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SEA OF OPPORTUNITY

Developing Jamaica's Blue Economy

Sea of Opportunity:
Developing Jamaica's Blue Economy

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Executive Summary

The tourism industry emerges as a pillar of Jamaica's blue economy, contributing to GDP and employment.

This study delves into Jamaica's expansive maritime potential and its adoption of the blue economy concept—a comprehensive approach integrating economic activities related to oceans and coastal areas. With a focus on artisanal fishers, sustainable fisheries, ecotourism, and blue finance, the research aims to explore
opportunities for economic diversification and the equitable distribution of social and environmental benefits. Emphasizing long-term social, economic, and environmental outcomes, the report analyses potential growth areas within Jamaica's blue economy, highlighting sustainable management practices in the fisheries and tourism sectors, as well as the role of blue finance and its interlinkages with the local economy.

The tourism industry emerges as a pivotal pillar of Jamaica's blue economy, contributing to GDP and employment. Offering diverse experiences, including cultural heritage tours, adventure tourism, and ecotourism, Jamaica attracts millions of visitors annually. However, conventional metrics measuring the industry's contribution do not account for negative externalities, such as environmental degradation, coastal erosion, pollution, and waste production.

Sustainable tourism practices, aligned with the principles of the blue economy, are identified as crucial for balancing economic growth with marine ecosystem conservation, community engagement, and sustainable infrastructure development. Ecotourism, marine tourism, and the pleasure craft industry are highlighted as areas with potential to enhance the sustainability of Jamaica's tourism sector.

Within the context of the blue economy model, sustainable fisheries occupy a central position, reflecting core tenets of responsible resource management, economic prosperity, and ecological integrity. Jamaica's extensive maritime borders offer opportunities for sustainable fisheries, but challenges such as declining coral reefs, fisheries production, and threats from illegal fishing activities
persist. Policy frameworks, Special Fishery Conservation Areas, and measures to combat overfishing are deemed imperative to align with the principles of the blue economy.

Blue finance emerges as a promising avenue for mobilizing resources to realize Jamaica's blue economy vision. Sustainable financing of marine and coastal conservation projects, through mechanisms such as blue bonds and impact investing, is explored. The potential of blue finance to drive marine resource protection, socio-economic growth, and its role in climate resilience are emphasized.

The study's key findings underscore the synergies and trade-offs inherent in Jamaica's pursuit of a sustainable blue economy. Opportunities for diversification within tourism, fisheries, and blue finance are identified. Sustainable tourism practices and blue finance are recognized as interconnected, with the potential for revenue generated from sustainable tourism activities to fund marine conservation and restoration projects. Similarly, a well-managed fisheries sector is seen as a reliable source of fresh seafood for

tourism, supporting both sectors.

However, the study also cautions against challenges such as overfishing, unsustainable tourism practices, competition for resources between fisheries and tourism, and the impacts of climate change on both sectors. The need for a comprehensive approach that considers ecological, economic, and social factors is emphasized. Collaboration among government bodies, ministries, and stakeholders as well as monitoring are deemed crucial for ensuring the sustainable development of Jamaica's blue economy.

In conclusion, this study reveal Jamaica's adoption of the blue economy concept as a promising avenue for sustainable development, particularly in tourism, fisheries, and blue finance. Balancing growth conservation, and development requires commitment, comprehensive policies, and global cooperation. Leveraging maritime resources through sustainable tourism, revitalized fisheries, and innovative finance is key to realizing the full potential of Jamaica's blue economy.

Collaboration amongst government bodies, ministries, and stakeholders as well as monitoring are deemed crucial for ensuring the sustainable development of Jamaica's blue economy.

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Acronyms

BMJ	Blue Minerals Jamaica Ltd.
CAGR	Compound Annual Growth Rate
CCZ	Clarion-Clipperton Zone
CBF	Caribbean Biodiversity Fund
CDB	Caribbean Development Bank
CIL	Community Infrastructure Levy
COVID	Coronavirus Disease
CRHI	Coral Reef Health Index
CROP	Caribbean Regional Oceanscape Project
DSM	Deep Sea Mining
ECAL	Environment and Climate Adaptation Levy
EEZ	Exclusive Economic Zone
ESG	Environmental, Social, Governance
FAO	Food and Agriculture Organization
GCF	Green Climate Fund
GCT	General Consumption Tax
GDP	Gross Domestic Product
GNH	Gross National Happiness
GOJ	Government of Jamaica
IDB	Inter-American Development Bank
IUCN	International Union for Conservation of Nature
IUU	Illegal, unreported, unregulated (pertains to fishing)
LAC	Latin America and the Caribbean
MCS	Monitoring, Control, and Surveillance systems
MOFPS	Ministry of Finance and the Public Service
MPAs	Marine Protected Areas
MSME	Micro, Small, and Medium Enterprises
MSP	Marine Spatial Plan
NFA	National Fisheries Authority
NGO	Non-Governmental Organization
ODA	Official Development Assistance
PES	Payment for Ecosystem Services
PIOJ	Planning Institute of Jamaica
SDG	Sustainable Development Goal
SeyCATT	Seychelles Conservation and Climate Adaptation Trust
SFCA	Special Fishery Conservation Areas
SIDS	Small Island Developing States
STATIN	Statistical Insitute of Jamaica

TEF	Tourism Enhancement Fund
TDPCo	Tourism Product Development Company
TNC	The Nature Conservancy
UNESCO	United National Educational and Scientific, and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WTO	World Tourism Organization

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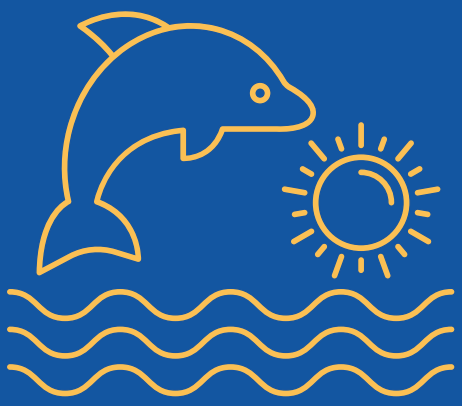
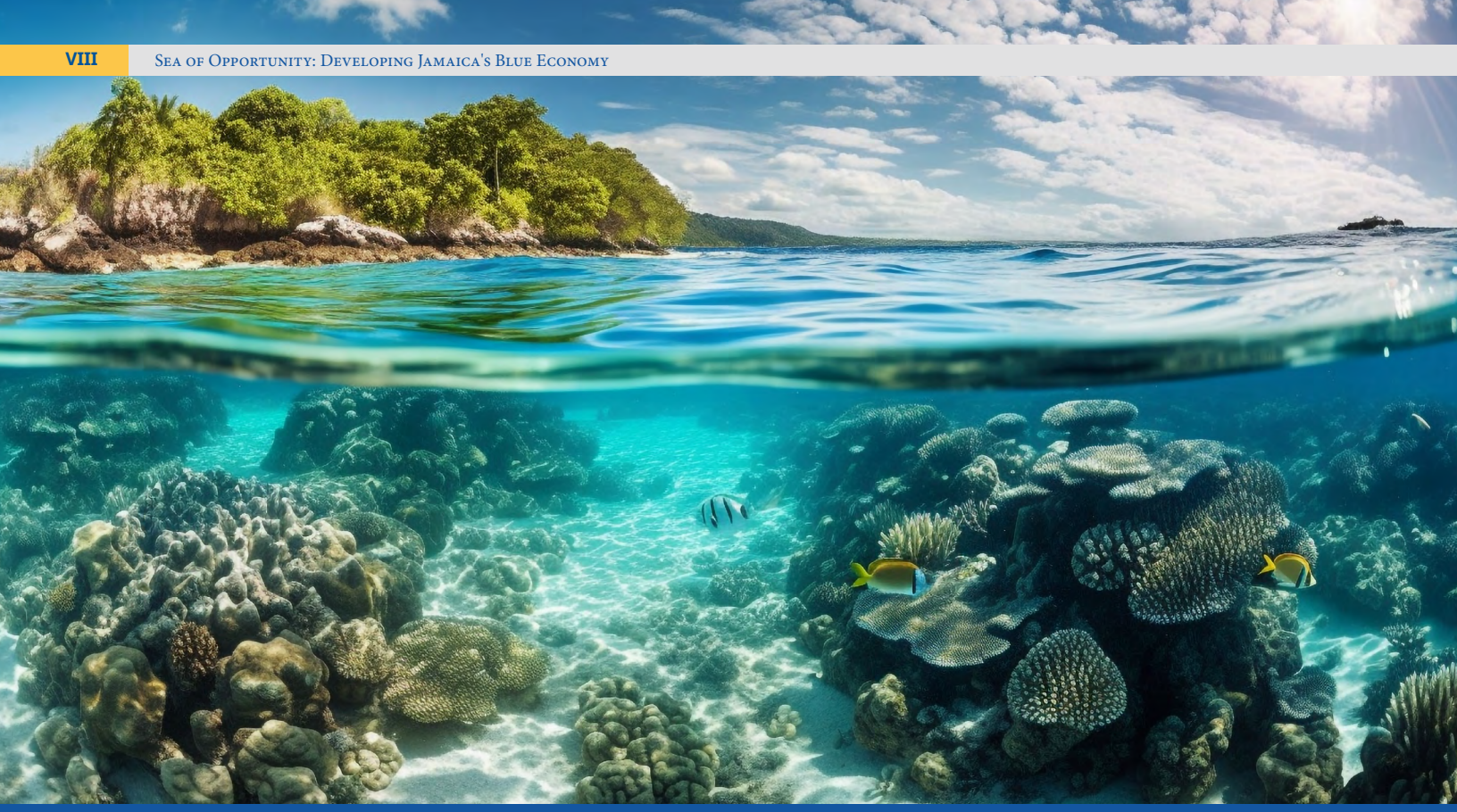




Introduction

7% GDP

Jamaica's blue economy is estimated to have a value of 7 percent of Gross Domestic Product (GDP), or just over US$1 billion.

The blue economy encompasses a range of economic activities related to oceans, seas, and coastal areas, that promote social inclusion, economic growth, environmental sustainability, and preservation of livelihoods. [1]

The notion of a blue economy thereby encompasses tourism, shipping, fisheries, aquaculture, waste management, marine protection, climate change adaptation and mitigation, and renewable energy.

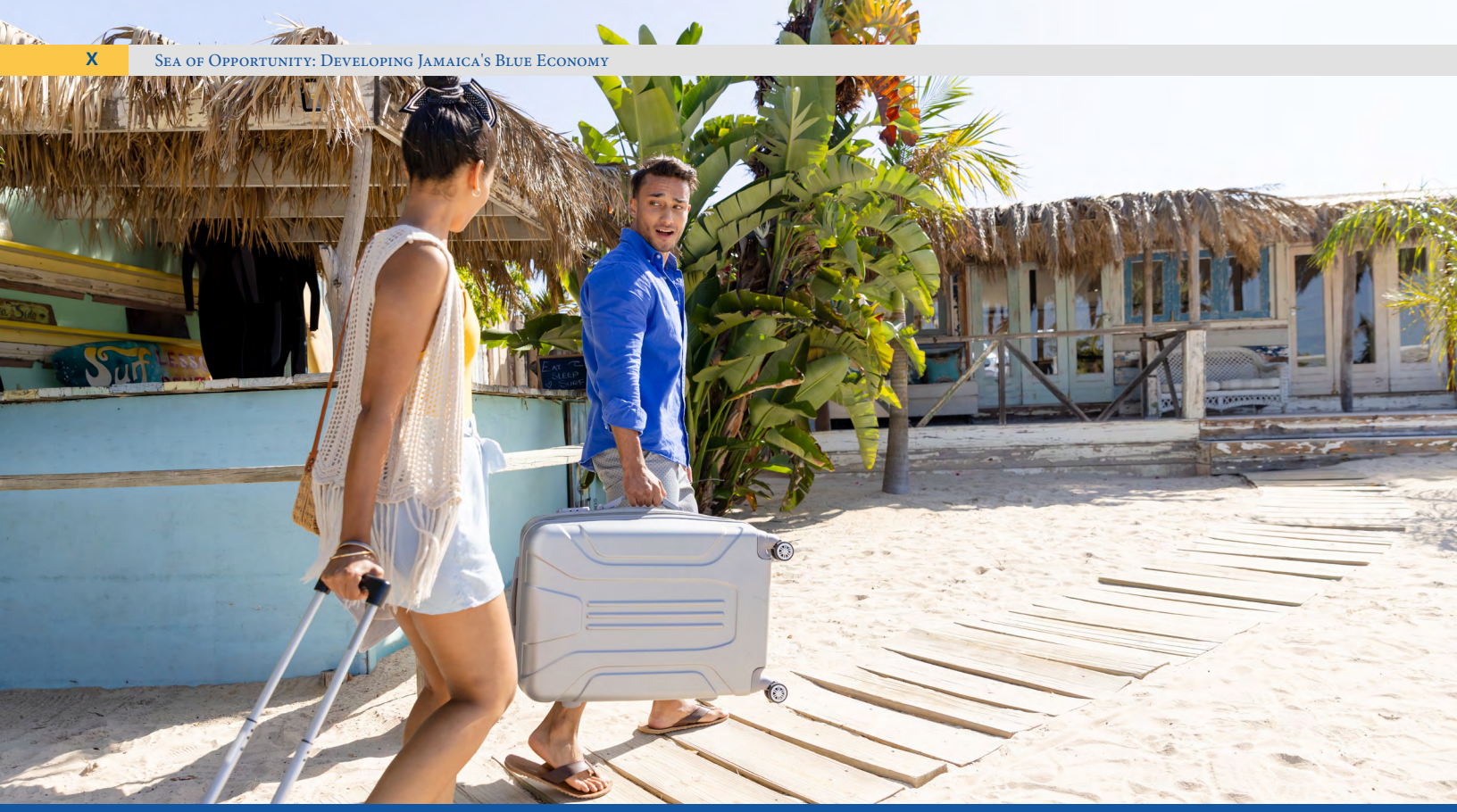
Globally, ocean assets were valued at US$24 trillion in 2016, while the value added for the ocean economy is set to reach US$3 trillion annually by 2030. It is also estimated that the blue economy accounts for 3.5 to 7 percent of global GDP.[2] Jamaica's blue economy is estimated to have a value of 7 percent of Gross Domestic Product (GDP), or just over US$1 billion.[3] This figure is likely an underestimation due to lack of data availability.[4] One study estimated the Jamaica's blue economy in 2020 was worth US$2.5 billion Gross Value Added and supported over 500,000 jobs; accounting for 37 percent of the employed workforce.[5] There is also a suggested projection of 4 percent growth in this area for the Caribbean. However, the potential economic value is jeopardized by environmental challenges such as overfishing, climate change, and ocean warming.[6]

