



JAMAICA POLICY ANALYSIS REPORT

Caribbean Coral Reef Restoration & Tourism Policy Analysis



CARIBBEAN
HOTEL & TOURISM
ASSOCIATION



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ACRONYMS

AGRRA	Atlantic and Gulf Rapid Reef Assessment	JTB	Jamaica Tourist Board
AHF	Alligator Head Foundation	KFTL	Kingston Freeport Terminal Limited
APCAR	Action Plan for Corals and Reefs in Jamaica	MPA	Marine Protected Area
CAPRI	Caribbean Policy Research Institute	NBSAP	National Biological Diversity Strategy and Action Plan
CAST	Caribbean Alliance for Sustainable Tourism	NEPA	National Environment and Planning Agency
CBD	Convention on Biological Diversity	NFA	National Fisheries Authority
CBF	Caribbean Biodiversity Fund	NGO	Non-Government Organisation
CCAM	Caribbean Coastal Area Management Foundation	PADI	Professional Association of Diving Instructors
CHTA	Caribbean Hotel and Tourism Association	PBPA	Portland Bight Protected Area
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	SAVE	Scientific, Academic, Volunteer and Educational
CSR	Corporate Social Responsibility	SCTLD	Stony Coral Tissue Loss Disease
DAC	Destination Assurance Council	SFCA	Special Fishery Conservation Area
DAN	Diver Alert Network	SDG	Sustainable Development Goals (United Nations)
EEZ	Exclusive Economic Zone	TEF	Tourism Enhancement Fund
GCRMN	Global Coral Reef Monitoring Network	TPDCo	Tourism Product of Development Company
GDP	Gross Domestic Product	TNC	The Nature Conservancy
GEF	Global Environment Facility	UNEP	United Nations Environment Programme
GOJ	Government of Jamaica	USAID	United States Agency for International Development
IKI	International Climate Initiative	UNSDG	United Nations Sustainable Development Goals
IUCN	International Union for Conservation of Nature	UWI	The University of the West Indies
JamVac	Jamaica Vacations Limited		
JASPEV	Jamaica Social Policy Evaluation		
JMD	Jamaican Dollar		
JSIF	Jamaica Social Investment Fund		

JAMAICA POLICY ANALYSIS REPORT



EXECUTIVE SUMMARY

1. INTRODUCTION

Under the overall project “to identify and understand regulatory obstacles and enabling conditions for coral reef restoration

implementation with tourism sector participation”, this report provides an overview of the policy framework that guides coral reef restoration in Jamaica and the participation of the tourism industry.

Jamaica is a leading tourist destination in the Caribbean, receiving 4.1 million visitors in 2023. Data for Jamaica shows that in 2021, Jamaica generated around 2.12 billion US dollars from the tourism sector alone. This corresponds to 12.39 percent of the country’s gross domestic product (GDP) and approximately 11 percent of all international tourism receipts in the Caribbean.

Coral reef restoration in Jamaica is currently and mainly undertaken by and linked to environmental NGOs and academic institutions, which they carry out in an effort to mitigate the impacts of climate change, coastal development, and local disturbances such as ship groundings and hurricane impact.

This report emphasizes that the health of the environment supported by coral reefs impacts the aesthetics and financial earnings gained from Jamaica’s tourism product. The tourism industry in Jamaica, therefore, has a vested interest in coral reef restoration and can play an expanded and increased role in scaling up coral reef restoration efforts through, for example, the provision of funding and personnel support, helping with sensitization efforts and in the development and sale of reef restoration experiences.

Firstly, however, it is critical to understand and evaluate the context under which coral reef restoration operates in Jamaica. This report, therefore, identifies:

- (i) the national, regulatory, and operational framework in Jamaica that guides and influences the implementation of coral reef restoration by the tourism industry;
- (ii) the obstacles, gaps, and opportunities for the participation of Jamaica’s tourism industry in coral reef restoration; and

- (iii) the best practices lessons learnt from the existing participation of Jamaica’s tourism industry in coral reef restoration.

2. CLARIFICATION OF KEY CONCEPTS

THE POLICY FRAMEWORK

In this analysis, the policy framework is broadly defined as including National Policies, Legislation, Regulations, Operational Requirements and related documented Policy Statements of the Government of Jamaica that impact upon or guide coral reef restoration as well as the guiding Conventions, Agreements and Protocols to which the country is a signatory.

The “Policy framework” also includes the agencies, and governance and institutional arrangements in place, that administer and implement the policies.

TOURISM INDUSTRY PARTICIPATION

This is defined as the direct involvement of tourism businesses (i.e., enterprises that cater to international and domestic visitors) in coral reef restoration as an economic and/or philanthropic activity to increase the conservation and sustainability of the marine environment, the diversification and offer of tourism experiences, the benefits derived to communities, and the added value provided for visitors, employees and their tourism businesses.

3. METHODOLOGY

Jamaica’s analysis was informed by stakeholders representing the public, private and NGO sectors involved in or with a mandate for tourism, environment or marine activities and specifically for coral reef restoration.

These stakeholders include representatives of private sector entities such as the Sandals Foundation; Seascope Caribbean; Yardie Environmental Conservationists Ltd.; White River Fish Sanctuary and Oracabessa Marine Trust that leads in coral reef restoration activities in Jamaica. Stakeholders also include the Ministry of Tourism, the National Environment and Planning Agency and the National Fisheries Authority.

To supplement the primary research from interviews, discussions, and surveys, the analysis was guided by the results from the desk research undertaken.

4. POLICY FRAMEWORK SUMMARY

TOURISM INDUSTRY POLICY FRAMEWORK

Legislation & Administration Agencies

Tourism activities are guided by a policy framework that addresses its development, standards, operation and promotion. In Jamaica, key tourism policies and legislation revolve around:

- (i) **Jamaica Master Plan for Sustainable Tourism Development:** This looks at tourism strategies that include (i) Growth; (ii) Enhancing the Visitor Experience; (iii) Making Tourism More Inclusive; and (iv) Environment Sustainability in which the tourism industry contributes to the conservation of the natural environment, and
- (ii) **Tourist Board Act:** This Act provides the statutory authority for the development and promotion of tourism. It authorizes (i) development of all aspects of the tourist industry of Jamaica and the promotion of its efficiency; and (ii) the encouragement, attainment and maintenance of integrity and the highest standards of service across the industry.

Jamaica has documented the intention to have tourism place emphasis on key outcome goals of the Jamaica Social Policy Evaluation (JASPEV). One of the goals centres on the environment and sets a policy for the sustainable use of coastal resources. Another goal focuses on sustainable use of biological resources under the National Biological Diversity Strategy and Action Plan (NBSAP).

Administratively, the Ministry of Tourism has primary responsibility for the tourism sector and the implementation of the country's tourism plans and policies. It undertakes its mandate together with appointed agencies for specific tourism sector functions. These agencies include:

- (i) The Tourism Product Development Company (TPDCo)
- (ii) The Jamaica Tourist Board (JTB);
- (iii) Jamaica Vacations Ltd; and
- (iv) The Tourism Enhancement Fund (TEF).

CORAL REEF RESTORATION POLICY FRAMEWORK

Legislation & Administration Agency

While tourism policies guide the industry in sustainable use of natural resources, coral reef restoration is not a specific strategy within these policies. In fact, coral reef restoration in Jamaica falls within an environmental

landscape governed by over 50 other legislative, international Agreements and related documents. These cover areas such as (i) Access to Information and Environmental Rights; (ii) Biodiversity; (iii) Fisheries; (iv) Climate Change; (v) Ozone; (vi) Pollution; (vii) Protected Areas; (viii) Special Fisheries Conservation Areas; (ix) Wetlands; and (x) Wildlife.

When analysed further, coral reef restoration activities are seen to be mainly guided by five (5) pieces of legislation administered by two (2) agencies:

- (i) The Natural Resources Conservation Authority (NRCA) Act, administered by the National Environment and Planning Agency (NEPA);
- (ii) Endangered Species (Protection, Conservation and Regulation of Trade) Act, 2000, administered by NEPA;
- (iii) Wild Life Protection Act, 1945 administered by NEPA;
- (iv) The Beach Control Act, 1956 administered by NEPA; and
- (v) The Fisheries Act 2018, administered by National Fisheries Authority for activities involving fishable resources and efforts undertaken in Special Fishery Conservation Areas (SFCAs).

Permits

As summarized in the **Table A** below, this analysis notes that there are up to three critical permits that must be obtained to carry out coral reef restoration work in Jamaica.

Table A: Permit and Permit Fee Structure for Coral Reef Restoration Activities, Jamaica

REQUIREMENTS & FEES FOR CORAL REEF RESTORATION: JAMAICA			
#	TYPE	PERMIT FEES	ISSUING AGENCY
1	Beach Licence (renewed annually)	JMD1000 + additional fees for each structure/unit (e.g. Moorings ¹ , coral nurseries)	NEPA
2	Exemption Permit Under Wild Life Protection Act (renewed every 5 years)	JMD24000	NEPA
3	Research Permit (conditional) (linked to Exemption Permit so renewed every 5 years)	JMD24000	NEPA

- (i) **Beach License:** This permit allows operations in the coastal and ocean space. It facilitates the use of

¹ 1-4 moorings= \$200; 5-10 moorings= \$1,000.00; 11-100= \$5,000.00

coral nurseries on the sea bed and the use of moorings to avoid anchorage that may damage marine resources.

- (ii) **An Exemption under the Wild Life Protection Act:** This permit allows the permittee to have in their possession/handle a protected species. All hard corals in Jamaica are protected so for coral reef restoration it will allow re-planting of coral reef fragments, as a protected species, for restorative purposes.
- (iii) **Research Permit:** This permit is required if research is to be undertaken separately or as part of activities facilitated under the Exemption Permit. In this case, the research results must be shared with the Government of Jamaica.

Fees: Fees are required for all permits and can range from JMD1000 to JMD24000. Only one agency is involved in issuing these permits, i.e. NEPA. **Table A** above also breaks down the fees for the key permits required for coral reef restoration.

5. ASSESSMENT, GAPS & OPPORTUNITIES

- (i) **The Tourism Product:** TPDco issues licenses to enterprises that directly offer services to visitors. They ensure that these enterprises meet the laws of the land that govern their operation prior to issuing an additional tourism license that further ensures that the product maintains the standards as required for the tourism sector. The existing policy directive and mechanism to maintain a quality tourism product, as mandated by TPDco contain useful elements should dive tourism and coral reef restoration activities expand as a recognised tourism product for greater participation by the tourism industry. The country's tourism product licensing policies, however, do not directly incorporate coral reef restoration activities for tourism purposes.
- (ii) **Marine Conservation/Tourism Policy - Separate Policy Spaces:** At the moment, while sustainable tourism is encouraged within the Jamaica tourism policy framework, there is no legislative overlap or guiding principles for marine conservation and tourism. Tourism entities that engage in marine conservation do so more as part of their corporate social responsibility (CSR). Coral reef restoration is,



therefore, conducted within the legislative framework set for natural resource management and conservation, while tourism is focused on and guided by its own legislation.

- (iii) **Limited Coral Reef Restoration Expertise in Tourism:** Local tourist operators who engage in coral reef restoration do so by collaborating with environmental NGOs and academia. These operators, however, represent a minority number of tourism industry operators and, as such, coral reef restoration knowledge and expertise are not in the hands of tourism industry operators, nor the national tourism agencies.

