of blended finance facilities have found it difficult to fully spend their resources and why leverage rates are often modest. For example, An ODI analysis suggests that each \$1 of MDB and DFI invested in blended finance facilities has only mobilized on average \$0.75 of private finance for developing countries¹³¹.

5.2. Government Policy

The government can support private sector investment in the blue economy in a number of ways. These include:

1. Overarching policies and regulations, and institutional framework

¹³⁰ AFD (2016). "Financing the SDGs in the Least Developed Countries (LDCs): Diversifying the Financing Tool-box and Managing Vulnerability". [Link](#).

¹³¹ ODI (2019). "Blended finance in the poorest countries". [Link](#).

2. Fiscal incentives and market-based support
3. Increasing awareness
4. Supporting necessary training in new industries

5.2.1. Overarching policies, regulations, measures and institutional framework

The government can support private sector investment by creating or updating policies and regulations in key blue economy sectors. Having updated policy documents in place can encourage investment by providing a clear picture of future plans in the sector. Clear regulations provide certainty to investors on the future regulatory environment, which is a pre-requisite for most private sector investments.

A number of blue economy sectors have been identified where policies and regulations require updating by different institutions:

- NEPA to finalize the mariculture policy.
- NFA to complete the National Fisheries and Aquaculture policy.
- NFA to complete plans across species as outlined in the Medium-Term Socio-Economic Policy Framework.
- NCST and SRC to develop a framework for the coordination and standardization of the National Nutraceutical Industry.

These policies and regulations will need to be complemented by resources to ensure that policies and regulations can be enforced. This is likely to be particularly important in the fisheries sector, for example.

As well as this, the government may consider other areas which may benefit from new or updated policies and regulations. Potential candidate sectors are marine energy and other forms of maritime transport (e.g. yachting). The government may want to consider a structured consultation process to help identify sectors that might benefit from further changes.

The cost of implementing these policies is the resource requirement at the various government ministries. The main cost of these changes is the opportunity cost at the various ministries, for example the fact that a certain amount of resources would need to be made available to complete policy updates.

The benefits are large if new policies and regulations enable further investment by the private sector. The policy and regulatory landscape is an important factor considered by private sector investors, updated policies may enable blue economy investment flows which would not be available without further clarity on this factor.

5.2.2. Fiscal incentives and market-based support

The government may consider structuring fiscal incentives for investors in target blue sectors. Investments in a number of blue economy sectors may not meet the investment size threshold (US\$1bn) required to qualify for tax relief under “The Income Tax Relief (Large-Scale Projects & Pioneer Industries) Act”. The government or other bodies may consider incentivising

blue economy investments by providing future income tax relief for investments in target sectors with a lower investment threshold than that required under the Pioneer Industries Act.

The government may consider other targeted schemes to mitigate cost barriers and other risks. For example, the government could consider guaranteeing minimum commercial prices for a certain period of time, relevant to fisheries and renewable energy, or provide additional tax relief on R&D activity. There may also be scope to consider personal tax relief incentives for investors in very early-stage blue economy companies to mitigate the downside risks involved.

5.2.3. Increasing awareness

The government can help promote the benefits of blue economy to encourage project development. For example, the government may undertake promotional campaigns to raise the profile of certain industries, such as sustainable tourism, for the benefit of existing and new enterprises. This central promotion of Jamaica's blue economy offering may encourage further investment in key sectors.

Another part of this awareness building may be building confidence around local standards and/or national and international certifications. For example, developing a clear definition of, and potentially a national approved list of 'sustainable tourism' destinations, which can be used to clearly communicate and provide confidence on the credibility of sustainable tourism offers by Jamaican businesses. To draw a comparison from another blue economy sector, for fisheries there is the Marine Stewardship Council certification, which can be used to demonstrate that fish catch meets international best practice and is sustainable, which could be systematically used and monitored for Jamaican fisheries companies.

5.2.4. Supporting necessary training in new industries

The government can continue to support training to meet skills requirements for new investment projects. Where certain training or certifications are necessary for employees of certain projects to undertake work, the government may finance this training by allocating spending at HEART / NSTA Trust or local universities to specific training. One recent relevant example of this is the support provided by CMU to the German Ship Repair Jamaica project. These academic institutions can be - and could be further encouraged and supported to be - catalytic in developing course content and driving interest in skills development in blue economy related areas.