Jamaica's pursuit of this potential, given its considerable dependence on the blue economy by industries such as tourism, requires responsible management of blue resources to ensure sustainable economic development. Despite Small Island Developing States' (SIDS) reliance on marine resources for food, jobs, and tourism, there is a general trend of over-exploitation. Jamaica's marine space, referred to as its "Exclusive Economic Zone" covers 235,000km. This is equivalent to 24 times its land space, containing essential ecosystems such as coral reefs, wetlands, and seagrass meadows. However, opportunities to seize benefits from the blue economy are thwarted by a lack of policy implementation, inadequate resource management, and sub-optimal governance. This has often resulted in the underutilisation or misuse of resources.

This study examines blue economy activities in Jamaica, with a focus on artisanal fishers and sustainable fisheries, ecotourism, and blue finance. It explores the potential for economic diversification, and the equitable distribution of social and environmental benefits. The research analyses the opportunity for the development of Jamaica's blue economy, with a view to addressing these issues, and provide long-term social, economic, and environmental benefits. The study will analyse the potential growth areas for the blue economy within Jamaica, as well as sustainable management practices within the fisheries sector, tourism sector, blue finance, and interlinkages with the local economy.

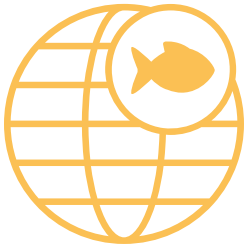
The Blue Economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.

Jamaica's marine space, referred to as its "Exclusive Economic Zone" is almost 24x larger than its land space.



Methodological Approach

7% GDP



(NEED PULLOUT) Jamaica's blue economy is estimated to have a value of 7 percent of Gross Domestic Product (GDP), or just over US$1 billion.

The methodology involves a review of policy, legal, and environmental frameworks concerning Jamaica's blue economy, focusing on fisheries, tourism, and blue finance.[7] Data from various sources are analysed to identify key themes and assess policy gaps. For the tourism sector, evaluations were conducted using data on tourist arrivals, trade, and environmental factors to understand the existing model and align it with sustainable practices. In fisheries, recent data is used to analyse contributions to GDP, fish catch data, and Illegal, Unreported, and Unregulated (IUU) fishing. Import-export dynamics were reviewed, with a view to informing recommendations for sustainability. For blue finance, financing mechanisms, loss projections, and financial products supporting green and blue sectors were assessed. Exploration of Payment for Ecosystem Services (PES) and other financing options were conducted.

Evaluations were conducted using data on tourist arrivals, trade, and environmental factors to understand the existing model and align it with sustainable practices.

1 Sustainable Tourism and Jamaica's Blue Economy

Measures such as contribution to GDP, employment, and tourist arrivals do not reflect the negative externalities of the industry and associated costs, including environmental degradation, coastal erosion, pollution, and waste production.

The tourism industry is a mainstay of many Caribbean economies, in terms of contribution to GDP and share of employment (see Table 2). Jamaica has a thriving tourism sector which has continued to grow as a main pillar of the economy and focus of government priorities. The island offers a diverse range of tourism experiences, including cultural heritage tours, adventure tourism, beach tourism, and ecotourism as well as the predominant resort model.[8] The majority of tourists in Jamaica come from the United States (~1.8 million visitors), Canada (~270,000), and the United Kingdom (~230,000).[9] There has been a consistent increase in visitor arrival numbers year on year, ostensibly indicating growth in the industry, with a sharp and uncharacteristic decline due to the pandemic. Stopover arrivals are dominant, but the cruise tourism share has also grown.[10] Whilst tourism was impacted by the COVID-19 pandemic, the sector has experienced a steady recovery.[11]

However, measures such as contribution to GDP, employment, and tourist arrivals do not reflect the negative externalities of the industry and associated costs, including environmental degradation, coastal erosion, pollution, and waste production.[12] If these could be factored in, the economic return on tourism would certainly be less, as is explored below.

The Value of Tourism

There are several methods used to calculate tourism's value. Among the conventional metrics are contribution to GDP, visitor arrival numbers, and employment. Visitor arrival numbers highlight the industry's consistent growth over the years, albeit with occasional disruptions, while employment underscores tourism's substantial role as a provider of jobs.

The tourism sector is considered significant to Jamaica's economy, by several measures. It accounted for 10 percent of the nation's GDP, as reported by the Ministry of Tourism in 2019. Another source, also in 2019, estimated that tourism had an 11 percent direct contribution to GDP and an additional 34 percent indirect contribution.[13] The indirect contribution amounted to approximately J$543 billion (US$4 billion), and encompassed various sectors, including accommodation, food and beverage, transport, shopping, entertainment, and related activities.[14] In the same year, the government's statistical agency (STATIN) reported tourism's direct GDP contribution as J$138 billion (US$1 billion). Accommodation represented 44 percent of the total, followed by Recreational Sports and Cultural Services at 18 percent, and Food and Beverage Services at 17 percent.[15]

Tourism accounted for 10% of the nation's GDP in 2019

The indirect contribution amounted to approximately J$543 billion (US$4 billion) and encompassed various sectors including accommodation, food and beverage, transport, shopping, entertainment, and related activities.

Tourism is important to the livelihoods of Jamaicans, especially in tourism-dependent areas of the island. The industry provides jobs for over 300,000 Jamaicans, nearly 20 percent of the workforce, ranging from hotel staff and tour guides to restaurant workers and artisans. Further, the tourism sector indirectly supports employment in agriculture, transportation, and retail.

From the conventional measures of GDP, visitor arrival numbers and employment in the tourism sector, it can be argued that the government resources invested and concessions accorded are justified. However, there are other measures that suggest that the conventional metrics do not show the whole picture of tourism's contribution and impact. Similarly, though the industry is growing, the retention rate for each dollar spent by a tourist in Jamaica is only 41 percent.[16] The tourism retention rate in Jamaica, also known as the leakage rate, refers to the percentage of money spent by tourists in the country that remains in the local economy. Ideally, destinations aim to have higher retention rates to maximize the economic benefits of tourism for the local economy.

Tourism is growing, the retention rate for each dollar spent by a tourist in Jamaica is only 41 percent.

Going beyond the seemingly impressive conventional figures that define tourism's economic impact, it becomes evident that hidden costs and negative externalities, particularly environmental ones, come into play. Traditional GDP calculations often overlook environmental costs, highlighting GDP as an incomplete indicator, which fails to account for negative environmental consequences.[17] For instance, between 2017 and 2021, activities in the tourism sector led to the loss of hectares of mangroves.[18] Mangrove ecosystems play vital roles such as contributing to carbon sequestration, biodiversity support, water filtration, and more.[19]

Many of these negative impacts are not unique to Jamaica but are experienced throughout the tourism industry worldwide. They result in environmental harm, encompassing issues such as waste production and wastewater discharge, amongst other forms of pollution, coastal erosion, mangroves and coastline habitat loss, and carbon emissions. [20]

Additionally, carbon emissions produced by activities within the tourism sector are absorbed by the ocean, as the largest carbon sink, which leads to acidification, warming, and declining coral health.[21]

The Government of Jamaica allocates substantial resources to tourism nevertheless. These take the form of direct investments, tax breaks, tariff-free importation, and subsidies. For example, in fiscal year 2021-2022 the Ministry of Tourism was allocated US$11 million, with revised estimates of US$12 million in 2022-2023. Projected estimates for 2024-2025 are US$12.4 million, US$13 million for 2025-2026, and US$13 million in 2026-2027.[22] This is much more than the budgets allocated to the Ministries of Agriculture, Fisheries, and Mining, the Ministry of Science, Energy, Telecommunications, and Transport, and the Ministry of Economic Growth and Job Creation, which arguably have just as an important economic role to play.[23] Fiscal incentives support hoteliers through the Fiscal Incentives Regime, which allows for the duty-free importation of capital equipment, raw materials, and other industry-related consumer goods.[24] Furthermore, the Hotels Incentives Act provides a ten-year relief from GCT, income tax, and import duty.[25]

Leakage rate, refers to the percentage of money spent by tourists in the country that remains in the local economy.

Tourism gets a large number of incentives

Summary of Tourism Tax Incentives in Jamaica

Corporate Income Tax (CIT)	Dividend	General Consumption Tax (CIT)	Tourism Expenses	Customs Duty & Additional Stamp Duty (ASD)
Profits relieved for duration of relevant concession period:	Distribution of profits relieved from CIT by way of dividends are:	Relief from GCT on specific listing of inputs	GCT chargeable on prescribed tourism activities at rate of 10% of gross revenues less the following costs:	Specified inputs imported during relevant concession period are relieved from customs duty.
Hotels - 10-15 years Resort Cottages - 7 years Tourism Attractions - 5 years	Exempt from income tax where paid to Jamaican tax resident shareholders Liable to income tax rates of 33.3% where paid to non-resident shareholders	Other inputs subject to GCT rate of 17.5% on most inputs consumed by tourism sector Advanced GCT imposed at 5% therefore a total of 22.5% imposed on imports Claims permitted on GCT incurred on materials on construction or repair of tourism enterprises	Commissions paid to overseas agents Transfers between hotels Gratuities/ service charges.	All other imports are subject to additional, non-recoverable charges, including: CUF - 2% EL - 0.5% SCF - 0.3%

Jamaica's existing tourism model falls short in terms of long-term growth potential and addressing negative externalities. Despite this, the Government of Jamaica does not appear to question the model nor be making substantive policy changes to shift the sector towards more sustainable forms of tourism. It is within this context that this report explores the potential of a blue economy tourism model, emphasizing opportunities for growth in Jamaica.

Measures such as contribution to GDP, employment, and tourist arrivals do not reflect the negative externalities of the industry and associated costs, including environmental degradation, coastal erosion, pollution, waste production.

The Blue Economy Model of Tourism

The Blue Economy model is an approach to sustainable tourism that focuses on responsible coastal and marine resource utilization.[26] It employs a framework geared towards generating economic utilisation of those resources while safeguarding coastal and marine ecosystems. In the context of tourism, the Blue Economy model prioritizes sustainable practices, community tourism and engagement, conservation of biodiversity through ecotourism initiatives, education and research, diversification of activities, and the development of sustainable infrastructure. It also endorses a "ridge-to-reef" approach, recognising that what happens on land impacts the ocean.

Ecotourism

The blue economy model incorporates ecotourism and is an approach to sustainable tourism that focuses on responsible coastal and marine resource utilisation. This is a strategic approach to mitigating the negative impacts associated with traditional tourism models while enhancing the benefits. There is a growing international trend towards ecotourism, driven by heightened global awareness of environmental sustainability, the impacts of climate change, and the human environmental footprint.

Ecotourism has gained prominence as sector within the tourism industry, currently generating an estimated US$600 billion annually, with an average annual growth rate of 6 percent.[27] The global ecotourism market was valued at $182 billion in 2019 and is projected to reach $334 billion by 2027, with a compound annual growth rate (CAGR) of 8 percent from 2020 to 2027.[28] A recent study found that 76 percent of global travellers would pay more for eco-friendly experiences.[29] The ability to provide sustainable tourism choices to tourists is key to keeping up with market demand whilst growing the economic share of tourism and retaining value.