Views of Tourism Businesses and NGOs

- (i) **National Importance of Coral Reefs**

The targeted businesses and NGOs that provided input via the online survey were asked to rank the importance and/or priority of several areas related to coral reefs.

Table B summarises the response results. Respondents felt that coral reefs are very important to the economy of Jamaica and to their business. They, however, gave extremely low ratings for the priority or importance given to coral reefs on the national agenda of Jamaica.

Table B: Priority Given to Coral Reef Restoration

#	Importance /Priority of:	To:	Importance /Priority (0 = none & 6 = highest)	Priority (%) ²
1	Coral Reefs	the Economy of Jamaica	5.6	93%
2	Coral Reef Restoration	your business	5.6	93%
3	Coral Reef Restoration	the National Agenda of Jamaica	2	33%

The response from the participants reveals a view that there may be a gap in the importance of coral reefs to the economy of and the attention given to it on the national agenda of the country (low).

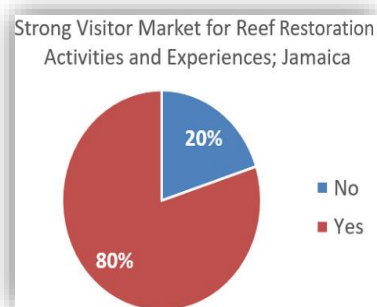
- (ii) **Visitor Interests in Coral Reef Restoration**

As seen in **Figure A**, a larger percentage of respondents had a view that there is a visitor market for coral reef restoration activities.

² Interpretation: Respondents could rate the priority of an item out of 6 (0 = no importance/priority to 6 = highest importance/priority). The

percentages reflect the averages of responses (i.e. all respondents replied with 6 = 100%, all respondents replied with 0 = 0%)
The % reflect the averages of responses)

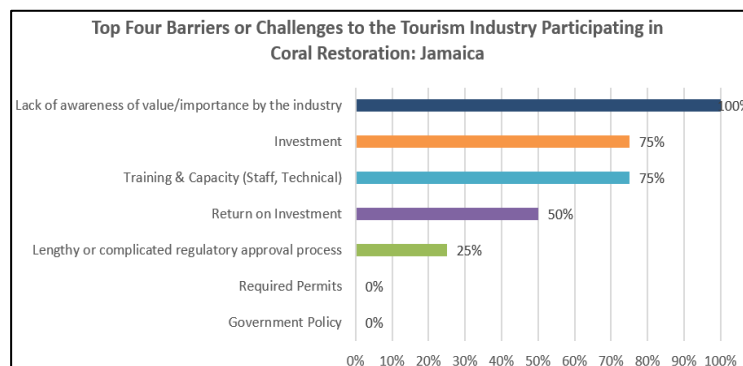
Figure A: Visitor Market for Coral Reef Restoration



(iii) Barriers & Challenges

This is shown graphically in the **Figure B** below:

Figure B: Top Barriers to Tourism Industry Participation in Coral Reef Restoration



The tourism operators surveyed believe that the top barriers and challenges to the participation of the tourism industry in coral reef restoration are:

- Lack of awareness of the value/importance of coral reef restoration by the tourism industry;
- The investment required;
- Technical training and capacity of staff; and
- Return on investment;

(iv) **Government Regulation Required:** When asked whether coral reef restoration activities by the tourism industry in Jamaica should be regulated by the Government, the majority of respondents (75%) were in agreement. Comments providing further clarity included:

“Restoration is complex as it involves making changes to an ecosystem. The government should establish the overall restoration plan for a site and monitor the ongoing progress and practices of the stakeholders”

Government regulation is needed to ensure that all activities are done according to accurate standards and so that information sharing may occur.

Views of Public Agencies

(i) **Facilitating Tourism Activities:** Public agencies responsible for the marine environment generally agreed that their agencies facilitated tourism activities in the marine space in Jamaica. Notwithstanding, further comments explained that tourism it is not part of their mandate. Comments included:

Our mandate is environmental protection. Tourism entities are stakeholders but not our mandate.

No – our agency primarily regulates planning and environmental issues. One of our strategic objectives is to increase protection of Jamaica’s biodiversity (coastal and marine, terrestrial and inland water ecosystems). The tourism industry can be considered an important stakeholder that utilizes the resources that our Agency regulates.

(ii) **Regulating Tourism Activities:** All agency respondents agreed that coral reefs in Jamaica are under threat. Likewise, they all agreed that tourism industry activities in the marine space should be regulated by government. Comments include:

- Regulations by Government is needed so that “we do not make a bad situation worse”; “bad practice/operators kill corals”.
- “Corals are a protected species so any activities related to them must be regulated”.

Stakeholder view, expressed on the other hand, that a lot could still go wrong if government regulations are not rigorous in protecting marine ecosystems, and if oversight is weak or regulations are poorly enforced.

(iii) **Agency Responsible for Tourism:** The Ministry of Tourism notes their interest in and appreciation for coral reefs with coral health seen as a factor in the environmental conservation of the marine space.

The Ministry of Tourism recognizes that there is no policy that pays specific attention to coral reef restoration but, given the interest of the Ministry discussions are currently underway with Green Fins for a project partnership that would likely include tourism’s involvement in coral reef restoration.

Other Opportunities

- (iv) **Opportunity for Tourism Industry Businesses:** The report notes that the current policy framework provides an opportunity for the tourism sector to get involved in coral reef restoration activities through the acquisition of applicable permits which are administered by one main agency.
- (v) **Public Sector Partnership Opportunity:** The Ministry of Tourism sees an opportunity for greater partnership with public sector environmental agencies, i.e., NEPA, NFA to collaborate on policies to increase the collaboration of the tourism sector in coral reef restoration.
- (vi) **Private/NGO Sector Partnership:** Feedback received from interviews is that “a hotel or dive shop should not get a license on their own”. The Tourism industry should, collaborate with or contract vetted, approved professionals and/or NGO that provide coral reef restoration services.

6. BEST PRACTICE LESSON LEARNT

While there are several best practice cases including the work done by the Sandals Foundation, this report highlights the Oracabessa Marine Trust and the collaborative work they carry out at the Oracabessa Bay Fish Sanctuary, as a best practice in Jamaica.



Tourism Industry/Fishing Industry Collaboration: The fishing sanctuary was started by a group of local fishermen and tourism industry stakeholders in response to a decline in vital Jamaican coastal life like corals and herbivorous fish. They recognised that both fisheries and tourism were severely affected by poor reef health.

Oracabessa is recognised by the Jamaica Social Investment Fund (JSIF) for its role in facilitating community-based tourism and its engagement of the women, youths, students and community members in the surrounding rural areas in which it operates. It is directly involved in attracting the scientific, academic, volunteer and educational (SAVE) tourism market and other adventure and dive visitors to Jamaica. There are also strong linkages with tourism, fisheries and other economic sectors in the community.



Achievements: Oracabessa has been successful in:

- **Training** local fishers as sanctuary wardens to patrol the Special Fisheries Conservation Area (SFCA) and as coral gardeners to assist in the maintenance of nurseries and out-planting exercises.
- **Operating the Oracabessa Dive Centre** at James Bond Beach, with 100% of profits made going to the marine conservation program. Local fishermen are trained up to PADI Divemaster and join the staff to offer excursions within the sanctuary.
- **Visitor Tours:** Visitors receive guided tours to the nurseries and restored areas, help maintain the coral nurseries through coral planting, cleaning corals and predator control.
- **Monitoring the status of its coral reefs.** Sites within The Sanctuary are a part of the 22 target sites for NEPA's coral reef health status assessments. Between 2013³ and 2020⁴, there has been a 470% increase in the biomass (total weight of fish) of herbivorous fish at Golden Eye Reef, a positive indicator of the efficacy of Special Fishery Conservation Area (SFCA) as a conservation tool.
- **Restoring Coral Reefs:** Coral reef restoration efforts including installation of coral nurseries, out-planting of over 30,000 corals to reefs within the SFCA.

Lessons Learnt

The following are lessons learnt in Jamaica:

- (i) **Science First:** While stakeholders that engage in restoration may be varied, they must have a common goal to restore ecosystem function. All activities should align with this goal, with clear objectives and indicators to track success. Where restoration efforts take place outside of marine NGO/academia, scientific principles should still guide efforts.
- (ii) **Enlist Help/Collaborate:** Operating in a silo can create inefficiencies, duplicating efforts, waste resources, and can give rise to conflicts. Tourism industry and community stakeholders should be engaged at every stage of a restoration activity to increase the chances of buy-in and project success. Collaborations with other practitioners allow the collective to understand what methods work locally, provide a platform for knowledge exchange, grants capacity building opportunities and scale efforts.
- (iii) **Have Standardized Monitoring & Maintenance Guidelines:** As coral reef restoration is relatively new, with some practitioners operating in silos,

³ NEPA, *Coral Reefs of Jamaica: An Evaluation of Ecosystem Health: 2013* (2014).

⁴ NEPA, *Coral Reef Health Status Report for Jamaica: 2020*.

how restoration efforts are assessed varies vastly. It is important to have a standardized monitoring protocol to compare projects across sites and time, thus informing future efforts. As a standard operating practice, nurseries and sites should be visited as frequently as possible to control predators, reduce fouling and other potential negative impacts.

7. CONCLUSIONS

- (i) **Integrate Conservation/Tourism Policy Frameworks:** While there is no policy that directly speaks to (i) coral reef restoration and (ii) coral reef restoration and tourism, the existing policy and legislative frameworks provide the foundational scope for the tourism industry to be involved in coral reef restoration. These frameworks can be further audited to facilitate the tourism industry's incorporation into restoration actions and thus better allow for cross-sectoral integrated management between NEPA and the Ministry of Tourism.
- (ii) **Opportune time to expand Tourism Industry Involvement:** Coral reef restoration has been ongoing for decades in Jamaica with commendable progress in the restoration of coral reefs made with some input from the tourism industry. As is, however, the weight is being carried by local NGOs and research institutions and they cannot keep pace with the scale needed to rehabilitate coral reef systems on their own. Expansion of the participation of the tourism industry in Jamaica can be an effective approach to help scale up coral reef restoration.
- (iii) **Utilise Existing Policies and Legislation:** Jamaica is not short of environmental policies and legislation. Coral reef restoration activities are overseen by the lead environmental government agency, NEPA. The tourism industry is not excluded from restoration activities once submitted applications can demonstrate clear goals for natural resource conservation with no adverse significant impacts.
- (iv) **Streamlined Permitting System:** Permits for coral reef restoration are streamlined so that few permits are required and all administered by a single agency, i.e. NEPA. This has reduced bottlenecks and deterrents to applicants.
- (v) **Collaboration – Important Approach:** Jamaica's tourism industry does not have to wait on any changes in the existing policy and legislative framework, i.e. tourism and marine conservation, to engage in coral reef restoration. While training staff or hiring staff that already have experience in or can be trained to lead restoration efforts are also options,

a most important approach is collaboration with existing NGO, entities and academic institutions that are already involved in coral reef restoration activities in Jamaica and with the existing expertise in place.

- (vi) **Tourism Buy-In:** Greater awareness and buy-in from tourism stakeholders in both the public and private sectors are needed.

- (vii) **Restoration VS Tourism Activity- Communication Approach:** While the tourism industry may see coral reef restoration as a good blend of a tourism attraction with protection and sustainability inbuilt, some marine conservationists in Jamaica see it more as a restoration activity guided by scientific knowledge and not as "another tourist activity".