6. Thirteen priority next steps

Both public and private finance flows are stymied by a number of barriers. For the public sector, any future investment needs to align with Jamaica's ongoing successful macroeconomic reforms with a focus on fiscal sustainability. There are also various strategic, coordination, and data barriers, although the forthcoming Blue Economy roadmap should help to address many of these. Access to finance remains a challenge for many private sector actors in the Jamaican economy, including those with interests in the blue economy. This barrier to private sector investment is compounded with more blue-economy specific barriers typically focused around blue economy opportunities having higher costs/risks than more conventional investment alternatives; difficulties for investors, companies, or potential customers to access credible information; the absence of relevant policy frameworks; and limited skills. The relative importance of these varies across the different sectors that comprise the blue economy.

To overcome the lack of public finance available to the blue economy, the Government of Jamaica can consider a range of opportunities. These include blue bonds, debt for nature swaps, intensified cooperation with development partners and dedicated taxation. There are attractions to all of these, but also a number of barriers/challenges associated with each. Various public financial management initiatives, such as a blue economy public expenditure reviews and blue economy budget tagging could help provide a clearer understanding of the extent to which public funds are currently supporting the blue economy, and support optimization of future support. These benefits need to be traded off against their potential to increase the complexity of budgetary policymaking.

To address the barriers holding back the private sector, the government can consider a combination of blended finance - supported by international or domestic public funding, or both - and the development or amendment of a range of regulations, policies and incentives. The latter might include the development of overarching policies, the provision of additional well-targeted fiscal incentives in key parts of the blue economy, information and awareness campaigns and skills training programs.

There are a series of 13 specific next steps that the Government of Jamaica may wish to consider as it looks to develop its blue economy finance and investment framework.

- 1. Develop a pipeline of blue economy activities prioritizing those where public funding is essential and/or can most effectively leverage private capital.** In order to identify whether and which funding sources - including GoJ own budgetary resources and funds available from development partners, it is critical to identify a prioritized pipeline of potential projects and activities. The development of the pipeline should be a collaborative process with a wide range of stakeholders. It should ideally include a discussion of the key focus of the activity/investment, expected outcomes, funding requirement, likely implementing partners, stakeholders who would need to be involved, and critical risks and interdependencies. It should also identify opportunities to mobilize private capital, to make best use of limited available public funding. The rationale behind what makes each project attractive from both the public and private sector perspective should be made clear.
- 2. Build capacity of existing agencies and financing vehicles to promote blue economy investment opportunities.** For example, increasing the capacity of agencies such as JAMPRO to actively promote blue economy projects and help crowd in finance for these projects, and explore financing windows which could be adapted to explicitly integrate blue economy projects through e.g. DBJ.

3. **Working with relevant international partners as appropriate, and taking account of the country's debt management and macroeconomic framework, take a strategic decision regarding whether to explore a blue bond issuance in more detail.** This decision would need to be taken by the Ministry of Finance and Public Service (MoFPS). The decision would need to take into account the extent to which any blue bond would be aligned with the country's macroeconomic framework, incorporating any credit enhancement that might be applied to the bond. If a decision is taken to explore this opportunity in greater detail, the next stage would be to identify which of the activities/projects in the pipeline are well-aligned to key blue bond investment frameworks (recognizing that these frameworks may change later this year).
4. **Undertake further discussions to explore the attractiveness and feasibility of a debt for nature swap.** This would need to be led by the MoFPS and, as well as domestic stakeholders such as the Ministry of Water, Land Environment & Climate Change would also likely include the IMF and The Nature Conservancy. A critical early step would be to ascertain whether there would be a high risk of any debt-for-nature swap having a negative impact on Jamaica's credit rating.
5. **Prioritize multilateral and bilateral concessional funding and engage with external funders and domestic stakeholders to scope blue economy opportunities.** A wide range of multilateral and bilateral funding sources have the potential to (further) support the government of Jamaica's blue economy ambitions. These include the Ocean Risk and Resilience Action Alliance, the Global Fund for Coral Reefs, the Global Environment Facility, the Green Climate Fund, the Adaptation Fund, the European Commission, the European Investment Bank, the UK Blue Carbon Fund, the Ocean Country Partnership Programme and the UK Caribbean Infrastructure Fund. The eligibility requirements for these different funding sources can be matched to the characteristics of the pipeline of projects and activities (action 1) in order to prioritize the funding sources of greatest relevance. International development partners can also often make resources available to assist in market development and project development, to help develop a pipeline of bankable projects supported by robust business cases.
6. **Work with development finance institutions, especially the World Bank and IDB, as well as the Development Bank of Jamaica and Caribbean Development Bank, to explore opportunities for programs to prioritize blue economy sectors.** There are opportunities across all blue economy sectors. For example, DBJ's work on supporting innovation could have elements targeted to bioprospecting; IDB's work on skills development could address skills barriers related to marine transportation; while the WB's work supporting strategic investment opportunities could support marine energy investments. Access to finance programs is likely to be particularly valuable for fisheries, sustainable tourism and ecosystem protection sectors, given the preponderance of SMEs in these sectors.
7. **Take a strategic decision on whether to develop a domestic blue economy investment facility that would support private sector investment in the blue economy.** This could be modelled on the Blue Investment Facility that is planned in Bermuda. A decision on whether to move forward with the detailed design of such a facility would require both assessing its feasibility in the context of Jamaica's macroeconomic reform program, understanding the appetite and interest of potential development partners, and further engagement with JAMPRO and representatives of the private sector to understand the expected value-add of such an initiative.