The desire for sustainable travel experiences is not limited to any particular region, with 48 percent of American leisure travellers engaged in some form of ecotourism, and 77 percent of Indian millennials expressing a willingness to pay more for sustainable travel options.[30] Given that India is the second most populous country in the world with a middle class larger than Europe's, and growing, they present one example of the potential to grow ecotourism in the Caribbean beyond Jamaica's traditional target countries of the USA, UK, Europe, and Canada.[31]

Jamaica's abundant natural assets and existing environmental policies make it well positioned to expand its ecotourism sector, aligning with the global trend of travellers seeking authentic and sustainable experiences. In addition, the ban on single-use plastic bags and the deposit refund scheme for plastic bottles demonstrates the country's commitment to becoming an environmentally sustainable and responsible destination.[32]

Jamaica has advanced in sustainable tourism practices. The Tourism Enhancement Fund (TEF) was established in 2005 to bolster the development of Jamaica's tourism sector, through support of sustainable tourism initiatives. These have included the implementation of renewable energy projects, the establishment of eco-parks, the formation of the Jamaica Centre for Tourism Innovation, the founding of the Craft Development Institute, and the promotion of cultural heritage tourism. The Jamaica Tourist Board's "Tourism Linkages Network" aims to

link tourism with other economic sectors, such as agriculture and manufacturing.[33] These initiatives are components of the Tourism Master Plan for Sustainable Growth, which outlines a vision for the sector's sustainable expansion. There are other signs that suggest Jamaica is undergoing a shift to more sustainable tourism. The state tourism entity, TPDCo, partnered with the Travel Foundation to boost sustainable tourism in 2017.[34] The partnership focused on ways to increase the local economic benefits from tourism, by supporting craft markets and other tourist attractions to improve the sustainability of their practices, and to encourage visitors to leave their hotels.

Jamaica's transition to a more sustainable tourism model is buttressed by new attractions, and the green repackaging of pre-existing venues and activities. There are several marine parks and protected areas that provide engaging tourist experience while preserving marine and terrestrial ecosystems.[35] A mapping of ecotourism initiatives shows that St. Elizabeth, Portland, and St. Ann parishes are well represented and many had potential attractions.

The shift towards ecotourism comes with challenges, including increased footfall and environmental strain with higher visitor numbers on natural ecosystems.[36] Other destinations have successfully mitigated these risks and dangers with structured programmes emphasising limited, impactful tourism to safeguard culture and nature.[37] Over 50 percent of Bhutan's land, for example, is designated as protected area under Bhutan's Forest and Conservation Act.[38]

The Blue Economy ecotourism approach offers a way of diversifying the sector, enhancing the industry's sustainability, improving its contribution to the broader economy, and mitigating its environmental impact. Ecotourism, however, is not the only Blue Economy approach to tourism: marine tourism also provides opportunities for countries like Jamaica to improve the tourism industry's sustainability and enhance the sector's potential to contribute to economic growth and development.

Marine Tourism

Marine tourism is a cornerstone of the Blue Economy model, emphasising the sustainable use of oceans, seas, and coastal areas to generate economic, social, and environmental benefits. As a vital component of this model, marine tourism capitalises on the inherent attraction of sea and ocean water and coastal regions to promote responsible economic growth with an eco-conscious approach. The marine tourism market can be segmented into various categories encompassing cruise tourism, yacht tourism, adventure tourism, and, as mentioned above, ecotourism.

The global marine tourism market has been valued at $154 billion in 2019 and is projected to reach $235 billion by 2027, growing at a CAGR of 5 percent from 2023 to 2030.[39] The growth is driven by an increasing number of tourists seeking unique and adventurous experiences, and the growing popularity of marine tourism activities such as cruising, sailing, and water sports. Social media has also popularised marine tourism and water sports through increased visibility and peer influence; social media also provides opportunity for increased marketing and reach.[40]

Jamaica has the potential to harness marine resources for tourism while simultaneously addressing environmental concerns and empowering local communities. This is a potential growth sector, as tourists are drawn to activities like scuba diving, snorkelling, and fishing. Jamaica's extensive coral reefs and marine biodiversity positions it as an ideal marine tourism destination. Approximately 60 percent of the four million visitors in 2019 reported participating in marine-related activities, including snorkelling, scuba diving, and fishing.[41] The Montego Bay Marine Park has been valued at US$48M.[42]

There are concerns, however, as coral reef health has consistently been rated as "poor" for the past five years.[43] This underscores the importance of integrating conservation efforts into the tourism sector to safeguard the underlying natural asset base. There are initiatives that serve as models for potential expansion. For example, Golden Eye Foundation's support to the Oracabessa Bay Fish Sanctuary, the ongoing work of the Sandals Foundation such as their coral restoration programmes, and upcoming initiatives such as Iberostar's MPA development in St. James. [44] Additionally, exploring the use of underwater sculptures to create artificial reefs to offset pressure and degradation on existing reef systems, and implementing restoration activities, could further boost the snorkelling and scuba diving tourism sector while simultaneously promoting reef preservation.[45]

Pleasure Craft Industry

The pleasure craft industry is a major sub-sector of the global tourism industry, offering a range of activities and experiences to travellers across the world.[46] The pleasure craft market is closely linked to the marine tourism industry, providing recreational vessels for travellers and enthusiasts. The global pleasure craft market is expected to grow at a CAGR of over 4 percent from 2021 to 2030, driven by the increasing popularity of water sports and recreational boating activities.[47] The market is also being driven by technological advancements in boat design and construction, as well as the growing demand for eco-friendly and sustainable vessels.

Jamaica already offers some marine tourism opportunities, and there is potential to expand. These include attractions like glass-bottom boats and see-through kayaks, which have gained popularity through social media exposure. Jamaica has approximately 15 marinas and harbours, which cater to a range of vessels, from small sailboats to luxury yachts, including the Errol Flynn Marina, and the Montego Bay and Royal Jamaica Yacht Clubs. The Port of Ocho Rios, which is the country's main cruise port, received over 1.5 million cruise passengers in 2019.[48] Along these lines, Jamaica has invested in its port infrastructure, for example the establishment of the Port Royal Cruise dock and the refurbishing of the old Port Royal Ferry Pier.

United States of America

Florida is one of the most popular destinations for pleasure craft and marine tourism in the US, with a coastline that stretches over 1,350 miles and numerous waterways that attract boaters, anglers, and divers. The Florida Fish and Wildlife Conservation Commission estimates that there are over 900,000 registered recreational boats in the state, and that recreational boating generates over US$23 billion annually. The state has robust fishing policies including catch and release and catch size guidelines, depending on the species, contributing to the industry's sustainability. Given its proximity and being Jamaica's largest tourism market, Jamaica could seek to leverage this robust market to carve out a unique niche, enticing visitors with a distinctive selling proposition due to its proximity.

The Maldives

The Maldives epitomizes exclusivity and luxury in the realm of marine tourism. Home to world-renowned resorts like Soneva Fushi, it offers visitors opulent experiences, including private yacht charters and immersive marine biology programmes. These programmes allow guests to delve into the intricacies of the local marine ecosystem. Beyond opulence, the Maldives is a case study in high standard environmental and community tourism. Jamaica can follow suit by drawing inspiration from this model, particularly high-end resorts, to maximize their contributions to the surrounding environment. The Maldives also capitalizes on uninhabited islands to create diverse tourism-related opportunities. Jamaica's analogous uninhabited islands, such as Morant Cay, Lime Cay, Maiden Cay, Pelican Cays, Pigeon Island, and Goat Island, present an ideal framework for

Hawaii

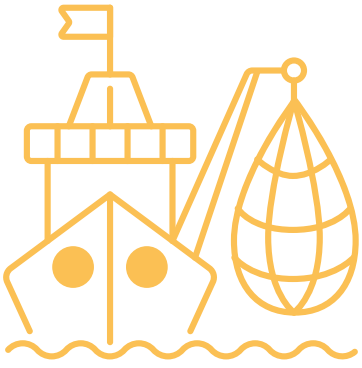
Marine tourism thrives in Hawaii, where pristine beaches, clear waters, and coral reefs are the main attraction. According to the Hawaii Tourism Authority, in 2019 approximately 25 percent of Hawaii's 10 million visitors engaged in marine activities like snorkelling and fishing.[49] A prominent attraction, Hanauma Bay, designated a protected site, draws 3,000 daily visitors.[50] With a population of 1.4 million, Hawaii has 12,000 registered boats, including sailboats, motorboats, and personal watercrafts.[51]

Jamaica can endeavour to emulate this success by tapping into its expanding Marine Protected Areas (MPA) network, catering to diving enthusiasts, offering cross-island tours, and promoting voluntourism in restoration work and ecotourism ventures. Collaborations among sanctuaries in Ocho Rios, Oracabessa, Portland, Montego Bay and others with higher tourist visit counts could present joint offerings that provide historical insight into conservation efforts and fostering international exchange programmes with scientific institutions.

The tourism industry plays a vital role in the economies of many Caribbean countries,and Jamaica is no exception. With its growing tourism sector, offering diverse experiences to travellers, Jamaica has made tourism a priority for economic growth. Despite the conventional metrics illustrating the importance of tourism, there are hidden costs and negative externalities, particularly environmental. The Blue Economy model offers a sustainable tourism approach that prioritizes responsible coastal and marine resource utilization. This model seeks to balance economic growth with marine ecosystem conservation and fosters community engagement, diversification of activities, and the development of sustainable infrastructure. Ecotourism, marine tourism, and the pleasure craft industry are three areas that offer opportunities for Jamaica to enhance the sustainability of its tourism industry while contributing to economic growth and development.

In the next chapter, we will delve into sustainable fisheries in the Blue Economy model, examining how Jamaica can further optimise its marine resources in a responsible and eco-conscious manner.

2 Sustainable Fisheries in Jamaica's Blue Economy



The need for sustainable fisheries underscores the importance of harnessing marine resources in a manner that ensures their long term viability.

Sustainable fisheries occupy a central position within the Blue Economy model, reflecting its core tenets of responsible resource management, economic prosperity, and ecological integrity. Jamaica's extensive maritime borders offer opportunities within its fisheries sector.

In the context of the blue economy, sustainable fisheries underscore the imperative of harnessing marine resources in a manner that ensures their long-term viability, while simultaneously fostering socio-economic growth. Unlocking this potential requires a balanced approach that combines socio-economic benefits with the preservation of marine ecosystems. In this section, we explore the challenges and opportunities in sustainable fisheries, aiming to provide practical insights to advance Jamaica's

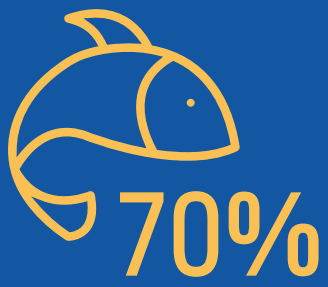
Jamaica's Marine Resources

Jamaica has valuable marine resources, but they are in a poor state. The island's coastal ecosystems, including coral reefs, seagrass and mangroves, provide critical habitat for numerous species and also support the tourism industry. The fisheries sector also supplies local and overseas markets. However, the current state of these resources is concerning.

On a global scale, several countries around the world have prioritised sustainable fisheries and implemented measures to ensure the long-term viability of their marine resources. Caribbean countries, to varying degrees, rely on the fisheries sector as a source of employment and income, and as a contributor to foreign exchange earnings. Jamaica's industrial fishing sector is an important aspect of the industry, specifically targeting conch, lobster, and sea cucumber, which are the main contributors of seafood exports within the sector.[52] Jamaica has one of the highest levels of fish consumption per capita (25.8kg/year in 2017) within the Caribbean region, however more than 70 percent of fish consumed is imported.[53] This suggests that the local demand exceeds what local fishers can supply, and that seafood is a key food source for Jamaicans, adding food security to the concerns facing this sector.

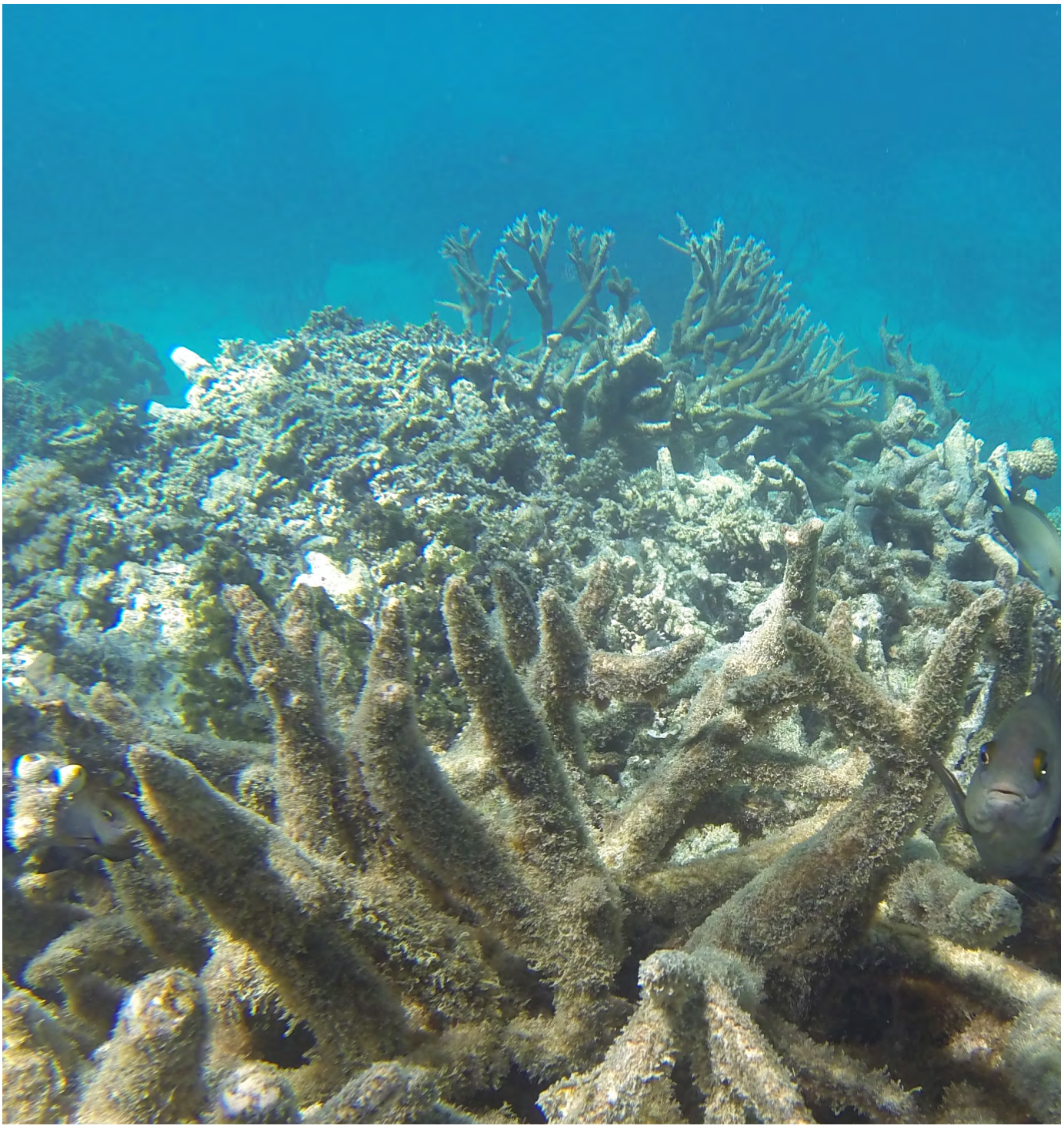
Fisheries also hold a non-consumptive value toward nature-based tourism, through diving or snorkelling tours in coral reef and mangrove ecosystems.[54] However, coral reefs, essential for marine biodiversity and marine tourism, are declining. The Coral Reef Health Index (CRHI) assesses their condition through indicators such as coral cover, macro-algae cover, herbivorous fish abundance, and the abundance of commercially important fish. The CRHI ratings range from "critical" to "poor," "fair," "good," and "very good." In 2020, the ranking was lower than in 2015, and none of Jamaica's coral reefs were rated as "good" or "very good," with more than half of them falling into the "critical" category. [55]