Both parties' views are valid but both groups must come to a common consensus and recognise that coral reef restoration can serve their respective purposes once executed properly. The language or packaging of coral reef restoration for buy-in, must cater to the view of each.

8. RECOMMENDATIONS

- (i) **Restoration Efforts Embedded in Science:** Restoration activities should be guided by scientific knowledge with an overall goal of rehabilitating the marine environment.
- (ii) **Build Knowledge/Consult Experts:** Tourism operators should consult environmental NGOs, academia, and literature prior to engaging in any restoration efforts. This should include where to rehabilitate, rehabilitation options to employ and activity complexity.
- (iii) **Ensure Sustainable Practices:** The diversification of the blue economy to include tourists engaged in coral reef restoration will have to ensure that there are no adverse significant impacts. Carrying capacity studies along with the development of standard operating procedures and communication points (buoyancy control, non-invasive activities) to tourists engaged, should be developed.
- (iv) **Capacity Development/Training:** The inclusion of coral reef restoration as a tourism product should not come at the expense of the very habitat practitioners are hoping to conserve. The goal of coral reef restoration and restoration options should, therefore, be understood before activities commence. Equipment and infrastructure will need to be procured and maintained. Operators will need to facilitate training opportunities on reef monitoring, maintenance of nursery structures and

out-planting. Science communication and visitor interaction should also be considered to enhance visitor experience and understanding of the activity.

- (v) **Funding Sustainability:** Funding for coral reef restoration projects and for the engagement of the tourism industry must be secured. Funding sources must include public-private partnerships, and international funding.

It is necessary to remember that coral reef restoration does not happen in a vacuum and funding needs to also go towards the creation of the enabling environment for corals to thrive at coral reef restoration sites – effective management reduction of threats e.g., pollution. A ridge to reef approach should, therefore, also be looked at for funding support whether through external sources and or by tourism industry funding participation.

- (vi) **Regional Policy Dialogue:** A Regional Policy Dialogue on Coral Reef Restoration in which public agencies in both tourism and environmental management in Jamaica are invited to participate. This dialogue must also have the involvement of tourism industry stakeholders. This Dialogue would help to discuss regulatory frameworks, best practices, institutional capacity, governance, and innovative funding mechanisms for coral reef restoration. It should aim to exchange knowledge, attract donors, and foster cooperation and collaboration.

Most importantly, it will encourage public, private and other stakeholders in Jamaica to better recognize the need for a strengthened national policy framework that specifically facilitates coral reef restoration with the participation of the tourism industry.

- (vii) **Regional Coordination & Collaboration:** A key factor in the regional dialogue and in moving ahead is the coordination and support that is needed at the regional level. TNC, CHTA and CAST are positioned in Jamaica (and regionally) to encourage buy-in from their respective partners and to exemplify

what is needed at the national level, regionally. Regional leadership and coordination will greatly advance the role that the tourism industry can play in coral reef restoration in Jamaica (and likely in each associated destination across the region).

9. REPORT OUTLINE

The full report is presented under the following sections:

1. INTRODUCTION & CONTEXT
2. METHODOLOGY
3. POLICY FRAMEWORK FOR CORAL REEF RESTORATION
4. REGULATIONS & OPERATIONAL REQUIREMENTS
5. ASSESSMENT AND GAP ANALYSIS
6. CONCLUSIONS AND RECOMMENDATIONS

10. ACKNOWLEDGEMENT

The work in Jamaica was facilitated based on the input of several key stakeholders. These stakeholders are acknowledged accordingly in the “Acknowledgement Section” of this report and include the project committee led by Dr Elizabeth Shaver with team members, Frank Comito and Kyle Mais along with the range of public, private and NGO agencies in Jamaica that participated by interview and those that completed the online survey.

11. SUMMARY TABLE

A summary table of the framework indicators and findings follow.

#	Indicators	Summary Finding	#	Indicators	Summary Finding
1	Key Public Sector Regulatory/Governing Bodies Impacting Coastal and Marine Conservation and Coral Reef Restoration	(i) National Environment and Planning Agency (ii) National Fisheries Authority (iii) Ministry of Economic Growth and Job Creation (This Ministry also has under its portfolio Water, Land, Environment and Climate Change)	7	Tourism Policy	(i) Established Legislation/Policy for: - tourism promotion - accommodation standards/licensing (ii) Accommodation sector has more tourism legislation than other sub-sectors (Hotel Incentives Act; Resort Cottages (Incentives) Act; Hotel Keeper's Liability Act)
2	Key Public Sector Regulatory/ Governing Agencies for Tourism	(i) Ministry of Tourism	8	NGO/Public/Private Partnerships for Coral Reef Restoration	(i) Existing Private/NGO Partnerships (ii) Opportunities to build on and expand partnerships
3	Agencies most involved in /opportune for Coral Reef Restoration Regulation	(i) National Environment and Planning Authority (NEPA)	9	Tourism Operator/ Private Sector Support for Coral Reef Restoration	(i) In place (ii) Best Practice Noted (iii) Still to be effectively developed
4	Key NGOs & Private Sector leading in Coral Reef Restoration Activities & Sensitization (See Annex 1 for details)	(i) Alligator Head Foundation (ii) The Nature Conservancy (iii) Oracabessa Marine Trust (iv) Seascope Caribbean (v) UWI (vi) White River Fish Sanctuary (vii) Sandals Foundation (viii) Iberostar Hotel	10	Existing Frameworks for Blue Economy Tourism Operations	(i) No Explicit Policy/Legislation for Blue Economy Tourism operations (ii) In 2023 World Bank (WB) published recommendations for a blue economy roadmap for Jamaica (iii) In February 2024 CAPRI published a study on the development of Jamaica's Blue Economy with focus on artisanal fishers, sustainable fisheries, eco-tourism & blue financing.
5	Government Coordination and Procedures	(i) Tourism product development licensing does not directly incorporate coral reef restoration activities. (ii) Operationalisation of connection/linkages between Tourism and Coastal and Marine Conservation and/or Coral Reef Restoration needed	11	Coral Reef Restoration	(i) Existing Framework in place
6	Permit/Licensing Procedures	(i) Up to 3 main coral reef restoration permits required (ii) Permitting Time/Cost/ Procedures for coral reef restoration permits are not overly bureaucratic (iii) Tourism Operators must first have tourism operator's license. High level of documentation, associated business/tourism licenses and good standing clearances required	12	Existing Frameworks for Coral Reef Management, Conservation, and/or Restoration Implementation in Tourism Sector	(i) Existing framework under conservation management (ii) Tourism encourages management & use of natural resources (iii) No specific tourism policy for coral reef restoration
10	Tourism/Sustainable Tourism	(ii) Significant established Legislation/Policy for Tourism/Sustainable Tourism			

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Caribbean Coral Reef Restoration & Tourism Policy Analysis



ACKNOWLEDGEMENT

The work in Jamaica and the resulting policy analysis report was facilitated based on the contribution and input of a range of stakeholders. Acknowledgement is given to the agencies and businesses that took the time to discuss the issues related to the policy framework for coral reef restoration Jamaica, to complete the surveys and to provide guidance and additional insights that helped to develop and enhance the report and its analysis.

Recognition, in this regard, goes to:

The Jamaica National Environment and Planning Agency (NEPA); Ministry of Agriculture and Fisheries, the National Fisheries Authority (NFA); Seascope Caribbean; Yardie Environmental Conservationists Ltd/Yardie Divers; Lady G'Diver: White River Fish Sanctuary; The Nature Conservancy; Sandals Foundation; Oracabessa Marine Trust, and Caribbean Coastal Area Management.

Also recognised is the input from the Ministry of Tourism, Policy Formulation and Technical Coordination Division led by Mr. Osbourne Chin, Senior Director, Tourism Policy & Monitoring and Mrs. Ranya Reid-Edwards, Tourism Resilience and Sustainability Specialist.

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Mention is also made of the Project Steering Committee led by Dr Elizabeth Shaver, TNC in collaboration with Frank Comito, CHTA and Kyle Mais, CAST (Jamaica Inn) that were responsible for facilitating this Caribbean Policy Analysis project and the supporting editors that also provided review and insights, i.e., Loureene Jones, Marine Ecologist & Environment Officer, NEPA/Climate Change Manager, TNC; and Anna Cherice Ebanks-Chin, Marine Conservation Programme Manager, TNC

The work of the project's Consultant on the ground in Jamaica, Ms. Chauntelle Green, Scientific Officer, UWI Port Royal Marine Laboratory and Biodiversity Centre, in drafting the Jamaica Policy report and the supporting Consultant and Research Analyst, Petra Lezama, are also acknowledged.



JAMAICA POLICY ANALYSIS REPORT

Caribbean Coral Reef Restoration & Tourism Policy Analysis



1. INTRODUCTION AND CONTEXT

1.1 REPORT OBJECTIVES

Under the overall project “to identify and understand regulatory obstacles and enabling conditions for coral reef restoration implementation with tourism sector participation to support future policy changes to increase coral reef restoration in the Caribbean”, this report looks specifically at the situation in Jamaica.



This report, therefore:

- (i) identifies the national policy, regulatory and operational framework (policy framework) in Jamaica that guides and influences the implementation of coral reef restoration by the tourism industry; and
- (ii) identifies obstacles, gaps, opportunities, best practices and lessons learnt for the involvement of Jamaica tourism industry in coral reef restoration.



1.2 JAMAICA IN CONTEXT

Jamaica is an archipelagic state in the Greater Antilles of the Caribbean (**Figure 1**). Jamaica consists of the mainland and a number of smaller cays.

Figure 1: Location of Jamaica



The mainland has a land mass of approximately 10,992 km² (4,244 sq. mi), making it the third largest island in the Caribbean.

Jamaica is rich in coastal and marine habitats, including mangroves, coral reefs, seagrass beds, and morasses, sandy, and rocky shores.

As its territorial baseline begins at the various offshore cays, Jamaica has a maritime area of approximately 242,240 km² (93,529 sq. mi) (**Figure 2**), twenty-two (22) times that of its land area.⁵

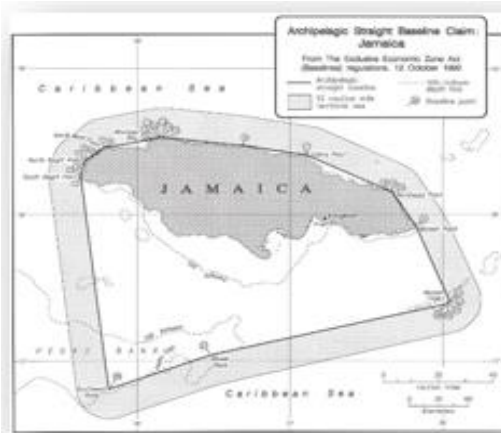
Coral reefs occupy an estimated 1,240 km² within the EEZ⁶. Various types of reefs can be found around mainland Jamaica, along with

⁵ US Department of State Office of Ocean Affairs, *Jamaica's Maritime Claims and Boundaries* (2004)

⁶ NEPA, *Action Plan for Corals and Reefs in Jamaica, Ecosystems Management Branch* (2018).

the neighbouring offshore banks of Pedro Cays, Morant Cays and Formigas Banks.

Figure 2: Jamaica's Maritime Boundaries



1.3 IMPORTANCE & STATUS OF JAMAICA'S CORAL REEFS

Like many countries, Jamaica's coral reefs are critically important for several reasons and provide a plethora of goods and services. Jamaica reefs provide a habitat for many organisms, with more three-dimensional reefs offering more spaces for occupation.