- 8. Increase awareness/act as a broker between private sector representatives and international blended finance opportunities.** These opportunities include Blue Invest, the Althelia Sustainable Ocean Fund, Blue Finance the Global Fund for Coral Reefs, the Meloy Fund and Blue Co Caribbean. The Government of Jamaica could host investor forums bringing together representatives from these types of organizations with private sector representatives from Jamaica (and beyond) to try and facilitate additional private sector investment.
- 9. Develop/enhance foundational policies and regulations in key sectors of the blue economy.** As already identified in the (draft) Blue Economy Roadmap, there is a need to develop the regulatory framework in key sectors of the blue economy including to update the National Fisheries and Aquaculture policy, to develop a mariculture policy and in the nutraceutical sector. This can help provide the regulatory certainty that is a precondition for much private sector investment, and would need to be developed in tandem with and as a pre-requisite for raising finance for a pipeline of bankable blue economy projects. It will likely need to be complemented by resources to ensure that policies and regulations can be enforced. This is likely to be particularly important in the fisheries sector, for example.
- 10. Explore the feasibility of providing fiscal incentives for some blue economy investments.** For example, the investment threshold for qualifying for the Income Tax Relief scheme could be lowered for certain blue economy investments or tax relief could be provided in R&D activity or early stage investments in the blue economy.
- 11. Help raise awareness of the opportunities of, and benefits from, investments in the blue economy.** A strong early candidate would be support for the growth of sustainable tourism as the industry recovers from the impact of the Covid-19 pandemic. This might include both general awareness raising as well as the potential for some sort of quality scheme to help those who have invested in high quality sustainable tourism offerings to better distinguish themselves to potential customers.
- 12. Identify skills gaps and develop an explicit strategy for how to best help meet the skills needs of the blue economy.** A well-trained workforce will make Jamaica a more attractive location for international investors in the blue economy. However, at present there are clear skills gaps, especially in relation to marine energy and maritime transport. The best approach to overcoming these skills gaps may include making use of existing approaches, and supporting expanded programmes related to the blue economy at leading academic institutions such HEART / NSTA Trust, and the CMU.
- 13. Consider undertaking a blue economy public expenditure review, or incorporate blue economy considerations into a broader climate change PER.** At present it is difficult to ascertain the extent to which government spending is (and is not) supporting the blue economy. A blue economy public expenditure review would help to fill this gap, identify potential gaps and where there may be opportunities for public spending to help deliver against the pipeline of activities (action 1). This could be incorporated into a broader climate-related PER to make efficient use of resources; and could also be the prelude to the development of a budget tagging exercise, ideally tagging both climate and blue economy related expenditure.

7. Closing remarks

This report has set out the current context for financing of the blue economy in Jamaica and explored opportunities that could help scale up future public and private flows.

There are already substantial resources flowing towards blue economy related sectors in Jamaica. The funding which is most clearly and explicitly linked to the blue economy is primarily coming from multilateral and bilateral funds and donors such as the Climate Investment Fund - PPCR and the Adaptation Fund. Moreover, international and domestic finance institutions, typically working in close collaboration with key ministries in the Government of Jamaica, are implementing a number of programs that have a strong focus on access to finance or business environment reform that could benefit actors in the blue economy. Private sector actors in Jamaica are also committing funding to high profile blue economy activities, especially in the marine transport and tourism sectors.

However, there is scope - and need - for significantly greater flows of finance in the future. Realizing Jamaica's full blue economy potential will require large increases in flows of finance, from a coordinated combination of public and private, domestic and international stakeholders. This report has identified some of the key barriers and wider context in which these increases will need to be found and, based on national and international experience, identified a series of next steps that the country can take, as it develops its Blue Economy Finance and Investment Framework.