Fisheries production has declined, attributed to a combination of factors such as coastal development, unsustainable fishing practices, and environmental degradation. Artisanal fishing, which relies on reef species, appears to have contributed to the overexploitation. These issues are not unique to Jamaica. Fisheries production across the Caribbean has declined by 40 percent over the last two decades, while 55 percent of commercially harvested stocks are depleted, and 40 percent of stocks are currently fully exploited.[56] The fishing industry is important to Jamaica and Jamaicans; efforts to stem the decline and even to reverse it are priorities for the state and stakeholders.



Jamaica has one of the highest levels of fish consumption per capita (25.8kg/year) within the Caribbean, however more than 70 percent of fish consumed is imported.

Climate change is also altering Jamaica's fisheries and marine resources, bringing noticeable impacts. This is observed through rising sea temperatures which are changing fish distribution and behaviour, affecting local fishing across the island. Warming temperatures also cause an imbalance in the sex distribution of certain populations for example, turtles, thereby affecting reproductive rates. Coral bleaching, caused by higher sea temperatures, weakens critical marine habitats and breeding grounds. Ocean acidification harms various marine species and the food chain foundation.[57] In turn, these changes have implications for the island's food security, local economies, and marine ecosystems.



Fishing Communities and Livelihoods

The fishing industry has supported the livelihoods of many Jamaicans over many generations and contributes to Jamaica's economic growth and development.[58] The fisheries sector can be categorised in five sub-sectors, namely mainland artisanal, offshore artisanal, industrial, inland aquaculture and sports fisheries.[59] Of these, the mainland artisanal (small-scale) sub-sector, primarily involving fishing nearshore around the island, is the most prominent. It serves as the primary income source for fisherfolk, who are among the most vulnerable social groups in Jamaica and globally.[60]

Jamaica's fisheries sector features several essential species that hold economic significance, both domestically and internationally. The spiny lobster and queen conch fishery are major contributors to Jamaica's seafood export industry, with a primary focus on the United States market. Snapper and grouper are highly prized species within Jamaica's commercial fishing industry, in both local and global markets. Mackerel also serves as a common source of local protein and is often canned for sale, both domestically and overseas. Popular catches among small-scale fishermen include parrotfish, snapper, bar jack, and in some cases, the invasive lionfish.[61] While less prominent, oyster fishing is also practised in Jamaica, diversifying its commercial fisheries sector.

However, the threat of overfishing and the depletion of crucial species in Jamaica presents a complex challenge with implications for the marine ecosystem and the socio-economic fabric of coastal communities. Overfishing, which arises when the rate of fish extraction surpasses the capacity of fish populations to naturally recover, is of particular concern in Jamaica. Key species such as snapper, parrotfish, and lobster are particularly susceptible to overexploitation. Closed seasons have been implemented as part of the effort to address overfishing. Fisheries production is in decline, attributed to a combination of factors such as coastal development, unsustainable fishing practices, and environmental degradation. Most fisherfolk, however, while aware of the unsustainability of their fishing practices, prefer alternative fisheries management guidelines such as catch size and gear restrictions, instead of closed seasons.[62]

"Fish are less afraid, there are now more opportunities for us for training and employment... I feel more aware. We can get involved in coral gardening. I would love to get into irish moss farming and if they can also work as FADs - would love to explore this."

- Fisher, White River [63]

"People sometimes coming at times when there are no wardens so the environment is getting worse, reefs are damaged. I have been fishing over 70 years and have seen the loss of June Fish, Rainbow and Blue Parrot Fish, now some fish are extinct, I used to see a manatee here as a boy."

- Fisher, Oracabessa Bay

Overfishing puts the income of fishermen and the overall economic health of the Jamaican fishing industry at risk. Moreover, it places the food security of coastal communities in jeopardy, as fish is a primary source of protein in Jamaica. Fisherfolk perceive several obstacles to their transitioning to more sustainable practices. Balancing livelihood security and sustainability poses challenges; there is limited government support.[64] Empowering fishermen to embrace eco-friendly practices such as the correct mesh size and ability to fish in the pelagic zone is necessary to ensure prosperous communities and the preservation of a healthy marine ecosystem.

Another contributor to depleted stocks is thought to be illegal, unreported, and unregulated (IUU) fishing within Jamaica's Exclusive Economic Zone (EEZ). IUU fishing refers to activities conducted without proper authorization, not reported to authorities, or in violation of existing regulations. This problem is primarily linked to the limited resources available for effective monitoring, control, and surveillance of Jamaica's vast EEZ, which spans over 235,000 square kilometres and shares its borders with Colombia, Honduras, and the Dominican

Republic—countries whose nationals are suspected to be involved in IUU fishing.[65]

IUU fishing not only deprives legitimate fishers and coastal communities of income, but also undermines conservation efforts and complicates the enforcement of regulations for sustainable fisheries management. The consequences of IUU fishing include the overexploitation of fish stocks beyond sustainable levels and jeopardising the balance of marine ecosystems.[66] Additionally, these illicit fishing practices typically lead to the unintended capture of some species, known as "by-catch", which can disrupt the ecological equilibrium of marine ecosystems. Some IUU fishing methods, like bottom trawling, can cause substantial damage to critical seafloor habitats, harming essential nurseries and breeding grounds.[67]

Jamaica has made substantial investments in enhancing surveillance and enforcement mechanisms, and in new legislation. These include Monitoring, Control, and Surveillance (MCS) systems to bolster data collection, tracking, and monitoring of fishing vessels. Central to the endeavours to combat IUU fishing is the establishment of a comprehensive legal framework, anchored by the Fisheries Act (2018) and its accompanying regulations, which serve to manage and conserve marine resources. The GOJ also participates in international agreements and conventions dedicated to eradicating IUU fishing, such as the United Nations Fish Stocks Agreement and the Food and Agriculture Organization (FAO) Agreement on Port State Measures.

Policy and Regulatory Framework

The GOJ, through the National Fisheries Authority (NFA), has a stated commitment to the development of a sustainable fisheries sector. The NFA is responsible for the management and regulation of fisheries and aquaculture in Jamaica. Its role is to oversee the sustainable use of marine resources, protect the marine environment, secure the livelihoods of fisherfolk, and support the seafood industry. The National Fisheries Policy is anchored in the FAO's code of conduct for responsible fisheries and provides a framework to guide responses to threats to the sector. The NFA has set specific objectives to be achieved by 2027, encompassing sustainable fisheries and aquaculture management.[68]

Special Fishery Conservation Areas (SFCAs) serve as a fisheries management tool in Jamaica. These areas are designated as no-fishing zones with the primary aim of promoting fish population reproduction. There are 18 such fish sanctuaries around the island. Under the Fisheries Act of 2018, any fishing activities within those designated zones are illegal and subject to legal penalties. SFCAs operate with the "spill-over effect" concept, ensuring that adult fish migrate to adjacent areas, providing opportunities for fishermen to benefit from increased catch.[69] Jamaica is also signatory of the Caribbean Community Common Fisheries Policy (CCCFP), which fosters cooperation among populations, fishermen, and governments for conservation, sustainable fisheries use, and well-being.[70]

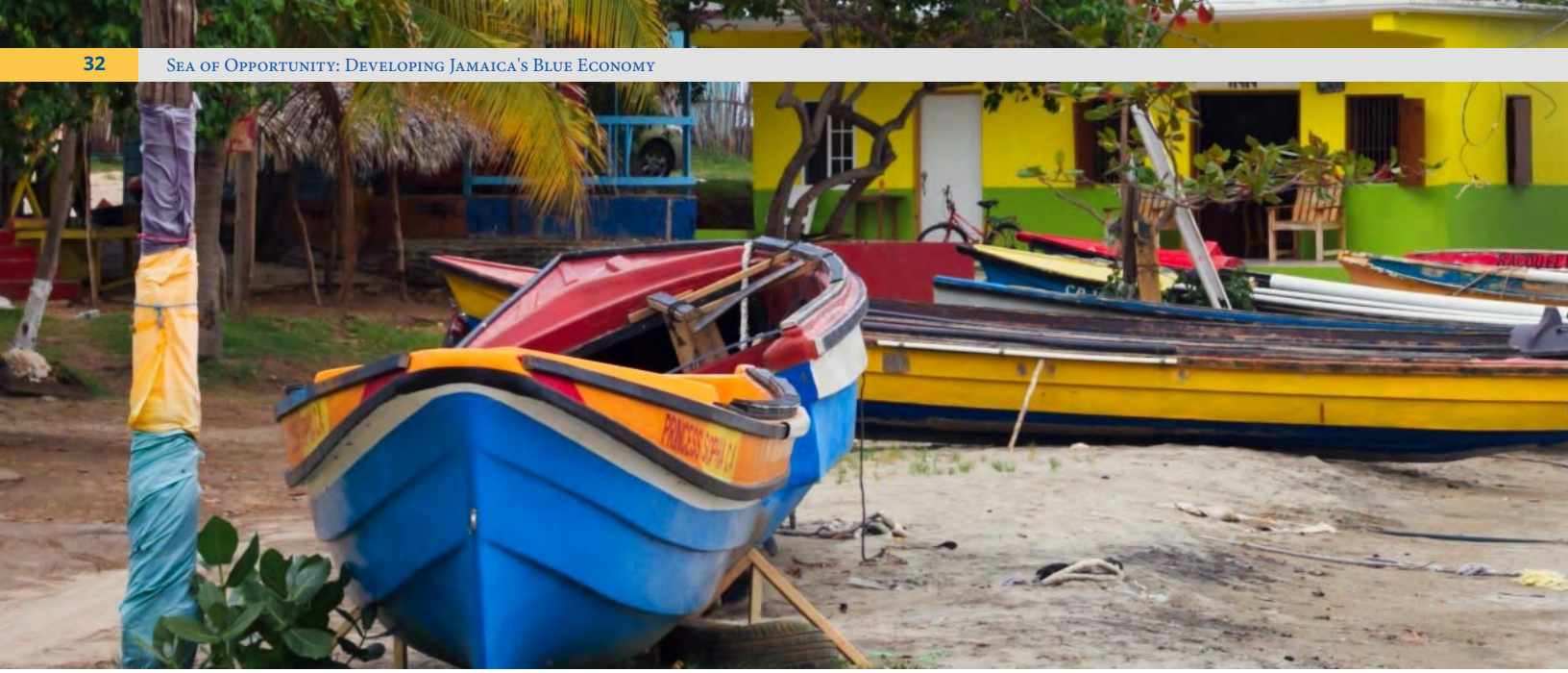
Special Fishery Conservation Areas (SFCA's) serve as a fisheries management tool in Jamaica. These areas are designated as no-fishing zones with the primary aim of promoting fish population.

The Blue Economy Approach to Sustainable Fisheries

In the context of the blue economy, the aim of sustainable fisheries is to strike a balance between harnessing the economic potential of fisheries and safeguarding the long-term health and resilience of marine ecosystems. Sustainable practices involve habitat preservation, harvesting mature fish, adhering to closed seasons, and diversifying fish sources through aquaculture/mariculture.[71] For example, seaweed cultivation and mariculture have gained traction for promoting sustainable fisheries and food diversification. They offer nutritious alternatives, reducing pressure on wild fish stocks and mitigating the risks of overfishing. The economic benefits of seaweed farming and mariculture also provide job opportunities and contribute to rural development. Coastal communities can enhance their economic resilience, reduce dependence on traditional fisheries, and diversify income sources. Seaweed cultivation also presents an opportunity for Jamaica to enter the growing global market for seaweed products. There are also opportunities to increase fisheries production, particularly within the EEZ, with the understanding that expansion must be accompanied by effective monitoring and regulation to ensure sustainable growth.