Jamaica's healthy, dimensional reefs also assist in coastline protection, buffering wave energy by as much as or over 86% and, therefore, are important in reducing the impact of natural disasters. This service provided by reefs, is critical in Jamaica where many of the major towns and cities are situated within close proximity to the coastline (Figure 3).

Figure 3: Major Towns & Cities in Proximity to the Coast, Jamaica



Reefs also contribute to the nation's economy, with benefits seen in industries such as fishing and tourism. The Jamaica National Fisheries Authority reported that between 2017 and 2022, a total of 23,300 fishing licences were issued, with many being artisanal fishers focused on reefs, offshore cays, and adjacent areas.

Tourism is a major earner of foreign exchange and a contributor to the local economy. In 2023, the country recorded 4.1 million visitors and foreign exchange earnings of US\$4.1 billion. There continues to be a robust growth trajectory for tourism in Jamaica with tourism earnings for the 2023/2024 period anticipated to reach over US \$4,265 billion.

Visitors engage in activities directly and indirectly linked to the coastal zone and marine environment, including sunbathing, boat tours, water sports, snorkelling and Scuba diving.

In the popular tourist city of Montego Bay in northwest Jamaica, reefs had a net present value (NPV) of USD400 million in 1999 (report by Ruitenbeek et al).

Currently, the average coral cover on Jamaica's reefs is 13%, as highlighted by The National Environment and Planning Agency (NEPA), the government agency mandated with environmental protection and natural resource management.

In the last assessment conducted by NEPA in 2020, higher ranked sites included Sandals Boscobel Special Fishery Conservation Area and

Ocho Rios Marine Park Protected Area. These

areas are associated with active restoration initiatives such as coral out-planting and no-take zones thus reducing fishing pressure. In assigning a ranking, 77% of the sites were ranked as either critical or poor, the two lowest ranks of four categories⁷.

1.4 THREAT TO CORAL REEFS IN JAMAICA

Though coral reef systems continue to provide ecological goods and services, some patterns of change have been observed, resulting in the current less-than-ideal status of reefs in the country. These changes have been due to several threats that act as stressors on the physical reef and reef-dwelling organisms. These drivers of change include:

- climate change;
- coastal development;
- pollution;
- improper fishing techniques (overfishing, removal of juveniles, use of destructive gear and/or removal of key species); and
- invasive alien species.

The drivers, whether individually or collectively, have resulted in:

- Increase in Macroalgae – as populations of key herbivorous species decline and nutrient enrichment from coastal activities increase.
- Diseases – most notably Stony Coral Tissue Loss Disease (SCTLD) and the 2022 die-off of the key herbivores, long spined black urchin or *Diadema antillarum*.

Coral Bleaching– due to stressors, corals lose their main food source as algae living

inside them are expelled, causing the coral to become white (example in **Figure 4**).

Figure 4: Coral Bleaching Example



During bleaching, corals are more susceptible to mortality. Recently, it was announced that the reefs are currently experiencing the 4th Global Mass Bleaching Event.

1.5 ADDRESSING THREATS

Coral reef restoration has been identified as a solution to mitigate threats to coral reefs. While options may differ, activities seek to improve the habitat quality of reefs, reduce and/or eliminate impacts and increase resilience and diversity of organisms.

In the early days of restoration activities in Jamaica, restoration occurred because of disturbances such as ship groundings and hurricanes. In more recent times, restoration has also been used to mitigate the impact of climate change, enhance a tourist product, both offering opportunities for research.

In Jamaica, coral reef restoration activities are mostly carried out by private organizations, environmental NGOs including marine parks, marine laboratories, hotels, and academic institutions. Many of these activities require grants, with external funding coming from local corporate organizations such as the Kingston Freeport Terminal Limited (KFTL), the Sandals Foundation or from external organizations such as The Nature Conservancy

⁷ NEPA, *Coral Reef Health Status Report for Jamaica: 2020 (2021)*.

(TNC), International Climate Initiative (IKI) and the Caribbean Biodiversity Fund (CBF).

Coral reef restoration actions in Jamaica are diverse and include removal of macroalgae to increase space for corals to settle, and declaration of special fisheries conservation areas (SFCA), which are no-take areas and limit activities in marine spaces thus preserving habitat and organisms, or control of coral predators.

By far the most popular method of coral reef restoration in Jamaica and undoubtedly synonymous to the activity, is coral gardening and out-planting. This involves harvesting coral fragments from the wild, rearing in an intermediate phase or nursery, and then out-planting in degraded reef areas. In many instances, this is done to immediately increase live coral cover and/or to assist species that may be endangered and low in abundance.

Tied to this, many practitioners focus on *Acroporid* corals as they once dominated Caribbean reefs, have seen a massive decline, and are currently listed as Critically Endangered by the International Union for Conservation of Nature (IUCN). Their ease of fragmentation and fast growth rates provide practitioners and funding agencies the opportunity to see results within the time frame of projects, which are often short-term funded projects.

1.6 TOURISM AS AN OPPORTUNITY FOR REEF RESTORATION

The tourism industry of Jamaica is characterized by large, international hotel chains situated along the coastline with beaches and nearby reefs. Most of these

hotels are concentrated within the tourist hotspots of Negril to the west and Ocho Rios and Montego Bay to the north. A smaller hotspot in Portland is situated to the east and characterized by smaller, boutique hotels, offering a more environmentally lush setting.

The tourism product (Figure 5) in Jamaica attracts visitors from North America and Europe, with almost half of the nation's visitors in 2023 being repeat visitors to the country.

Figure 5: Sketch Map of Tourism in Jamaica



According to Statista, the average number of nights spent by international tourists in Jamaica in 2021 was 9.1.

Like many other countries, coral reef restoration activities in Jamaica face challenges with regards to scalability, long-term maintenance and sustainability of restoration sites and logistics coordination (vessels, divers, funding). The tourism industry of Jamaica is strategically poised in many ways to assist in coral reef restoration efforts. These include:

- **Tourist Sensitization and Education:** Travel agencies, the Ministry of Tourism and hoteliers can engage visitors through awareness campaigns on the importance of reefs, current restoration actions and best practices while on vacation.

- **Funding Coral Reef Restoration Activities:** Hotels can contribute resources such as funds, personnel, and vessels to projects. Such funding opportunities can extend the lifetime of projects that are oftentimes hampered by costs, which include permits, consumables, procurement of gear and equipment.
- **Citizen Science Programmes:** The two largest visitor markets to Jamaica - The United States of America and Europe - have approximately 2.5 million and 3.5 million active SCUBA divers (diving within the last 12 months) respectively.

Coupled with the aforementioned facts of visitors to the island, being repeat visitors and spending multiple nights per trip, can

engage in volunteer programmes or packaged tourist experiences at nearby restoration sites to assist with coral planting, nursery maintenance and tours to learn about restoration efforts. Visitors can also act as “eyes on the ground” reporting what they saw during dive and snorkel trips and potential areas that need to be investigated.

As the tourism product begins to see tourists becoming more environmentally conscious and wishing to engage in more local activities, it provides a perfect opportunity for the tourism industry to expand its tourism product experiences and for reef practitioners and researchers to collaborate on the preservation and rehabilitation of marine habitats.



2. METHODOLOGY

2.1 DEFINITIONS & CONCEPTS CLARIFICATION

(i) The Policy Framework

The “Policy Framework” is broadly defined as including National Policies, Legislation, Regulations, Operational Requirements and related documented Policy Statements of the Government of Jamaica that impact upon or guide coral reef restoration as well as guiding Conventions, Agreements and Protocols to which the country is a signatory. The “Policy Framework” also includes the entities and institutional

arrangements in place that administer and implement the policies.

(ii) Tourism Industry Participation

This is defined as the direct involvement of tourism businesses (i.e., enterprises that cater to international and domestic visitors) in coral reef restoration as an economic and/or philanthropic activity to increase the conservation and sustainability of the marine environment, the diversification and offer of tourism experiences, the benefits derived to communities, and the added value provided for visitors, employees and their tourism business.

2.2 DATA COLLECTION APPROACH

(i) Surveys & Structured Interviews:

In the implementation of the “Caribbean Coral Reef Restoration & Tourism Policy Analysis Project”, two data collection survey instruments were developed:



- one to gather data from private sector and NGO stakeholders, and
- the other to gather data from public sector stakeholders.

Guidelines for structured interviews with the various stakeholders were also established for utilization accordingly.



These instruments were followed and/or adapted as necessary for the situation faced in Jamaica.

(ii) The Approach in Jamaica

In Jamaica, data was collected from stakeholders representing:

- the private sector;
- NGOs; and
- the public sector, comprising government agencies with a mandated responsibility for various environmental and marine sectors and for tourism development.

INTERVIEWS

Adapted from the project’s survey instruments and interview guidelines, structured **one-on-one discussions or interviews** were coordinated, scheduled

and conducted to gather insights on various areas related to tourism, coral reef restoration, and marine space management.

Public sector agencies were limited to those directed involved in regulating coral restoration activities on one hand and responsible for tourism development on the other- a total of three (3) government entities.

NGOs/academia also involved in marine conservation and coral restoration as well as private sector business also engaged in coral restoration were part of the stakeholder base interviewed.

Tourism industry businesses were selected based on their involvement with CHTA and or TNC and their familiarity with the regulatory processes involved in coral restoration activities given their existing involvement in coral reef restoration efforts

SURVEY

To supplement the interviews, surveys were sent to selected representatives from organizations engaged in tourism and marine-based excursions, coral reef research and coral reef restoration. Thirteen (13) representatives from Jamaica participated in the online survey.

Private Sector Approach

For the private sector, the approach focused on gathering information on general business operations, best practices, legal requirements, and identifying opportunities.

Public Sector/NGO Approach

Similarly, for public sector agencies and NGOs, the discussions and surveys covered general agency information, impact on tourism and coral reef restoration, permitting and licensing procedures, as well as identifying gaps,

opportunities, and next steps in coral reef restoration spaces in Jamaica.

The approach emphasized structured discussion guidelines, must-ask questions, and the importance of providing participants with information on the purpose of the analysis.

(iii) Desk Research

Desk research was a key factor in the analysis. It supplemented the primary research collected from interviews and discussions.

Several documents were pertinent to informing and guiding the knowledge base for analysis including international agreements which Jamaica has become/intends to be a signatory to, local pieces of legislation, reports, and action plans such as the Action Plan for Corals and Reefs in Jamaica 2018-2023 (APCAR) by NEPA, and information published by regulatory agencies and stakeholders by way of website, organization records, and media.

2.3 ANALYSIS & ASSESSMENT FRAMEWORK

(i) National and Public Sector Context

This area of analysis focuses on understanding the broader national and public sector context in which coral reef restoration and tourism initiatives are implemented. In so doing, the analysis considers the mandates, roles, and priorities of key public agencies involved in marine resource management.

Understanding the national and public sector context provides a foundation for assessing the effectiveness of existing

policies and identifying areas for improvement.

(ii) Policy and Regulatory Framework

This aspect of the analysis involved mapping and evaluating the critical existing policies, plans, and regulations related to coral reefs, and tourism, which impact coral reef restoration and the involvement of the tourism industry in Jamaica. It aims to identify the strengths, weaknesses, and gaps in the policy framework.

By analyzing the governance structure and responsibilities across agencies, this assessment determined the effectiveness of coordination and collaboration among different stakeholders.

Overall, this analysis provides insights into the regulatory environment and helps identify opportunities for policy integration and coherence related to the involvement of the tourism industry in coral reef restoration in Jamaica.

(iii) Permitting and Operational Requirements

This area focuses on evaluating the permitting processes and operational requirements for coral reef restoration and tourism activities. It involves assessing the complexity, efficiency, and transparency of the permitting procedures.

By understanding the application requirements and associated timelines and costs, the analysis can identify potential barriers or bottlenecks in the process.

The assessment aims to provide recommendations for streamlining and improving the permitting system if necessary, ensuring that it supports sustainable coral reef restoration and tourism practices.

(iv) **Private Sector Engagement and Best Practices**

This aspect of the analysis examines the role and initiatives of the private sector stakeholders in the tourism and coral reef restoration sectors.

It involves identifying best practices and a successful model of private sector engagement in coral reef restoration and sustainable tourism. By understanding the private sector's involvement and contributions, the analysis highlights opportunities for increased collaboration and partnership between the public, private, NGO sectors with community involvement.

This can lead to the development of policies and strategies that leverage the resources, expertise, and innovation of the private sector for the benefit of coral reef restoration and sustainable tourism in Jamaica.

2.4 CONTRIBUTING STAKEHOLDERS

This analysis report received the input of the following critical stakeholders in Jamaica:

(i) **The Nature Conservancy**

TNC has been actively involved in coral reef



restoration efforts in collaboration with local NGOs and stakeholders. They have been instrumental in promoting sustainable fishing practices, establishing protected marine areas, and preserving coral reefs and mangroves in Jamaica. TNC's work has also focused on promoting sustainable

marine resource usage and conservation practices.

Currently, TNC has a regional project, CoralCarib, which seeks to restore key coral reef areas in Jamaica, Haiti, The Dominican Republic and Cuba. The programme is implemented locally in Jamaica by NGO Alligator Head Foundation.

(ii) **Caribbean Coastal Area Management (CCAM)**

The Caribbean Coastal Area

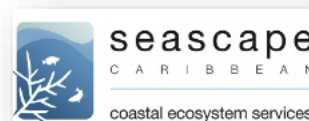


Management (CCAM) is an environmental NGO established in 1997. Based on the south-coast of Jamaica, CCAM operates within the Portland Bight Protected Area (PBPA), the country's largest protected area, encompassing both marine and terrestrial areas across two parishes.

Activities include management of three (3) SFCAs within the PBPA, environmental education, with an interpretive centre and hosting of visitors for outreach activities, maintenance of a coral nursery and associated out-planting activities, habitat assessment and monitoring. CCAM has also facilitated the establishment of several community-based organizations to assist in the co-management of the area's natural resources. Such examples include the Portland Bight Fisheries Management Council (PBFMC), and the Portland Bight Tourism Council (PBTC).

(iii) **Seascope Caribbean**

Seascope Caribbean is a



local organization specializing in rehabilitating

marine landscapes through restoration projects such as coral propagation and out-planting, and installation of artificial reefs.

The company also works with hoteliers to develop aesthetically pleasing marine landscapes for visitors to enhance the tourist product. Seascope Caribbean works in MPAs and fishing communities, facilitating exchange for fisher/stakeholder relations and best practices.

(iv) **National Environment and Planning Agency (NEPA)**

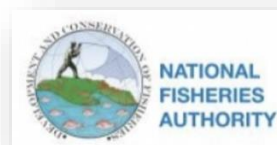


NEPA is an Executive Agency within the Ministry of Economic Growth and Job Creation.

NEPA was formed as a merger between three statutory bodies: (i) the Natural Resources Conservation Authority (NRCA), (iii) the Town and Country Planning Authority (TCPA) and (iii) the Land Development and Utilisation Commission (LDUC). With this merger to increase efficiencies, NEPA is Jamaica's lead environmental government agency with responsibility for natural resource management, protection, and land use.

The NRCA, under the NRCA Act, is the Authority that has oversight on the management of the natural environment and thus influences the landscape of coral reef restoration policy and efforts.

(v) **National Fisheries Authority (NFA)**



The National Fisheries Authority (NFA) is an Executive Agency within the Ministry of Agriculture, Fisheries and Mining. NFA is mandated to ensure the conservation and sustainable use of the nation's marine fishable resources through resource management, research and monitoring, education, licensing, and enforcement of regulations related to the sector.

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3. POLICY FRAMEWORK FOR CORA REEF RESTORATION

3.1 NATIONAL & PUBLIC SECTOR CONTEXT CORAL REEF RESTORATION

As it relates to coral reef restoration, Jamaica has made advances in formalizing coral reef conservation and restoration efforts through the structuring of their policy framework and guidelines. This framework is guided by targets set at both the international and national level, through conventions, multilateral environmental agreements (MEAs) and actioned through national legislation, action plans and technical guidelines.

Most restoration works are grounded in science and streamlined through a limited number of agencies to ensure efficiency in project rollout.

Coral Reef Restoration Policy Framework

The policy framework for coral reef restoration in Jamaica is guided by:

- (i) International conventions to which the country has become a signatory;
- (ii) National legislation; and
- (iii) Guiding documents such as action plans and technical guidelines.

International Agreements

At the international level, Jamaica has identified the following conventions and protocols as key to coral reef conservation and restoration efforts:

- (i) **Convention on Biological Diversity (CBD).** Opened for signature in 1992, the CBD speaks to the conservation of biological diversity and the



sustainable use of flora, fauna, and various resources. Recent national action plans in Jamaica, address the goal of achieving Article 6 of this Convention, which speaks to developing national strategies and programmes for the conservation and sustainable use of resources and incorporation of such activities across sectors.

- (ii) **Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (WCR)** also known as the **Cartagena Convention** is a regional legal agreement for the protection of resources in the Caribbean Sea (**Figure 6**). The Convention is aided by three Protocols:

Figure 6: Graphical Outline of the Cartagena Convention



- **Protocol concerning Specially Protected Areas and Wildlife (SPAW Protocol)** which speaks to the protection and sustainable use of coastal and marine biodiversity in the WCR. SPAW houses the Caribbean node of the Global Coral Reef Monitoring Network (GCRMN) and ensures a standardization of data collection on the reefs, access to information and reporting on the status of the region's reefs.

While Jamaica is a signatory to the Cartagena Convention, it is not a signatory to SPAW. It should, however, be noted that Jamaica has two representatives on the GCRMN-Caribbean Steering Committee, offering technical,

scientific and policy expertise and provides representation for Jamaica's coral reefs, researchers, and restoration practitioners.

- **Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol)**

highlights the obligation of Jamaica as a signatory, to institute measures that will reduce and prevent land-based point and non-point sources of pollution such as domestic sewage and agricultural run-off which can have adverse, significant impacts on coastal and marine habitats such as coral reefs.

- **Protocol Concerning Co-operation in Combating Oil Spills in the WCR** lists

objectives of ensuring national and regional preparedness and response capacity to major spill events and to facilitate regional co-operation and assistance in such an event. This is key in preserving national assets, as many of Jamaica's reefs are in proximity to trans-shipment lanes, refineries and ports, which have the possibility to have oil spills with adverse impacts to be felt.

(iii) **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**

seeks to regulate the international trade of endangered plants and



animals. This is actioned through a list of species protected under CITES, certificates, permits, and quotas.

To fulfil Jamaica's obligations as a Party to CITES, the local legislation is the Endangered Species (Protection,

Conservation and Regulation of Trade) Act, 2000. Examples of common coral reef restoration organisms listed under CITES include all story corals, black corals, sea cucumbers, and queen conch.

(iv) **Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat** has

coral reefs listed as a type of wetland. The convention has identified wetlands as key to the sustenance of mankind and promotes the sustainable use of its resources.



Jamaica became a signatory in 1997 and to date, Jamaica has four (4) Ramsar Sites designated under the convention: (i) Black River Lower Morass; (ii) Portland Bight; (iii) The Palisadoes-Port Royal Protected Area; and (iv) Mason River.

A **National Ramsar Committee** comprising members across government agencies, academic institutions and non-governmental organizations ensures scientific and technical oversight and promotes sustainable use across a general platform through outreach and science communication activities.

National Legislation

At the national level, the following acts and regulations are key to Jamaica's coral reef conservation and restoration efforts:

(i) **The Natural Resources Conservation Authority (NRCA) Act** allows for the management and protection of Jamaica's natural resources. The NRCA Act establishes the NRCA Authority and oversees the evaluation, authorization, and technical support for coral reef restoration

projects, ensuring compliance with environmental regulations and sustainable practices.

Through the Act, as a step to ensure efficient resource management, a body of persons is appointed by the Government of Jamaica (GoJ) to review activities, developments that can have a potential impact on the environment, recommend protected areas, and review permits and applications.

- (ii) **Endangered Species (Protection, Conservation and Regulation of Trade) Act, 2000.** This was enacted to meet obligations under CITES, therefore regulating the trade of endangered species internationally and domestically. The Natural Resources Conservation Authority, empowered by the NRCA Act, reviews permits and activities involving such species.

While Jamaica does not currently engage in the trade of hard corals, local activities involving the harvesting, relocation or impact of these organisms are covered under this Act.

- (iii) **Wild Life Protection Act, 1945 NRCA** protects various species of plants and animals that collectively allow the island to be rich in biodiversity. The Act lists hard corals as species protected in Jamaica, of which most restoration activities include, as protected under Section 2.

- (iv) **The Beach Control Act** legislation was originally passed in 1956 with various amendments

ADDRESS:			
 			
BEACH CONTROL ACT BEACH LICENCE			
10 & 11 Catherine Ave, Kingston 5, Jamaica W.I. Tel: (876) 754-7540/3, Fax: (876) 754-7195/4, Toll Free: 1-800-897-1005, Email: com@nepa.gov.jm , Website: http://www.nepa.gov.jm			
Volume:	Folio No.	Licence no(s).	Date Issued:
Issued To:			
For inspection please call: (876) 754-7540, Email: Enforcementmanager@nepa.gov.jm The permit/licence may be viewed at http://www.beachcontrol.nepa.gov.jm or http://www.beachcontrol.nepa.gov.jm			

to date. The Act speaks to activities within the foreshore and on the floor of the sea, along with the ability to establish protected areas.

The Act also outlines a licensing system and applicable fees for encroachments within the area, such as the construction of docks, piers and also structures such as moorings, coral nurseries, and artificial reef structures.

- (v) **The Fisheries Act 2018** was passed to repeal the previous Fishing Industry Act. The new Act outlines the governance structure of the National Fisheries Authority as mentioned prior. The Act also highlights provisions for the declaration of SFCAs, management plans for the sustainability of the industry, principles for the licensing of fishers and registration of vessels.

Strategic Plans and Other Documents

Other documents such as action plans and technical guidelines, which speak to natural resource management and elements of reefs and coral reef restoration include:

- (i) **The National Strategy and Action Plan on Biological Diversity in Jamaica 2016-2021.** This was developed with the incorporation of the CBD, its strategic goals and Aichi targets. Key strategies in this Action Plan include cross-sectoral targets for fisheries, tourism, and threats to biodiversity.
- (vi) **Action Plan for Corals and Reefs in Jamaica 2018-2023** developed by NEPA, outlines actions which aim to understand the current status of reefs in Jamaica, threats to the system and strategies to build resilience and promote recovery. The document also highlights the need for citizens and the general public to actively participate in the care of the nation's reefs.