Opportunities for diversification extend to harnessing marine resources for renewable energy, such as offshore wind, wave, and tidal power. Investing in these technologies can reduce dependence on fossil fuels, thereby aiding in mitigating climate change's impacts on marine ecosystems. Further, it can enhance energy security and stimulate economic growth, benefiting both the renewable energy and fisheries value-added sectors.

Jamaica's blue economy holds diverse opportunities for sustainable growth, particularly by enhancing value-added fisheries products. Elevating the value chain through advanced processing facilities and technology extends seafood shelf life and quality. This innovation opens the door to products like smoked fish, fillets, sauces, and ready-to-eat meals, targeting high-value markets locally and abroad. By diversifying beyond traditional exports, Jamaica can tap niche markets that value ethical and unique seafood products. Exporting value-added items increases revenue and local job opportunities. Investment in research, partnering with culinary experts, and training in value addition, quality control, and marketing supports this expansion. The strategy maximises the blue economy's potential, fostering sustainability and competitiveness in global fisheries markets.

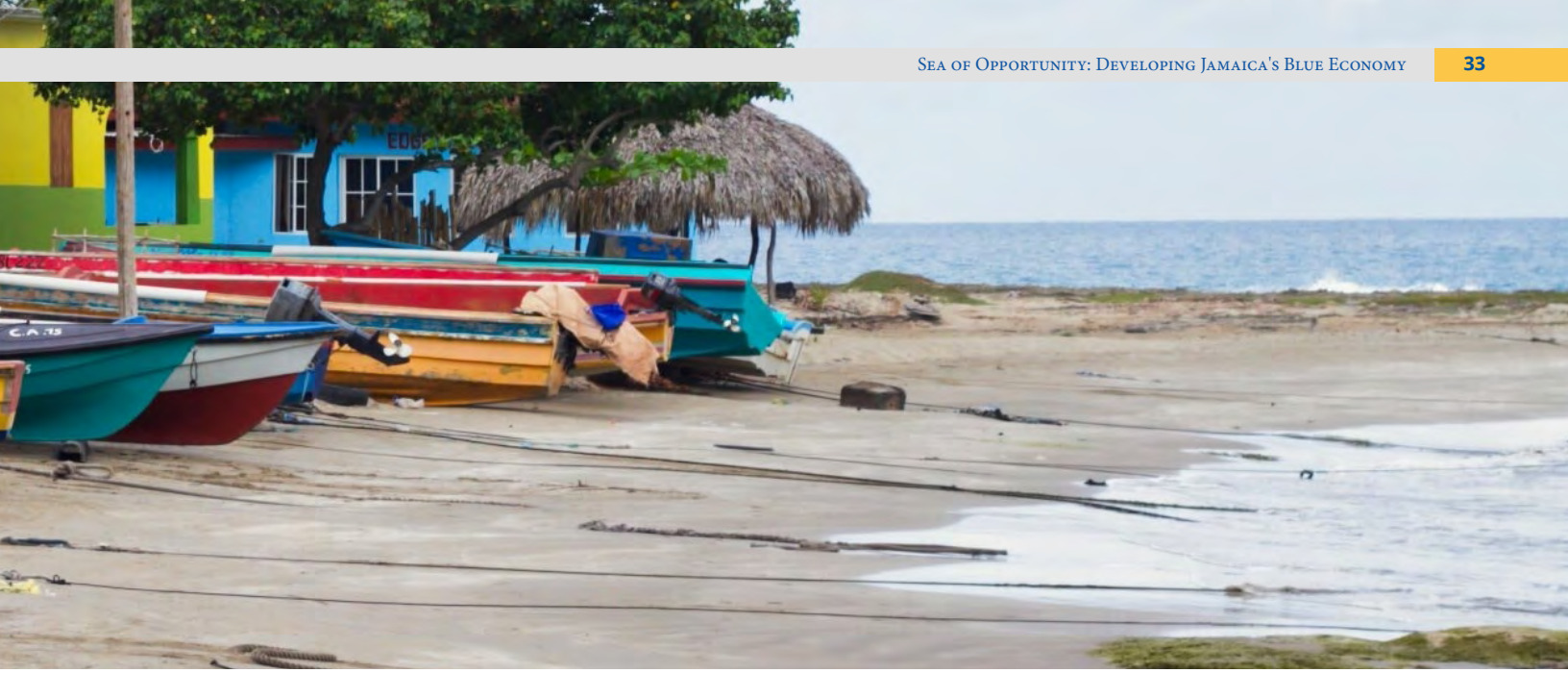


Social Aspects of Blue Economy and Sustainable Fisheries

Jamaican fisherfolk face a range of social vulnerabilities due to their reliance on marine resources for their livelihoods. Economic instability, income disparities, and limited access to social services are common issues, and the informal nature of the fishing industry exacerbates these challenges. Physical risks and the lack of societal safety nets also affect fishermen's well-being, as do climate change impacts, overfishing, and market fluctuations.

Among the social aspects of a blue economy model of sustainable fisheries is the promotion of gender equality. In 2017, around 6 percent of about 25,000 recorded fishers were female, or 1,500 fisherfolk. The blue economy approach promotes inclusivity by way of enhancing equitable access to education and training, and supports women's participation in fisheries, aquaculture, and marine technology, with a view to expanding their opportunities for entrepreneurship, including improving access to finance. Mentorship, networking, and knowledge-sharing, for example through groups like "Women in Caribbean Aquaculture" augur well for inclusive work environments, challenging traditional gender roles, and recognizing women's contributions.[72]

Several Caribbean nations are progressing in promoting sustainable fisheries, reaping ecological and socioeconomic benefits. Belize, Mexico, and Barbados are models for how development and management of sustainable fisheries contribute to a blue economy.



Case Study - Belize

Belize excels in sustainable fisheries management, notably in its UNESCO World Heritage barrier reef system. The country enforces fishing rules, gear restrictions, and marine reserves like Hol Chan and Glover's Reef. Its success in building a vibrant blue economy is evident. A robust Marine Protected Area (MPA) network, led by the Belize Barrier Reef Reserve System, safeguards biodiversity and habitats. Sustainable fisheries practices ensure sector longevity. Belize champions coral reef conservation, battling bleaching and pollution while restoring reefs. Involving communities enhances decision-making, all leading to a sector yielding total earnings of US$143 million.[74] Strong policies and regulations underpin their blue economy governance. Belize's accomplishments stand as a model, balancing development and coastal ecosystem preservation for global emulation.

Case Study - Mexico

Mexico's strides in the blue economy showcase its commitment to sustainability and conservation. Extensive MPAs stand as testament to its dedication to preserving biodiversity and protecting habitats. Their regulations promote responsible fishing, including quotas and gear restrictions. Sustainable tourism practices draw millions of visitors, emphasising conservation and community engagement. Tourism directly contributes around 9 percent to Mexico's GDP.[75] The country has also made strides in renewable energy, such as offshore wind and wave projects, to reduce fossil fuel reliance. Collaboration with international groups and a vibrant scientific community fuel its blue economy. Challenges remain, but Mexico's dedication and ongoing efforts augur well for its continued growth and success.

Case Study -Barbados

Despite challenges posed by climate change and pollution, Barbados remains committed to leveraging the blue economy for sustainable development and conservation, positioning itself as a leader in the Caribbean region. The country's achievements are noteworthy, starting with the establishment of Marine Protected Areas (MPAs) such as the Carlisle Bay Marine Park and Folkestone Marine Reserve. Barbados has also implemented sustainable fisheries management practices, including regulations, licensing, and gear restrictions, to ensure the long-term sustainability of fish stocks and support local fishing communities. Additionally, the country has embraced renewable energy initiatives, focusing on solar and wind power infrastructure, while recognizing the importance of blue carbon ecosystems like mangroves and seagrasses in mitigating climate change. Barbados has integrated sustainable practices into its tourism sector, promoting responsible tourism, protecting coastal ecosystems, and involving local communities in tourism development. The country also actively engages in partnerships and collaborations with international organisations, benefiting from technical expertise, financial support, and knowledge exchange opportunities.

Sustainable fisheries are an integral component of Jamaica's blue economy, contributing to economic development, food security, biodiversity conservation, tourism, climate resilience, and the overall sustainable use of marine resources. However, these valuable marine resources face several challenges, including declining coral reefs and fisheries production, as well as threats from illegal, unreported, and unregulated fishing activities. Efforts to address these multifaceted challenges encompass the establishment of policy frameworks, the creation of Special Fishery Conservation Areas, and the implementation of measures to combat overfishing and illegal fishing. These initiatives align with the principles of the Blue Economy, emphasising the need to balance economic opportunities, address social issues, and prioritise the health of marine ecosystems.

Unlocking the potential of the blue economy requires the mobilisation of resources to enable and support its objectives. Blue financing emerges as a promising avenue for realising Jamaica's Blue Economy vision, offering a pathway to equilibrium between socio-economic development and environmental conservation.

3 Blue Finance

Blue Finance has the potential to power Jamaica's marine resource protection and socio-economic growth.

Blue Finance has the potential to power Jamaica's marine resource protection and socio-economic growth. Blue Finance refers to the sustainable financing of marine and coastal conservation projects with the goal of preserving and restoring the health of oceans and coastal ecosystems. In this indicative exploration into Blue Finance in Jamaica, the financial strategies, mechanisms, and investments that underpin the conservation and sustainable use of maritime resources are outlined. An exploration of the landscape of Blue Finance, with a view to identifying opportunities and challenges, is a first step towards policy recommendations that can advance financial innovation for socioeconomic and marine environment benefit. This exploration also considers the role of Official Development Assistance (ODA) investments.

Sustainable Blue Finance in Jamaica

Jamaica's progress in embracing innovative financing approaches, such as debt-for-nature swaps and the utilization of blue carbon credits, signifies its dedication to securing sustainable funding while fostering broader positive impacts. Sustainable Blue Finance in Jamaica can play a crucial role in preserving biodiversity, promoting community development, and aligning sectors with blue economy goals. Here, we explore these aspects to highlight the importance of sustainable blue finance in Jamaica.

Innovative Financing Approaches

Innovative financing approaches are essential for sustainable blue finance in Jamaica. One notable example is the Caribbean Biodiversity Fund (CBF). Jamaica, as a member of the CBF, benefits from a regional financing mechanism that pools resources to support conservation efforts. This approach leverages funding from various sources, including grants, endowments, and debt-for-nature swaps, to ensure a sustained flow of funds for conservation projects.

Economic Incentives for Conservation

Economic incentives for conservation serve to encourage individuals, businesses, and governments to prioritise environmental protection and the sustainable management of natural resources. These incentives align self-interest with conservation goals, providing financial or economic rewards to those who engage in sustainable practices. Such incentives, if well implemented, can assist in the effort to preserve the underlying natural asset base that drives economic success in other sectors such as agriculture, tourism and fisheries, thereby delivering triple bottom line (economic, environmental, and social) benefits.

These economic incentives can take multiple forms, but for the purpose of this report, those most aligned with blue finance suitability for Jamaica will be discussed. For example, tax incentives targeted at individuals or businesses engaged in conservation activities could be applied, through the removal and redirection of harmful subsidies. This approach includes the provision of tax credits or deductions for investments in renewable energy, energy-efficient technologies, green and blue innovation incentives, and conservation easements.

Market-based instruments such as carbon pricing, payment for ecosystem services, biodiversity offsets are other incentive-based schemes for promoting conservation efforts.[76] Green certifications can strengthen product sustainability in the tourism sector and other sectors. Natural resource user fees and Environmental Impact Assessments, some which may already be in place, are also applicable tools in the context of optimising resources and increasing value for ecosystem preservation.[77]

Tax incentives targeted at individuals or businesses engaged in conservation activities could be applied, through the removal and redirection of harmful subsidies.

Payment-for-Ecosystem Services Approach

Payment for Ecosystem Services (PES) is a conservation and environmental management approach that involves a financial mechanism that can be applied to support the conservation and restoration of an ecosystem. It involves compensating individuals or communities for the services they provide by maintaining or restoring valuable ecosystems and the benefits they offer to society. These services can include clean water provision, carbon sequestration, biodiversity conservation, soil erosion control, and more. PES programmes establish financial incentives to encourage landowners, farmers, or other stakeholders to engage in practices that protect or enhance ecosystem services.

A PES model can be applied to blue carbon.[78] Blue carbon refers to the carbon stored by coastal ecosystems like mangroves, seagrasses, and salt marshes. These ecosystems have a unique capacity to capture and retain carbon dioxide from the atmosphere. Mature mangroves, for instance, can sequester between 200 and 1,000 metric tonnes of carbon per hectare in their biomass. Mangrove soil, rich in organic carbon, can store an additional 500 to 2,000 metric tonnes more per hectare due to anaerobic decomposition.

Payment for Ecosystem Services programmes establish financial incentives.

Advantages of Sustainable Blue Finance to Jamaica's Economy and Environment

Blue finance can play a role in reducing risks associated with climate change and natural disasters. Investments in coastal protection measures, such as the restoration of mangroves and coral reefs, contribute to natural buffers against storm surges and erosion. These initiatives enhance the resilience of coastal communities, reduce property damage, and minimise the economic costs of disaster response and recovery. Additionally, Blue Finance supports adaptation measures such as climate-resilient infrastructure, early warning systems, and community-based coastal management strategies, enabling Jamaica to better cope with the impacts of climate change.