(vii) **Vision 2030** is the National Development Plan of Jamaica, developed by the GoJ's Planning Institute of Jamaica (PIOJ). To achieve a sustainable economy, society, and environment, the GoJ has highlighted national goals and related outcomes. Goal 4 outlines the vision for a healthy, natural environment with national strategies including the integration of environmental issues in economic and social decision-making, implementation of mechanisms for biodiversity conservation and ecosystems management and the development of efficient and effective governance structures for management.

These policies establish the legal basis for environmental protection and the sustainable use of natural resources, including coral reefs, which are critical to the country's biodiversity and tourism industry.

TOURISM

Given the aim to involve the participation of the tourism industry, understanding the context specific to tourism policy is also necessary.

Tourism Policy Framework

Tourism is guided by a policy framework that addresses its development, standards, operation, promotion and investment incentives. Currently, tourism is conceptually guided by the provisions of **Vision 2030 Jamaica: National Development Plan**. Tourism policies and plans, therefore, include adoption and operationalisation of national goals.

Key tourism policies and legislation, however, revolve around:

- (i) **Jamaica Master Plan for Sustainable Tourism Development:** This looks at tourism strategies that include (i) Growth; (ii) Enhancing the Visitor Experience; (iii) Making Tourism More Inclusive; and (iv) Environmental Sustainability in which the tourism industry contributes to the preservation of the natural environment, and
- (ii) **Tourist Board Act:** This Act provides the statutory authority for the development and promotion of tourism. This Act allows the authority, inter alia, to (i) Develop all aspects of the tourist industry of Jamaica and to promote its efficiency; and (ii) Encourage the attainment and maintenance of integrity and the highest standards of service across the industry.

Environmental Policies & Tourism

In its development, the Ministry of Tourism has noted the intention for tourism development to incorporate and place emphasis on key outcome goals of the Jamaica Social Policy Evaluation (JASPEV):

- One of the goal centres on the Environment led by an Ocean and Coastal Zone Policy, which sets a policy for the sustainable use of coastal resources.
- Another goal focuses on Sustainable use of Biological Resources under the National Strategy and Action Plan for Biological Diversity in Jamaica.

No specific mention of coral reef restoration is identified within this tourism framework. However, as attention is paid to sustainable tourism development and resource use principles, there is scope for tourism to address coral reef restoration within its ambit.

3.2 REGULATORY AGENCIES

At the national level and public sector level, one agency stands out with regards to impacting coral reef and reef organisms, conservation and restoration policy, i.e.: National Environment and Planning Agency (NEPA).

NEPA, within the Ministry of Economic Growth and Job Creation, holds the **sole responsibility of oversight for coral reef restoration within the current legal framework**. NEPA is, therefore:

- The sole permitting and regulating agency for restoration efforts, and
- Provides rigorous technical oversight for the monitoring and assessment of these initiatives.

While NEPA is the lead regulatory agency in coral reef restoration activities, it receives support from:

- (i) **NFA:** This is the regulating agency for declaration of SFCAs, formerly fish sanctuaries, which are key in reducing fishing efforts, restoration of fisheries and, therefore, protection of key herbivorous species. Coral reef restoration efforts occurring in SFCAs would, therefore, incorporate regulations set by both NFA and NEPA.
- (ii) **Jamaica Defence Force - Coast Guard & Jamaica Constabulary Force - Marine Police:** though two different bodies, the Coast Guard and Marine Police provide various levels of enforcement of legislation within



the marine environment. Examples include breaches in fishing regulations such as fishing in SFCAs, and the removal of protected species. They can also provide logistical support in terms of surface support during in-water activities.

- (iii) **Game Wardens:** are appointed by the Governor General of Jamaica through NEPA, under the Wild Life Protection Act. Game Wardens are often selected from the general populace, being persons of upstanding character within their respective communities, and are empowered to carry out various provisions of The Act. Activities in alignment with or in contradiction to The Act are then reported to NEPA.

- (iv) **Fisheries Inspectors are also appointed by the Governor General but through NFA.** Many of the wardens in SFCAs are Fisheries Inspectors and have similar powers to Game Wardens. They carry out enforcement activities in the marine space including SFCAs where much of the coral reef restoration activities currently takes place.

Tourism Agencies

Administratively, the Jamaica Ministry of Tourism has primary responsibility for the tourism sector and the implementation of the country's tourism plans and policies. It undertakes its mandate together with appointed agencies for specific tourism sector functions. These agencies include:

- (i) The Tourism Product Development Company (TPDCo). TPDCo has the mandate to maintain, develop and enhance Jamaica's tourism product. This includes training courses and certification for tour guides, sensitization

workshops on visitor safety and experience, incident prevention and licensing.

- (ii) The Jamaica Tourist Board (JTB). JTB is the official agency responsible for destination marketing and currently promotes experiences in Jamaica under six categories:

1. Adventure
2. Health & Wellness
3. Cuisine
4. Culture & Heritage
5. Music
6. Romance

- (iii) Jamaica Vacations Ltd (JamVac). This agency works to increase tourist visits to Jamaica through airlift and cruise. It was established in 1978 with a mission to create conditions to increase the rate of visitor growth to Jamaican and to provide, protect, and increase airlift capacity on both schedule and charter routes.



- (iv) The Tourism Enhancement Fund (TEF). This is the lead mechanism for developing tourism linkages and innovation in Jamaica. TEF was established in 2005 to implement recommendations emanating from the Master Plan for Sustainable Tourism Development (2002). The Tourism Master Plan provides the framework in which TEF will fulfil its mandate of promoting growth and development in the tourism sector, encouraging better management of environmental resources in Jamaica,



enhancing the country's overall tourist experience, and providing for the sustainable development of the tourism sector⁸.

Tourism Product Governance

These agencies participate on inter-governmental committees and collaborate with the tourism industry and other stakeholders on matters that impact upon tourism.

While there are numerous committees in which tourism agencies are part, Jamaica has a system of **Destination Assurance Councils** (DAC) that covers the seven (7) tourism districts into which the country is divided, i.e.:

- (i) Negril (Westmoreland and Hannover);
- (ii) Montego Bay (St. James);
- (iii) Falmouth (Trelawny);
- (iv) Ocho Rios (St. Ann; St. Mary);
- (v) Portland (Portland, St. Thomas);
- (vi) Kingston (St. Andrew; St. Catherine; Kingston); and
- (vii) South Coast (St. Elizabeth; Clarendon; Manchester).

These councils have the responsibility to identify the needs of the tourism industry and monitor the progress of developmental efforts in resort areas in Jamaica.

The chairperson of each council provides governance and administration, as well as influence, motivate and enable partners to ensure that quality standards are met and maintained in the destination. The chairpersons are assisted by additional council members, namely appointees who provide input by way of their expertise.

⁸ <https://www.mot.gov.jm/agency/tourism-enhancement-fund>

The Councils receive administrative support from TPDCo through Destination Managers who are responsible for coordinating the work of governmental and non-

governmental agencies in resort areas. Tourism governance across the country, therefore has a multi stakeholder approach, which is seen as essential in its success.



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4. REGULATIONS & OPERATIONAL REQUIREMENTS

4.1 PERMITTING

To facilitate coral reef restoration efforts, operational requirements necessitate that individuals or organizations seeking to conduct research or restoration activities secure permits from NEPA.

The permitting process involves the submission of the relevant applications and fees, along with a comprehensive project proposal that details the project:

- goals;
- methods;
- expected results; and
- potential environmental impacts.

The proposal must align with sustainability and conservation principles, demonstrating a commitment to the preservation of marine ecosystems.

NEPA is responsible for evaluating the proposal that is submitted through a single online web portal. When evaluated, if the project is deemed to align with the country's environmental policies and conservation goals, the relevant permits are granted.

Permit Validity Time Frame: Depending on the nature of the work, permits can last up to five (5) years and include specific conditions to ensure minimal impact on the environment and adherence to best practices.

4.2 APPLICATION REQUIREMENTS

For works related to coral reef restoration, the applicant will need to satisfy the requirements for two (2) key permits:

- (i) **Beach Licence** under the Beach Control Act for use of the foreshore and floor of the sea. The application requires the applicant to identify activities associated with the restoration activity, for example, moorings and coral nursery structures.

Cost: The application fee is JM \$1,000 with each structure or unit attracting an additional fee. For example, if moorings are to be installed, 1-5 moorings attract a fee of JMD200, if 6-50 are to be installed, the fee is JMD1,000.

Validity Period: The beach licence is valid for a year, after which a renewal must be sought.

(ii) **Wild Life Protection Act Exemption.**

This allows the possession of the whole or any part of a protected animal, in most cases, corals for coral nurseries and/or out-planting activities.

Details Required: The application includes the species the practitioner wishes to be exempt, including information on the size, part (fragments/whole colonies), and original source location.

Cost: The application is submitted with an application fee of JMD24,000 and the completed application and NRCA recommendations are sent to the Minister responsible for the environment.

Period of Validity: If successful, exemptions are valid for five (5) years, with renewals submitted three (3) months prior to the expiry date.

Additional permits may be required, depending on the nature of the work. Such permits include:

(iii) **Wildlife Research Permit** where the applicant must clearly outline the research that will be undertaken, output and significance of the research.

Cost: Along with an application fee of JMD24,000, a letter of support from the institution(s) must be submitted with the application.

Summary of required permits and costs are in **Table 1.**

Table 1: Key Permits Required & Associated Fees: Coral Reef Restoration, Jamaica

REQUIREMENTS & FEES FOR CORAL REEF RESTORATION: JAMAICA			
#	TYPE	PERMIT FEES	ISSUING AGENCY
1	Beach Licence	JMD1000 + additional fees for each structure/unit (e.g. Moorings ⁹ , coral nurseries)	NEPA
2	Exemption Permit Under Wild Life Protection Act	JMD24000	NEPA
3	Research Permit (conditional)	JMD24000	NEPA

The timeline for obtaining permits can vary depending on the complexity of the project, scale, and the efficiency of the administrative processes within the Ministry.

Once a permit is granted, the organization is responsible for adhering to the conditions set forth by NEPA, which may include regular reporting and monitoring to assess the impact and success of the restoration efforts.

Monitoring and Reporting: Exemptions under the Wild Life Protection Act require the practitioner to notify NEPA fourteen (14) days prior to harvesting, field reports are also required and must be submitted at quarterly intervals for one (1) year and six (6) months thereafter.

It is, therefore, important for organizations to engage with NEPA early in the planning process to understand all the requirements and grant ample time for application consideration to ensure that their coral reef restoration activities are carried out legally and sustainably.

⁹ 1-4 moorings= \$200; 6-5 moorings= \$1,000.00; 51-100= \$5,000.00

4.3 OPERATIONAL REQUIREMENTS

To ensure safe and efficient efforts, the following requirements and certifications have also been identified as helpful to efforts:

- (i) **Vessel Registration, Safety Inspection and Coxswain Licence.** This licence is required under the laws of Jamaica and to operate vessels in the maritime space. Vessels are mainly registered through the Maritime Authority of Jamaica upon inspection of the vessels for fitness and the requisite safety equipment on board.

In some instances, canoes owned by fishermen may be contracted by practitioners and researchers, in which case, registration through the NFA is required.

Safety Inspections are conducted annually, while certificates of registry and coxswain licences are renewed every five (5) years.

- (ii) **Licencing of Tourism Entities** (individuals and businesses that cater or provide services directly to visitors) is a requirement under the Jamaica Tourist Board Act (1985). License categories, as outlined by TPDCo, currently provides for the following tourism facilities and services:

1. Hotels
2. Home Stay (Bed and Breakfast)
3. Resort Cottage which is broken down into (i) Apartment; (ii) Guest House; and (iii) Villa
4. Bike Rentals
5. Car Rentals
6. Contract Carriage Operators
7. Attractions
8. Place of Interest/Places of Worship

9. Craft Traders
10. Travel Halts
11. Water Sports Operator and Employee
12. Domestic Tour Operators

Therefore, in addition to obtaining permits to carry out coral reef restoration activities, tourism industry entities must, in the first instance, have a valid tourism operator's license from the TPDCo issued by the Tourist Board.

Tourism industry entities involved in coral reef restoration, may need to produce additional documentation and certifications such as lifeguard licence, first aid and CPR certificate etc. Once submitted, a Product Quality Assessment of the facility is conducted prior to approval/rejection.

Table 2 gives an indication of the documents required for apartments, guest houses and villas for licensing purposes to operate as a tourism

Example of TPDCo Requirements & Documents: Apartments, Guest Houses & Villas

1. Completed Application Form with required documentation submitted to Manager, License Processing Unit, TPDCo
2. Copy of Certificate of Incorporation
3. Copy of Registration of Business Name (where applicable i.e., if Business Name is different from the name of the Company)
4. Letter of Good Standing from the Companies Office of Jamaica (where applicable)
5. Copy of Tax Registration Number (TRN)
6. List of Directors
7. Copy of Title/Lease or Rental Agreement
8. Copy of Public Liability Insurance
9. Approval from Local Planning Authority (e.g., Kingston & St Andrews Municipal Corporation (KSAMC), St. James Municipal Corporation)
10. Copy of Public Health Certificate
11. Copy of valid Food Handler's Permit
12. Copy of Fire Certificate
13. Copy of Public Health Swimming Pool Permit (where applicable)
14. Proper Security Arrangements (e.g., Copy of Security Contract/Certified Personnel)
15. Copy of Private Security Regulation Authority (PSRA) Certification for Security Company/Personnel Contracted
16. Security Approval from Resort Area Division of the JCF
17. Copy of Beach License from the National Environment & Planning Agency (NEPA) (where applicable)
18. Copy of CPR, First Aid certificates and Lifeguard licenses for employees assigned as Lifeguards (where applicable)
19. Copy of Work Permit (s) (where applicable)
20. TPDCo Assessment Recommendation

- Additional Certificates may be required based on the activities being offered
- All Documents must have at least four (4) clear weeks before expiration at the time of application
- All Government statutory requirements must be met and adhered to.

entity; a list of 20, most of which are required from other government agencies.

Table 2: Document for a Tourism Operator License: Jamaica

Cost: Each category of tourism license has applicable annual fees with most being in the region of JMD10,000.

4.4 SUPPORTING INFRASTRUCTURE

The following have been identified as additional facilities, services, and systems that can assist coral reef restoration activities in Jamaica:

- (i) **Science** provides the foundation to inform the status and trends of reef systems, threats, and proposed methodologies and standards for restoration activities.

Locally, several institutions undertake research in the marine environment. The University of the West Indies (UWI) is the leading university in the Caribbean, with a campus in Jamaica. This campus, Mona, is at the forefront in marine research and policy information, operating two marine laboratories, engaging in the teaching of reef ecology, and conducting research on coral systems, status of coral populations and ocean acidification.

The UWI also houses the **Caribbean Coastal Data Centre of the Centre for Marine Sciences**, where data from regional and local monitoring programmes are archived and managed.



Other agencies engaged in coral research include environmental NGOs such as the White River Marine Association and the White Rive Fishermen Association that manage the White River SFCA, Caribbean Coastal Area Management, and the Alligator Head Foundation Marine Laboratory, all of which conduct research in their respective areas to inform management decisions.

- (ii) **Dive Operations & Safety** as coral reef restoration may include working with SCUBA, guests and practitioners should be certified and registered with an established dive organization such as The Professional Association of Diving Instructors (PADI), The National Association of Underwater Instructors (NAUI), or The British Sub-Aqua Club (BSAC). Such certifications demonstrate a level of competency in diver safety, practical knowledge, and skills. Most hotels and dive shops island-wide have the capacity to certify visitors prior to excursions, with PADI being the most popular certification body.



- (iii) **Audit:** An audit of diver safety infrastructure would also be vital in understanding what measures are in place prior to a rollout of the tourism industry into additional activities, which may call for greater fitness as it occasionally involves operating close to the seafloor with organisms that can sting and/or bite.
- (iv) **Diving Safety:** Diving safety covers the equipment (appropriate, functional, frequently serviced), environmental safety

(depth, temperature, ecology, currents) individual diver performance (human error, health), and mitigation/emergency plans. Certified divers will have a better understanding than general snorkelers of personal safety measures, with Rescue Divers, Dive Masters, and Dive Instructors being Emergency First Aid and CPR Instructors.

Due to local and international regulations, hotels are equipped with such instruments to manage large groups of people such as resort doctors, nurses, and AED machines. Additionally, the UWI houses and operates a hyperbaric facility at its Discovery Bay Marine Lab, which is the sole facility on the island and the only treatment plan for decompression illness.

Divers may possess Divers Alert Network (DAN) Insurance, which grants access to medical consultations, emergency

relocation of patients and subsidization of costs. Funding for operating the chamber is accessed through the UWI, and Tourism Enhancement Fund (TEF).

Between 2018 and 2023, the UWI's Discovery Bay Marine Laboratory, where the hyperbaric chamber is located, treated 68 patients of which 10% were tourists diving on the North Coast. Most of these cases were mild cases with treatment administered out of caution, and because patients typically had insurance coverage. Mild cases typically require one treatment, with each treatment attracting a cost of USD6,000.

The DBMI has been approached by various health authorities on the island, dive shops and hotels requesting additional information on the facility and procedure, however, more thorough sensitization campaigns have been suggested.



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5. ASSESSMENT: GAPS & OPPORTUNITIES

5.1 OVERALL ASSESSMENT

- (i) **The Tourism Product:** The existing policy directive and mechanism to maintain a quality tourism product, as mandated by TPDCo contain useful



elements should dive tourism and coral reef restoration activities expand. There remains, however, a gap in the country's tourism product licensing policies as they do not directly incorporate coral reef restoration activities for tourism purposes.

- (ii) **Coral Reef Restoration Landscape in Jamaica:** The collective of coral reef restoration operators in Jamaica is diverse and multi-layered. In this collective coral reef restoration efforts are:

- **Implemented** mostly by various environmental NGOs operating within their geographic footprint.
 - **Regulated** by the Ministry of Economic Growth and Job Creation, through NEPA, which governs this landscape by outlining regulations, reviewing applications, and providing technical oversight.
 - **Supported** by research institutions and academia, which supplement these efforts with data and scientific methodologies; and
 - **Further enabled** by international partnerships that expand the scope with additional technical expertise and support.
- (iii) **Coral and Fisheries Networks.** On-the-ground there exists a network of reef researchers, restoration practitioners, divers, fishermen and other relevant stakeholders that can provide a medium for knowledge exchange, training and capacity building, and resource assistance (grant sourcing, volunteer divers, equipment procurement/loan/rental) that can support expansion of the tourism industry's participation in coral reef restoration activities in Jamaica.

Locally, there have been several networks including the Jamaica Coral Reef Monitoring Network (though inactive, personnel are still involved in reef/diving activities), and Jamaica Fish Sanctuary Networks along with international networks such as Global Coral

Reef Monitoring Network (GCRMN), Atlantic and Gulf Rapid Reef Assessment (AGRRA), both of which have regional presence, are active in information sharing and database management

- (iv) **Tourism Enhancement Fund:** Under TEF, there is currently a call – The Tourism Incubator – for innovative ideas in the areas of tourism products. Successful pitches are granted access to training, mentoring and commercialization opportunities to be integrated into the tourism market. Coral reef restoration as a blue tourism activity in Jamaica would be novel, and ventures such as this can provide a platform to engage potential service providers.

5.2 FEEDBACK FROM TOURISM BUSINESSES

(i) National Importance of Coral Reefs

Businesses in Jamaica that participated in the online survey were asked to rank the importance and/or priority of several areas related to coral reefs. **Table 3**¹⁰ summarizes the responses.

Table 3: Ranking of Coral Reef Restoration: Jamaica

#	Importance /Priority of:	To:	Importance /Priority (0 = none & 6 = highest)	Priority (%) ¹
1	Coral Reefs	the Economy of Jamaica	5.6	93%
2	Reef Restoration	your business	5.6	93%
3	Reef Restoration	the National Agenda of Jamaica	2	33%

Respondents felt that coral reefs are very important to the economy of Jamaica and to their business. They, however, gave extremely

¹⁰ Interpretation: Respondents could rate the priority of an item out of 6 (0 = no importance/priority to 6 = highest importance/priority). The percentages reflect the averages of

responses (i.e. all respondents replied with 6 = 100%, all respondents replied with 0 = 0%)
The % reflect the averages of responses)

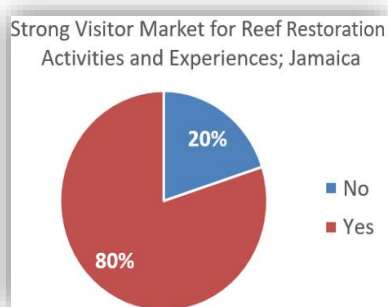
low ratings for the priority or importance given to coral reefs on the national agenda of Jamaica (33%).

This response demonstrates that there is a perception in the country that there is a significant gap in the importance given to coral reefs on the country's national agenda.

(ii) Visitor Interests in Coral Reef Restoration

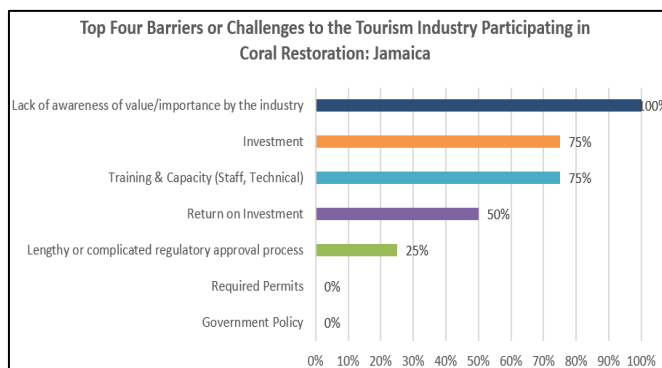
There is a high respondent view that there is a visitor market for coral reef restoration (Figure 7).

Figure 7: Visitor Market for Coral Reef Restoration



(iii) Barriers & Challenges: Figure 8 indicates the top barriers to coral reef restoration.

Figure 8: Top Barriers to Coral Reef Restoration, Jamaica



As seen in Figure 4, tourism industry/private sector participants believe that the top barriers and challenges to the

participation of the Jamaica tourism industry in coral reef restoration are:

- Lack of awareness of the value/importance of coral reef restoration by the tourism industry;
- The investment required;
- Technical training and capacity of staff; and
- Return on investment.

(iv) **Government Regulation Required:** When asked whether coral reef restoration activities by the tourism industry in Jamaica should be regulated by Government, the majority of respondents (75%) were in agreement. Comments providing further clarity included:

"Restoration is complex as it involves making changes to an ecosystem. The government should establish the overall restoration plan for a site and monitor the ongoing progress and practices of the stakeholders"

Government regulation is needed to ensure that all activities are done according to accurate standards and so that information sharing may occur.