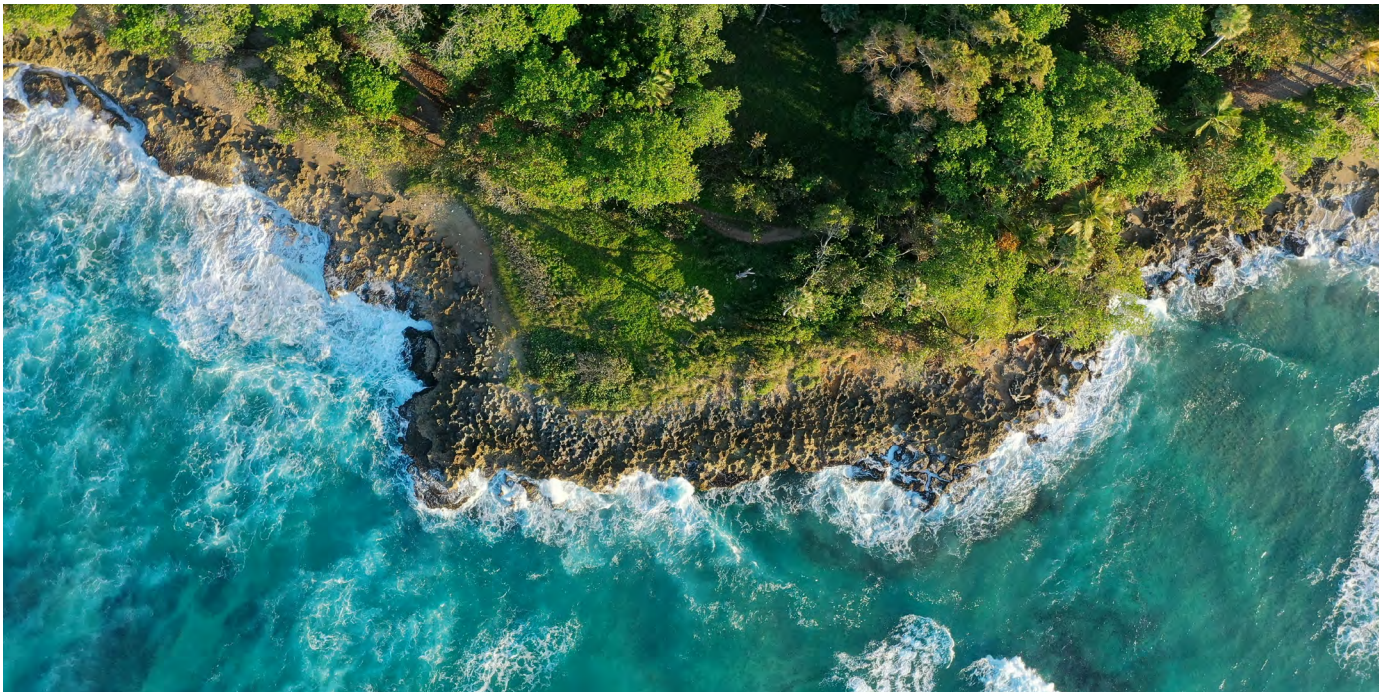
Blue finance initiatives in Jamaica promote ecosystem restoration and conservation, leading to multiple environmental benefits. For example, investments in coral reef restoration through supporting the establishment of Marine Protected Areas (MPAs) enhance the health and biodiversity of these critical ecosystems, supporting sustainable fisheries and promoting tourism activities such as snorkelling and diving. Engaging the community in the management of marine protected areas and other conservation projects promote improved livelihoods, at the same time as conservation efforts safeguard biodiversity and provide opportunities for community development.

Challenges Facing Sustainable Blue Finance in Jamaica

A primary challenge to blue finance in Jamaica is the limited availability of suitable finance mechanisms. While there is growing recognition of the importance of blue finance, the development and implementation of tailored financial instruments and mechanisms specifically designed for the blu economy are still in the early stages. For example, patient capital is lacking for sustainable blue finance projects in Jamaica.[79] Patient capital is long-term, low-interest funding with longer payback periods. The lack of patient capital makes it difficult to implement projects that require substantial upfront investments and have longer return-on-investment timelines. The lack of finance mechanisms hinders the flow of capital to sustainable blue projects.

Multilateral Financing Institutions and International NGO Support

Multilateral financing institutions play a vital role in supporting sustainable blue finance in Jamaica. Jamaica generally benefits from Multilateral Financing Institutions' financial support. Organisations like the World Bank and the Inter-American Development Bank (IDB) have provided funding and technical assistance for marine and coastal management projects. Within the recent new overseas developmental assistance of US$85 million, US$68 million was focused on the directly productive sector to improve access to agriculture and tourism markets using climate change resilient approaches, as well as to support small and medium-sized enterprises.[80] Moving forward, sectors like citizen security, health, environment, climate resilience, disaster risk management, governance, agriculture, and social protection are poised to receive new ODA, aligning with blue economy goals and fostering demand for blue finance mechanisms.



Financing Mechanisms for a Sustainable Blue Economy

Sustainable blue finance in Jamaica is a multifaceted approach that not only preserves biodiversity and supports community development but also embraces innovative financing, leverages multilateral support, and aligns sectors with blue economy goals. By investing in the conservation and sustainable management of its marine resources, Jamaica is not only safeguarding its natural heritage but also laying the foundation for a more prosperous and resilient future. Various supporting mechanisms can be leveraged to deliver this, as will be outlined further below.

The Environmental, Social, Governance (ESG) agenda is new to Jamaica, but is rapidly becoming embedded into corporate social responsibility practices. Grace Kennedy, one of Jamaica's largest conglomerates, recently launched an ESG report.[81] Blue financing is a natural fit in the ESG framework. In addition, there is the newly established Jamaica Social Stock Exchange and green bond options on the Stock Exchange. These initiatives could be looked to for blue economy financing, the establishment of patient capital, grants, and favourable loans for scalable projects.

Annual Government Allocation

An annual allocation from the government budget towards blue economy initiatives demonstrates a commitment to sustainable marine practices. This consistent funding can support a range of projects, from scientific research to marine infrastructure development. The Tourism Enhancement Fund (TEF) is funded through a variety of sources, including a room tax levied on hotels and other tourism-related businesses, as well as through donations and grants from international organisations and individuals. According to the TEF's 2019/20 annual report, the agency raised J$10 billion (approximately US$69 million) in revenue during that fiscal year. Most of this revenue, approximately J$7.5 billion, came from the room tax, while the remaining revenue was generated through donations, grants, and other sources. The TEF could have a percentage of funds reallocated specifically to blue financing endeavours.[82]

Arrival Fees

Tourism arrival fees can contribute to sustainable blue economy development by allocating a portion of the funds collected to support marine conservation, coastal protection, and sustainable tourism practices. These fees can help fund projects that enhance marine biodiversity, promote responsible tourism, and minimise the environmental impact of tourism activities.

There is potential to leverage the cruise industry. For example, the Port of Ocho Rios, which is one of the country's main cruise port, received over 1.5 million cruise passengers in 2019.[83] A head charge of US$30 per passenger could raise US$4.5 million to deploy blue economy initiatives on the island to expand technical capacity and related infrastructure to deliver transformation.[84]

Another idea relates to the cruise industry's achievement of a 40 percent reduction in carbon emissions compared to 2008, with further ambitions to become carbon neutral by 2050.[85] Jamaica could look to support finance and implementation of offsetting initiatives through mangrove and seagrass restoration, and natural capital accounting measures.[86]

Environmental Levies

A way to raise money to offset the environmental impact of the resort model and hotel sector is via an environmental levy. Environmental levies imposed on activities with potential environmental impacts, such as waste generation or resource extraction, can generate revenue that supports marine conservation and sustainable practices. Maldives introduced a Green Tax known as the "Tourism Goods and Services" tax which was able to generate US$30 million within six months in its first year.[87] The charge is set by the government at US$6 per day from resorts, vessels, and hotels, and US$3 per day from guest houses. The Environment and Climate Adaptation Levy (ECAL) is a tax charged in Fiji on goods and services at businesses of a particular size, including most major resorts and hotels. It varied from 5-10 percent (the decrease occurred in Aug 2020 due to Covid-19).[88] Fiji raised US$58M in 2018 by applying this levy.

Charges on shipping and cargo could raise finance to re-invest in water quality, waste management, and mangrove restoration initiatives on the coast. These funds could help to offset negative environmental externalities produced by the shipping sector. A shipping tax can contribute to sustainable blue finance by funding initiatives such as vessel emission reduction programmes, port infrastructure upgrades to minimise environmental impacts, and maritime safety enhancements which are necessary to prevent IUU fishing. Furthermore, as is done in the EU, the GOJ can strengthen the legal framework and reduce environmental impact by introducing a new law which obliges companies to ensure products sold in Jamaica have not led to biodiversity loss.[89]

Energy Bill Tax

Implementing an energy bill tax on energy companies incentivizes renewable energy investment and carbon offset projects, addressing fossil fuels' environmental impact. Tax proceeds can fund marine renewable energy projects, curbing maritime carbon emissions. Calculated payback periods make green finance, ESG, and loans appealing. While taxing energy bills in Jamaica may be unattractive due to high costs, leveraging green energy to reduce living and business expenses can offer sustainable development potential.

Plastic Tax

A plastic tax is best instituted at the business level (production/importation) as opposed to at the consumer level. Monies raised could be channelled into offsetting measures for the environment, such as water pollution, waste management, recycling and biodegradable alternative initiatives.

Developer's Fee

Jamaica currently lacks a developers' mitigation fee, relying instead on Environmental Impact Assessments, which are inherently flawed due to lack of regulation and oversight.[90] However, there are existing frameworks for potential fee collection. For instance, the UK employs the S106 and Community Infrastructure Levy (CIL) to allocate fees based on location and site size. This approach could be adapted for Jamaican planning permission, perhaps with specific rates for waterfront and infrastructure projects. This could help offset marine ecosystem impacts and promotes responsible coastal planning, addressing the conflict between development and conservation/fisheries.

Extractive & Non-extractive Fees and Permits

Fees and permits related to extractive activities like fishing, as well as non-extractive activities like ecotourism, can generate revenue for marine resource management and protection. This ensures that the use of marine resources is sustainable and that funds are available for monitoring and enforcement.

Deep Sea Mining

The potential for deep sea mining is being explored in Jamaica. Blue Minerals Jamaica Ltd. (BMJ) and the International Seabed Authority (ISA) signed a 15-year contract for the exploration of polymetallic nodules in the Clarion-Clipperton Zone (CCZ) in the Pacific Ocean in 2021. Ensuring that revenues from this venture benefit the citizens of Jamaica will be key as this development continues and is in early stages.[91]

Trust Fund

A trust fund can be established to accumulate and manage financial resources dedicated to long-term marine conservation and sustainable development projects. Such a mechanism provides stability and continuity in funding, even as government budgets may vary. Working with an existing institution such as Caribbean Biodiversity Fund to establish a blue economy fund could be an opportunity to ensure finance for projects is sustainable and regularised.

Blue Bond or SDG Bond

A blue bond or SDG Bond is a financial instrument that raises funds from investors specifically for marine conservation and sustainable ocean projects. The bond can be used to finance initiatives like coral reef restoration, marine protected areas, and sustainable fisheries management as well as other sustainable development projects. These can be done through a variety of mechanisms including debt for nature swaps or a securitised revenue stream such as arrival fees or levies, mitigation banking, and taxes.

Jamaica could look to support finance and implementation of offsetting initiatives through mangrove and seagrass restoration, and natural capital accounting measures.

Case Study - Mexico

Mexico issued a Sustainable Development Goal (SDG) bond in 2020, designed to finance projects aligned with the SDGs, thereby attracting socially responsible investors and raising funds for targeted initiatives. The SDG bond provided Mexico with an opportunity to raise funds for projects that align with its development priorities while attracting responsible investment. The bond's proceeds were dedicated to funding projects that contribute to the achievement of various SDGs (SDG 1,4,7), and marketed to impact investors who seek financial returns alongside positive social and environmental outcomes. Mexico has also committed to transparently reporting on the utilisation of the bond proceeds and the outcomes achieved through the funded projects.

Case Study - Seychelles

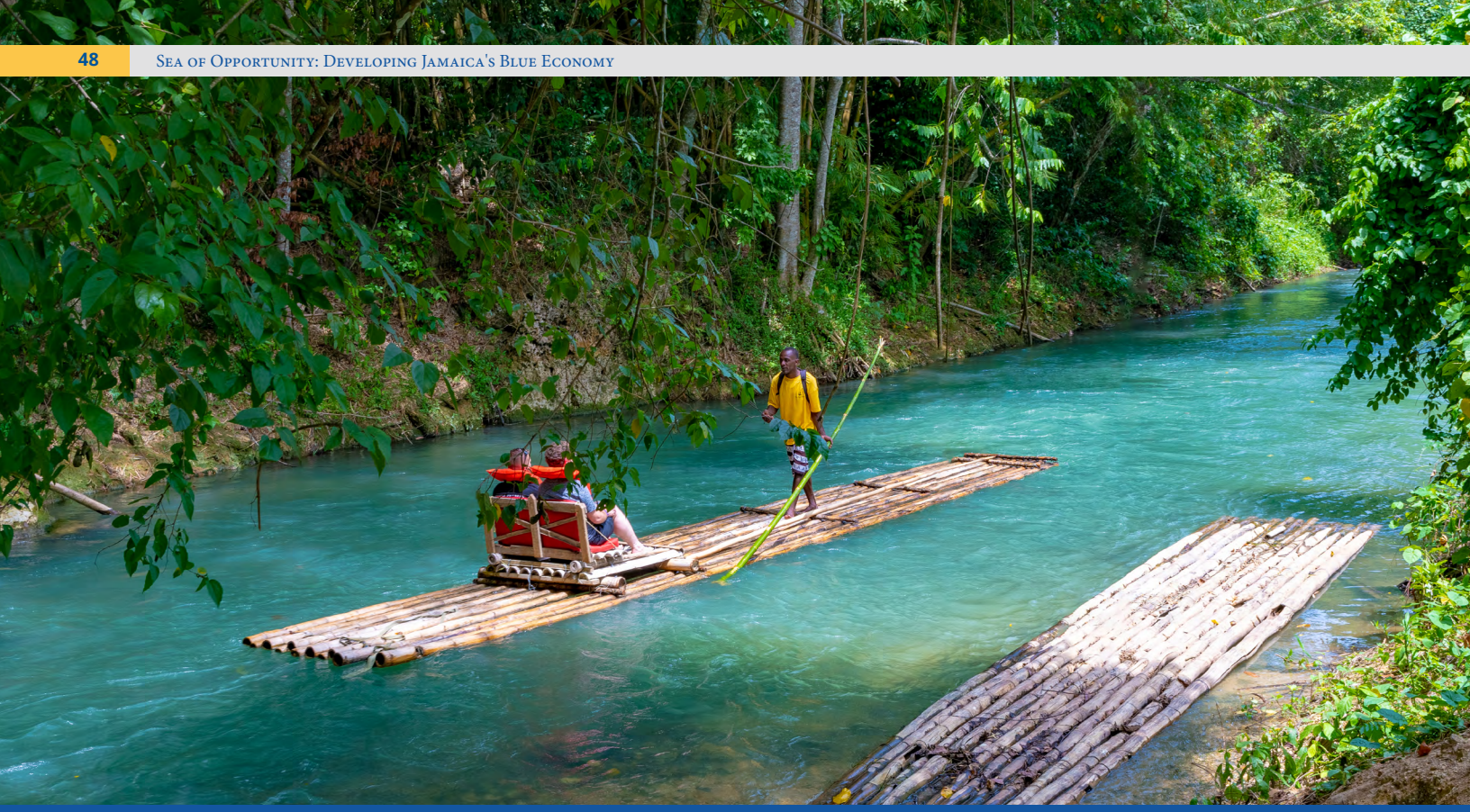
To address the conservation and sustainable use of its oceans, Seychelles issued the world's first blue bond in 2018. The blue bond contributed to funding projects that promote sustainable fisheries management, marine conservation, and the development of the blue economy in Seychelles. Its aim is to finance marine conservation and sustainable fisheries projects, supporting the government's efforts to promote sustainable activities. The bond was structured with the assistance of international organisations like the Nature Conservancy and the World Bank and has attracted investors interested in both financial returns and the conservation of marine resources. A percentage of the bond issued, went to Seychelles Conservation and Climate Adaptation Trust (SeyCATT) to provide grants to communities, small business and entrepreneurship activities related to the blue economy.

A similar model could be developed in Jamaica with existing organisations that serve this space to scale initiatives and maximise impact.

This exploration of Blue Finance in Jamaica's Blue Economy highlights the potential for sustainable financing to drive marine resource protection and socio-economic growth. Blue Finance, with its focus on the sustainable financing of marine and coastal conservation projects, aims to preserve and restore the health of oceans and coastal ecosystems. There are financial strategies, mechanisms, and investments that can form the backbone of conservation efforts, safeguard Jamaica's environment, promote economic growth, and ensure the well-being of its people. Innovative financing approaches, such as support for entrepreneurial activities in the blue space, economic incentives for conservation, tax credits, market-based instruments, and payment-for-ecosystem services, have the potential to align self-interest with conservation goals.

The advantages of sustainable blue finance to Jamaica's economy and environment include mitigating climate change and natural disaster risks; buttressing coastal protection measures, ecosystem restoration, and conservation projects; contributing to coastal communities' resilience; and promoting sustainable practices. At the same time, there are challenges of limited availability of suitable finance mechanisms, awareness gaps, and a fragmented regulatory framework.

Sustainable Blue Finance has the potential to propel Jamaica towards a more resilient and prosperous future by safeguarding its marine resources and promoting responsible and sustainable practices.



4 Key Findings Synergies and Trade-offs

Harnessing the natural beauty and marine resources of the country can lead to the creation of compelling tourism products.

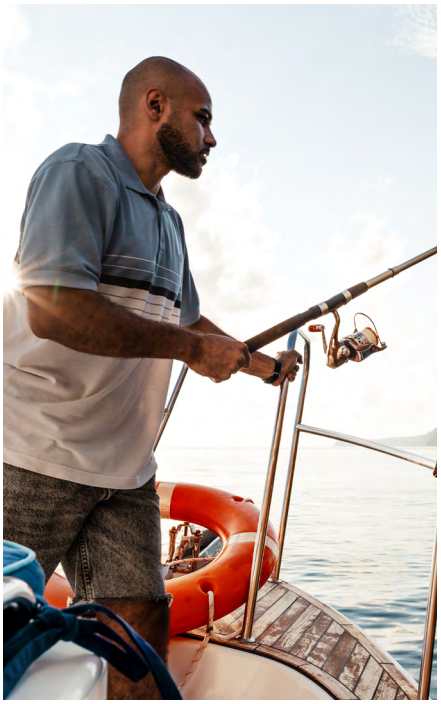
Jamaica has taken steps towards the development of a blue economy. The present research has identified gaps that warrant attention to bolster the nation's progress in achieving a sustainable blue economy. This study has delved into the potential for diversification within the key sectors of tourism, fisheries, and blue finance, identifying the opportunities, gaps, and challenges. Moreover, it underscores the significance of broader economic diversification to underpin sustainable development. By addressing the identified gaps and aligning sector-specific objectives with the overarching goal of sustainability, Jamaica can chart a more robust and effective path towards a viable, environmentally conscious, and socially inclusive blue economy.

Opportunities for Diversification

Tourism
The research identified opportunities for diversification within the tourism sector. These include expanding ecotourism offerings, conservation-based marine tourism, the pleasure craft industry, and sustainable coastal development. Harnessing the natural beauty and marine resources of the country can lead to the creation of compelling tourism products that not only attract environmentally conscious tourists but also actively contribute to the preservation of local ecosystems.

Fisheries
The study found significant potential for diversification within the fisheries sector. Specifically, there is an opportunity to expand sustainable aquaculture/mariculture and pelagic fishing, given the sustainable nature and potential to reduce pressure on traditional fishing grounds. Implementing well-managed pelagic fishing practices can enhance fish stocks and support the long-term viability of the industry.[92] This can also help to reduce Jamaica's high seafood import bill and support sustainable, local fish consumption and food security.

Blue Finance
Unlocking potential in the sector through innovative mechanisms like blue bonds and impact investing can attract private funds for sustainable marine projects. Jamaica has the opportunity to lead in the Latin America and Caribbean (LAC) region by creating a climate-focused finance mechanism. This supports small island states with pooled funds for resilience, drawing lessons from Barbados, Belize, and Seychelles. Learning from Seychelles' Debt for Nature Swap and SeyCCAT can guide Jamaica in establishing a local facility for blue finance development.



Synergies

Sustainable Tourism and Blue Finance
Blue finance, which refers to financial mechanisms that support sustainable ocean-based projects, can help fund the development of responsible tourism infrastructure, marine conservation efforts, and ecosystem restoration projects. For example, revenue generated from sustainable tourism activities can be reinvested into conservation and restoration projects, thus benefiting both sectors, if a percentage of sustainable tourism profits are ring-fenced and directed towards conservation initiatives. This protects the underlying natural asset base that sustains the nature-based tourism economy.

Revenue generated from sustainable tourism activities can be reinvested into conservation and restoration projects, thus benefiting both sectors.

Fisheries and Sustainable Tourism
A well-managed fisheries sector can provide a reliable source of fresh seafood for the tourism industry, enhancing the overall experience for tourists. This can not only potentially reduce food related costs, importation and associated travel miles, but can also improve opportunities for sea-to-table experiences. Additionally, sustainable fishing practices can help maintain healthy marine ecosystems, which in turn contribute to the attraction of tourists interested in marine biodiversity and ecotourism.

Integration for a Sustainable Blue Economy

The study emphasises the need for better integration among the tourism, fisheries, blue finance, and other related sectors to achieve a sustainable blue economy. Coordination and collaboration among government bodies, ministries, and stakeholders are crucial to align sector-specific objectives with the overarching goal of sustainability.

Fisheries Management Strategies
Fisherfolk around Jamaica demonstrated awareness of the unsustainability of their practices and the benefits of MPAs. The research indicated their support for certain fisheries management strategies, including gear restrictions, catch size, and weight limits. From discussions with fisherfolk, the study identified potential for deep sea fishing. Prior to the expansion into a pelagic fishery a stock assessment needs to be conducted to inform size limits can be established.

To capitalise on this opportunity, the government can provide support and investment in the form of:

Vouchers for Boat Fuel
Subsidising boat fuel costs can reduce the economic burden on fisherfolk and encourage exploration of deep-sea fishing grounds.

Technological Training
Training in advanced fishing technologies can enhance fishing efficiency and promote sustainable practices, especially in post harvest techniques to maintain the quality of the catch.

Financial incentives for fully registered and compliant fisherfolk can encourage participation and responsible practices in the deep-sea fishing industry.

Considerations for opportunities for electric fishing vessels; reducing costs, noise and fossil fuel pollution. This should be pilot tested in the first instance.

Support in the establishment of aquaculture further upstream and for target species, as well as support in access to markets for products and linkages with the tourism sector.

Enhanced licensing scheme to provide commercial fishers with more certainty for example longer licence terms (three to five years) that would provide them with stability to access traditional forms of finance and banking support.

The research uncovered a notable tension between sustainable fisheries and coastal development for tourism in Jamaica. As the tourism sector expands and coastal areas undergo development, conflicts arise concerning resource allocation, pollution control and management practices. This tension poses challenges to achieving a balance between economic growth in tourism and the preservation of marine resources essential for sustainable fisheries.

The study also revealed that fisherfolk feel aggrieved by the access granted to the tourism sector within Marine Protected Areas (MPAs). They perceive their exclusion from these areas and express concerns about the unequal enforcement of regulations. Such perceptions raise issues of social equity and highlight the need for improved communication and collaboration between fishing communities and the tourism sector. This is particularly, because fishers note the impact of tourism and coastal development on the health of fisheries and the reef.

Greater support for, inclusion, and integration of fishers in the development and decision-making process is necessary. For example, broader retraining of fishers in relation to non-extractive use jobs related to MPAs should be considered and tourism linkages with community tourism and local product development. This should be broader than philanthropic-related initiatives and have an integrated, sustainable approach to developing local tourism offerings such as sport fishing opportunities and boat tours as well as monitoring and enforcement-related roles.

Cautions

Overfishing and Marine Health
Overfishing can deplete fish stocks anddisrupt marine ecosystems, negatively impacting both the fisheries sector and the attractiveness of the marine environment for tourists. Therefore, a balance must be struck between fishing activities and conservation efforts to ensure the sustainability of both sectors.

Tourism Impact on Ecosystems
Unsustainable tourism practices, such as excessive coastal development, pollution, and habitat destruction, can harm marine ecosystems and biodiversity. This can undermine the long-term viability of both the tourism and fisheries sectors, as healthy ecosystems are essential for the well-being of marine life and the appeal of Jamaica for marine tourism including boat trips, snorkelling, diving, pristine beaches and local seafood.

Resource Allocation
Competition for marine resources and space can arise between fisheries and tourism. Our initial surveys indicate that this is the case and fishers feel excluded. Overallocation of resources to one sector may result in conflicts and ecological degradation. Proper zoning and management strategies are required to allocate resources effectively and minimise conflicts. Therefore, a comprehensive Marine Spatial Planning approach with stakeholder consultation may be required to offset concerns.

Blue Finance and Economic Priorities
While blue finance can provide funding for conservation and sustainable projects, there might be competition for financial resources among various economic sectors. Balancing investments in blue finance with other economic priorities could be challenging, but looking at the potential for a blue or SDG bond to finance the sustainable ocean sectors and other needs will be key.

Climate Change Resilience
Both fisheries and tourism are vulnerable to the impacts of climate change, such as rising sea levels, coral bleaching, ocean warming and acidification, fish migrations and extreme weather events. As such, efforts to enhance the resilience of these sectors will require integration and coordination to minimise negative effects, as well as considerations for alternative livelihoods, insurance mechanisms and transition finance.

To effectively navigate these synergies and trade-offs, it is essential for Jamaica's blue economy to adopt an integrated approach that considers ecological, economic, and social factors. This involves engaging various stakeholders, including government agencies, local communities, conservation organisations, and industry players, in collaborative decision-making processes. Adaptive management strategies, ongoing monitoring, and continuous assessment of the impacts of different activities are crucial for ensuring the sustainable development of the blue economy in Jamaica.

Engaging various stakeholders, including government agencies, local communities, conservation organisations, and industry players, in collaborative decision-making processes.

5 Conclusion

Attention to fisheries is crucial to protect biodiversity and food security in Jamaica

Jamaica's adoption of the blue economy concept—focusing on tourism, fisheries, and blue finance—holds promise for sustainable development. Aligning tourism with these principles can preserve natural beauty and heritage while driving economic growth. Prioritising sustainable practices and community engagement in tourism can benefit coastal communities. Urgent attention to fisheries is crucial to protect biodiversity and food security in Jamaica. Implementing strong management and conservation efforts can regenerate fish populations, securing livelihoods and preserving ecosystems. Blue finance offers an innovative pathway to mobilise resources for sustainable ocean projects, positioning Jamaica as a hub for responsible investments and climate leadership. However, achieving a successful blue economy demands coordinated policies, stakeholder integration, transparent governance, and capacity-building.

Leveraging maritime resources through sustainable tourism, revitalised fisheries, and innovative finance is key to balancing growth, conservation, and development, requiring commitment, comprehensive policies, and global cooperation.

A successful blue economy requires coordinated policies, stakeholder integration, transparent governance, and capacity-building.

Recommendations

1. Increase collaboration and public private partnerships with tourism sector, fisheries and conservation initiatives.
2. Develop a comprehensive Marine Spatial Plan with stakeholder consultation.
3. Prioritise marine protection in alignment with Jamaica's commitment to the High Ambition Coalition for 30 by 30 to protect 30 percent of ecosystems by 2030.
4. Support sustainable fisheries initiatives through comprehensive stakeholder engagements with fishers to ensure solutions align to preferences.

Blue Finance: Private Sector & International Financial Institutions (IFI's).

5. Utilise Jamaica's strategic location to establish a regional Sustainable Finance Hub focused on blue finance and climate financing opportunities in alignment with the Sustainable Development Goals (SDGs).

Blue Finance: Government

6. Direct some spending from the Tourism Enchancement Fund (TEF) to environmental management activities.
7. Develop a Payment for Ecosystem Services approach to include a framework for blue carbon management.


SPORT

Glossary

Blue Assets:	Ocean-related resources that contribute to the environmental, social and economic development of the country to which they belong.
Blue Bonds:	A new form of financing that operates as an innovative instrument to support ocean conservation.
Blue Economy:	The sustainable use of ocean resources for economic growth, improved livelihoods, jobs and ocean ecosystem health.
Blue Finance:	Finance or monies directly allocated to ocean resources, conservation or development of ocean industries and projects in the Blue Economy sectors.
Carbon Credits:	Carbon credits are a way for companies to compensate for their greenhouse gas emissions by paying someone else to reduce, remove or avoid them.
Debt-for-Nature Swaps:	Debt-for-nature swaps are financial transactions in which a portion of a developing nation's foreign debt is forgiven in exchange for local investments in environmental conservation measures.
Exclusive economic zone (EEZ):	The region that extends from Bermuda's coast outward to 200 nautical miles (nm). Bermuda has jurisdiction over the natural resources, marine environment, and energy production rights in this region.
Environmental Social and Governance (ESG):	A collection of corporate performance evaluation criteria that assess the robustness of a company's governance mechanisms and its ability to effectively manage its environmental and social impacts.
Fully-protected marine protected areas:	Marine protected areas in which no extractive or destructive activities are allowed and all abatable impacts are minimised (also known as no-take fisheries replenishment zone).
Natural Capital:	Stocks of natural assets including water, air, soil and other living things that generate ecosystem services to sustain human life and contribute to society's development.
Patient Capital:	This refers to long-term financing, where investors are prepared to wait a considerable amount of time before seeing any financial returns.
Pelagic fish:	Fish that exist in the pelagic zone, oceanic fish found closer to the surface or mid-depths.
Ringfenced:	Guarantee that (funds allocated for a particular purpose) will not be spent on anything else.
Sustainable:	Able to balance social, economic and environmental needs and manage the balance between these three pillars to continue over time.
Sustainable Development:	Development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs.
Triple Bottom Line:	Delivering environmental, social and economic benefits.

Appendix A

Detailed Methodology

Methodological Approach

The methodology for this study includes a comprehensive desk review and analysis of existing policy and legal and environmental frameworks and initiatives to support the blue economy in the key sectors of fisheries, tourism, and blue finance. Data related to these sectors were sought from the relevant ministries, departments, agencies, private sector entities, and international organisations with relevant datasets. These were analysed for results and discussion. Secondary data was gathered on the priority sectors (sustainable fisheries, tourism, and blue finance), an analysis of existing national and regional policies was conducted, and international policies/conventions that Jamaica has adopted/signed were reviewed. Best practice case studies were considered. Themes and patterns were identified using thematic analysis, and policy gaps were determined.

A comprehensive overview and evaluation of the tourism sector's contribution to Jamaica's GDP was conducted, considering various aspects of this industry. Current data on tourist arrivals, tourism-related imports and exports, and economic and environmental indicators was analysed, with the primary aim to understand the existing tourism model and local supply chains. Within this an examination was done of the ecotourism sector, analyzing market share, reviewing marketing strategies, and studying earnings data. Additionally, the research critically assessed existing socio-economic analyses and studies, comparing them to sustainable tourism best practices. Both SWOT and PESTLE analyses were conducted to identify the sector's risks and opportunities. Data was sourced from local, regional, and international sources, including entities such as the Ministry of Tourism, TPDCo, TEF, MEGJC, and PIOJ. The analysis sought to pinpoint areas for improvement and alignment with sustainable tourism principles.

In the examination of the fisheries sector, the most recent available data regarding fisheries' contribution to Jamaica's GDP was utilized. An assessment was made regarding the extent of illegal, unreported, and unregulated (IUU) fishing activities. Fisheries import and export data, earnings, and relevant survey data were examined, as were the opportunities for diversification and the economic performance of Jamaica's fisheries industry. A review of Marine Protected Areas (MPAs) was conducted, exploring their potential spill-over benefits and efforts to protect and recover at-risk or vulnerable species. Local aquaculture initiatives were evaluated to determine the suitability of different species for aquaculture practices. The findings formed the basis for informed recommendations aimed at enhancing sustainability in each sector under scrutiny.

Information regarding the blue finance sector encompassed various facets of the financial landscape within the blue-green sector. Initially, an analysis was conducted to assess the allocation of existing environmental and blue-green-related financing mechanisms within the country. Concurrently, the study delved into an examination of international financing mechanisms within the blue-green sector, aiming to identify best practices and comparative initiatives. A review of loss and damage projections for Jamaica and predictions was sourced from the Intergovernmental Panel on Climate Change (IPCC), with a view to understanding potential financial implications. Local financial practices and products tailored specifically for the green and blue sectors were considered. SWOT and PESTLE evaluations of the sector were done, as well as a review of local ecosystem-related data, encompassing seagrass, mangroves, reefs, and biodiversity. The potential for implementing Payment for Ecosystem Services through the blue carbon market or other fines, fees, and enforcement levies, as a means of structuring an effective financing mechanism, was explored.

Appendix B

Ecotourism Mapping

A1 Ecotourism Mapping by Parish (High-level)

PARISH	ECOTOURISM INITIATIVES
St. Elizabeth	Black River Safari Treasure Beach YS Falls Pelican Bar Appleton Estate Middle Quarters
Hanover	Zimbali Retreats Hopwell
Westmoreland	Blue Hole Mayfield Falls Blue Fields Beeston Spring
St. James	Montego Bay Marine Park Dr. Cave beach Animal Farm Nature Reserve
Trelawny	Glistening Waters Martha Brae Cockpit Country Worthy Park
Manchester	Milk River Bath Potential development opportunities; hiking trails, farm-to-table & local products (Etennio, Wassi & other Jamaican brands made locally in the parish)

PARISH	ECOTOURISM INITIATIVES
Clarendon	Caribbean Coastal Areas Management Foundation (CCAM) Potential development opportunities; Rio Minho (longest river in Jamaica) Denbigh Agri-show
St. Catherine	Potential development opportunities
St. Ann	Stush in the Bush Spanish Bridge Hidden Beauty Blue Hole Pure Chocolatier Jacana Farm Dunns River Mystic Mountain Hampden Fern Gully Green Grotto Caves
St. Mary	Firefly James Bond Beach Oracabessa Fish Sanctuary
Kingston & St. Andrew	Holywell Falling Edge Yardie Divers & Watersports
Portland	Bowden Pen Farmers Association Blue Mountains Reach Falls Somerset Falls Beaches -Frenchman's Cove, Winnifred, Boston Bay Rio Grande Charles Town Maroon Council; Nanny Falls etc. Alligator Head Foundation
St. Thomas	Jamaica Conservation & Development Trust (JCDT) Beaches including; Bob Marley Beach, Wickie Wackie, Jamnesia Cane River Falls Bath Spa

Appendix C

SWOT Analyses

SWOT Analysis of Jamaica's Ecotourism Potential

S

STRENGTHS
Variety of natural assets that drive attraction in the tourism market
Cultural heritage
Proximity to major USA market
Local skillsets through UWI, Discovery Bay Marine Lab etc.
Existing Sustainable Tourism policies and recognition

W

WEAKNESSES
Infrastructure and road network
Cost of goods and services
State of coral reefs and ongoing heat stress

O

OPPORTUNITIES
Increased awareness and growing ecotourism market to be leveraged
Strengthening and expansion of the Fish Sanctuaries Network
Increased environmental financing opportunities
Digital tourism opportunities and marketing
Diversification of marine attractions through underwater sculptures

T

THREATS
Climate change
Current quality of certain ecosystems and risk of deterioration
Perceptions of safety and crime benefit an all-inclusive model where tourists do not leave the resort due to related concerns

Appendix C

SWOT Analyses

SWOT Analysis for Sustainable Fisheries

S

STRENGTHS
Collaboration with regional and international organisations (FAO, CRFM etc.)
Establishment of community-based fish sanctuaries
Implementation of fisheries management plans (seasonal closures, catch limits)

W

WEAKNESSES
Limited awareness and compliance
Limited enforcement resources
Lack of data, research and effective Fisheries Management

O

OPPORTUNITIES
Integrated Coastal Management
Sustainable aquaculture/mariculture
Investment in blue carbon conservation
Investment in marine renewable energy
Expansion of MPAs

T

THREATS
Climate change impacts
Habitat degradation
Overfishing
IUU fishing

Appendix C

SWOT Analyses

SWOT Analysis for Blue Finance

S

STRENGTHS
Growing prominence and importance of blue finance and innovative finance mechanisms that can be applied to Jamaica's blue economy
Strong asset base to maximise blue finance opportunities
Local blue finance-related initiatives

W

WEAKNESSES
Underdeveloped institutional framework for blue finance
Several vulnerable ecosystems
Sporadic and small-scale financing to date has been sporadic
Insufficient funding for MPAs

O

OPPORTUNITIES
Potential to become a regional hub to promote blue finance and climate resiliency
Establish a PES and carbon offsetting framework

T

THREATS
Climate change risks, biodiversity losses
Coastal development impacting blue carbon storage (mangrove cutback)

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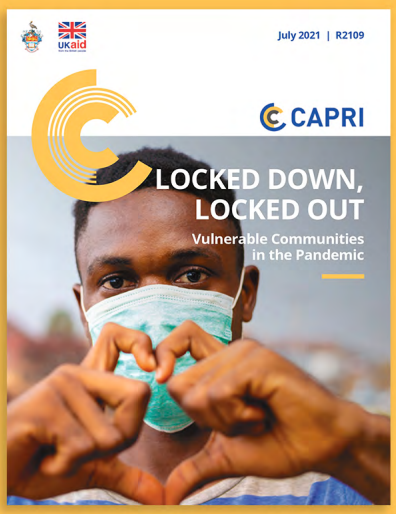

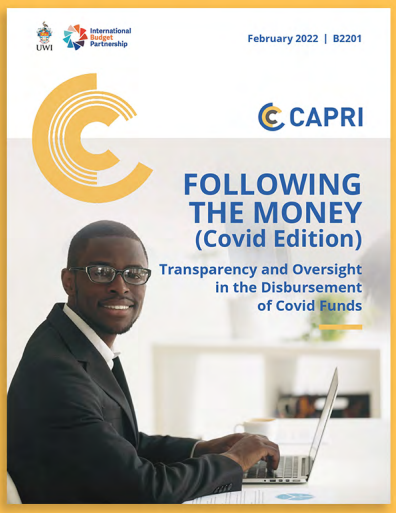

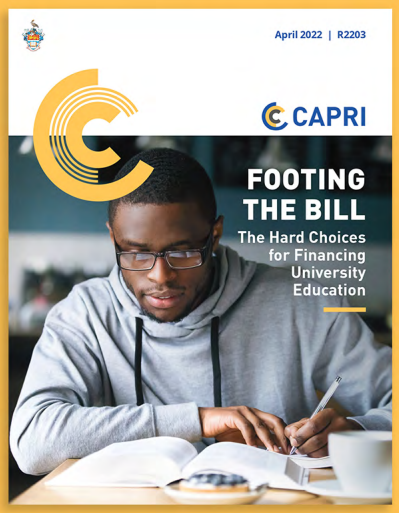

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