(v) **Current Policy Framework:** More tourism business respondents believe that the current national policy in the country supports the ease of involvement of tourism businesses (60%) than those that felt that it did not (40%). A comment for clarity by a respondent was:

"I think that the pieces of the puzzle necessary to have a tourism involved coral reef restoration mechanism are there but here is no coordinated effort to promote this and so it is up to the interested stakeholders to venture into the field if they desire"

5.3 FEEDBACK FROM PUBLIC AGENCIES

Agencies Responsible for the Environment

- (i) **Facilitating Tourism Activities:** The public agency responsible for the environment generally agreed that their agencies facilitated tourism activities in the marine space in Jamaica. Some noted, however, that tourism is not part of their mandate.

Comments included:

"Yes - We encourage and foster the development of eco-tourism in protected marine spaces"

No – (our) agency primarily regulates planning and environmental issues. One of our strategic objectives is to increase protection of Jamaica's biodiversity (coastal and marine, terrestrial and inland water ecosystems). The tourism industry can be considered an important stakeholder that utilizes the resources that our Agency regulates.

Our mandate is environmental protection. Tourism entities are stakeholders but not our mandate.

- (ii) **Regulating Tourism Activities:** All agency respondents agreed that coral reefs in Jamaica are under threat. Likewise, they all agreed that tourism industry activities in the marine space should be regulated by government. Comments include:

Regulation by Government is needed so that "we do not make a bad situation worse"; "bad practice/operators kill corals".

"Corals are a protected species so any activities related to them must be regulated".

Ministry Responsible for Tourism

- (i) **Tourism Policy for Reef Restoration:** The Ministry of Tourism has a specific Division - *Policy Formulation and Technical Coordination Division*, that is responsible for tourism policy development. The Ministry notes that while there is an interest in and appreciation for coral reefs there is no policy statement specific to reef restoration and the involvement of tourism.

Notwithstanding, coral reefs, from a tourism perspective fall within the commitment of country for environmental and biodiversity conservation as outlined within the Tourism Strategy for Jamaica. The Sustainable Tourism Policy of the country that is currently being updated could also speak to coral reef restoration. The Draft Water Sports Policy also addresses environmental conservation in the marine space, which includes coral reef health.

- (ii) **Tourism and Coral Reef Restoration Partnership:** The Ministry of Tourism is currently in discussions with Green Fins for a potential project partnership in Jamaica.

Green Fins is a conservation management approach  implemented internationally by the Reef-World Foundation and the United Nations Environment Programme (UNEP). This approach is designed to lead to a measurable reduction in the negative environmental impacts associated with marine tourism. It aims to protect coral reefs through environmentally friendly guidelines promoting sustainable diving and snorkelling. It provides the only internationally recognised environmental standards for marine tourism

and its robust assessment system measures compliance.

The details of the project partnership are currently being determined but it would likely include integrating coral reef restoration activities by the tourism sector into the project.

- (iii) **Tourism/NEPA Partnership:** The Ministry of Tourism is involved with NEPA on projects in the country's marina protected areas. In this regard, the Ministry of Tourism is represented on a sub-committee of NEPA's Board and continues to support sustainable and resilient tourism development.
- (iv) **Policy/Licensing Framework for the Tourism Industry:** The Ministry of Tourism notes that Tourism entities that are granted a tourism license to operate by TPDCo can proceed to be involved in coral reef restoration activities by meeting the required licensing and requirement to do so as laid out by NEPA.

The Ministry of Tourism recognises, however, that:

- A specific tourism industry policy framework for tourism's involvement in coral reef restoration should be articulated
- Closer partnership with NEPA to review the requirements and/or to establish specific requirements for the tourism industry's involvement in coral reef restoration is an approach for consideration moving forward;
- Closer partnership with the tourism industry such as dive operators etc. as it

related to reef restoration is a strategy for consideration.

Other Assessments

- (v) **Marine Conservation/Tourism Policy - Separate Policy Spaces:** At the moment, while sustainable tourism is encouraged within the Jamaica tourism policy framework, there is no legislative overlap or guiding principles specifically for coral reef restoration and the involvement of the tourism industry.

While the Ministry of Tourism is interested in coral reef restoration, without a specific policy environment, tourism entities that engage in marine conservation do so more as part of their corporate social responsibility (CSR) operationally guided by environmental legislation and not by any tourism legislation.

Coral reef restoration is, therefore, conducted within the legislative framework set for natural resource management and conservation. Tourism is guided by and focused upon its own legislation.

- (vi) **Limited Coral Reef Restoration Expertise in Tourism:** Generally, the required coral reef restoration knowledge and technical expertise are not generally within the hands of the tourism industry, nor too within that of the national tourism agencies.

Local tourist operators who engage in coral reef restoration do so by collaborating with environmental NGOs and academia. These operators, however, represent a minority number of tourism industry operators.

- (iii) **Opportunity for Tourism Industry Businesses:** The report notes that the current framework provides an opportunity for the tourism sector to get involved in coral reef restoration

activities through the acquisition of applicable permits which are administered and issued by a single agency.

- (v) **Partnership Opportunity:** There is a view that tourism industry businesses should not get a license to carry out coral reef restoration on their own but rather they should partner with vetted, approved professionals and/or NGO practitioners who can provide these services in collaboration with or contracted to a hotel/tourism entity.

5.4 BEST PRACTICE & LESSON LEARNT

BEST PRACTICE

While there are several best practice cases including the work done by the Sandals Foundation, this report highlights the Oracabessa Marine Trust in St. Mary and the collaborative work they carry out at the Oracabessa Bay Fish Sanctuary, as a best practice in Jamaica.

Tourism Industry/Fishing Industry Collaboration: This best practice demonstrates the advantage of strong collaboration among stakeholders to effect management and conservation of the coastal and marine resources within The Oracabessa Bay Fishing Sanctuary.

The fishing sanctuary was first started by a group of local fishermen and tourism industry stakeholders in response to a decline in vital Jamaican coastal life like coral and herbivorous fish. They recognised that both fisheries and tourism were severely affected by poor reef health.



The Oracabessa Marine Trust manages the sanctuary and was registered to formalize the partnership between the GoldenEye Foundation (formally Oracabessa Foundation) and the Oracabessa Fisher's Association.

The GoldenEye Foundation is the philanthropic arm of the GoldenEye Resorts, founded in 1995 to promote sustainable development in Oracabessa. The Oracabessa Fishers Association was founded to provide a unified platform for the representation of views, with the general aim to improve livelihoods.

Operational Model: The operational model that has been employed is one of partnership between tourism stakeholders and local fishermen in the community, grounded in scientific and local knowledge.

Community-based Tourism Recognition: Oracabessa Marine Trust is recognised by the Jamaica Social Investment Fund (JSIF) for its role in facilitating community-based tourism and its engagement of the women, youths, students and community members in the surrounding rural areas. It is directly involved in attracting the scientific, academic, volunteer and educational (SAVE) tourism market and other adventure and dive visitors to Jamaica. There are also strong linkages with tourism, fisheries and other economic sectors in the community.

Achievements: Oracabessa has been successful in:

- **Training** local fishers as sanctuary wardens to patrol the SFCA and as coral gardeners to assist in the maintenance of nurseries and out-planting exercises.



- **Operating the Oracabessa Dive Centre** at James Bond Beach, with 100% of profits made going to the marine conservation program. Local fishermen are trained up to PADI Divemaster and join the staff to offer excursions within the sanctuary.
- **Visitor Tours:** Visitors receive guided tours to the nurseries and restored areas, help maintain the coral nurseries through coral planting, cleaning corals and predator control.
- **Monitoring the status of its coral reefs.** Sites within The Sanctuary are a part of the 22 target sites for NEPA's coral reef health status assessments. Between 2013¹¹ and 2020¹², there has been a 470% increase in the biomass (total weight of fish) of herbivorous fish at Golden Eye Reef, a positive indicator of SFCA as a conservation tool.
- **Restoring Coral Reefs:** Coral Reef restoration efforts including installation of coral nurseries, out-planting of over 30,000 corals to reefs within the sanctuary.
- **Land-based Nursery:** A land-based sea urchin nursery was established to rear the long-spined sea urchin, *Diadema Antillarum*.
- **Marine Conservation:** Other associated marine conservation activities, such as nesting sea turtle and hatchling protection

and conservation experiences and coastal cleanups have also been facilitated.

Various conservation initiatives have been funded over the years by agencies such as the GoldenEye Foundation, UNDP, USAID, NCTFJ, GEF, Seacology, and The United States (US) Bureau of Oceans and International Environmental and Scientific Affairs. A recent partnership with skincare company, Soleil Toujours sees part of its proceeds going to the Trust and visitors to the GoldenEye website and/or The Dive Shop can also make donations to various conservation initiatives, for example, Adopt A Reef Program.

- **Community Engagement:** Outside of their immediate footprint, the Trust has also taken their model to several communities around the island to promote marine conservation. This includes SCUBA training and certification of fishers, formalization of fishers' associations, mapping of fishing grounds and proposal of new SFCAs.

LESSONS LEARNT

The following are highlighted by restoration practitioners and coral researchers as lessons learnt in Jamaica:

- (i) **Science First:** While stakeholders that engage in restoration may be different, they must have a common goal to restore ecosystem function. All activities should align with this goal, with clear objectives and indicators to track success. Where restoration efforts take place outside of academia, scientific principles should still guide efforts.
- (ii) **Enlist Help/Collaborate:** Operating in a silo can create inefficiencies, duplicating efforts, waste

¹¹ NEPA, *Coral Reefs of Jamaica: An Evaluation of Ecosystem Health: 2013 (2014).*

¹² NEPA, *Coral Reef Health Status Report for Jamaica: 2020.*

resources, and can give rise to conflicts. Stakeholders should be engaged at all stages of a restoration activity to increase the chances of buy-in and project success. Collaborations with other practitioners allow the collective to understand what methods work locally, provide a platform for knowledge exchange, grant capacity building opportunities and scaling of efforts.

(iii) **Have Standardized Monitoring & Maintenance Guidelines:** As coral reef restoration is relatively new, with some practitioners operating in silos, how restoration efforts are assessed varies vastly. It is important to have a standardized monitoring protocol to compare projects across sites and time, thus informing future efforts. Where possible, nurseries and sites should be visited as frequently as possible to control predators, reduce fouling and other potential negative impacts.



6. CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

(i) Ecological and Economic Significance

Coral reefs are diverse and complex habitats. These reefs support the provision of valuable ecological goods and services in Jamaica and without them, the health of the environment and a nation would be compromised.

(ii) Tourism Sector – Large Contributor to Economy & Vested Interest in Coral Reefs

The tourism sector is vital to Jamaica and contributes to a significant portion of the country's GDP. The tourism industry relies heavily on a healthy coastal and marine environment of which coral reefs play a vital role. The tourism industry, therefore, has a vested interest in protecting, conserving

and rehabilitating coral reefs to ensure sustainable growth.

(iii) Integrate Conservation/Tourism Policy Frameworks

While there is no policy that directly speaks to (i) coral reef restoration and (ii) coral reef restoration and tourism, the existing policy and legislative frameworks are extensive and provide the foundational scope that allows for the tourism industry to be involved.

(iv) Opportune time to expand Tourism Industry Involvement

Coral reef restoration has been ongoing for decades in Jamaica with commendable progress in the restoration of coral reefs made with some input from the tourism industry.

As is, however, the weight is being carried by local NGOs and research institutions and they cannot keep pace with the scale needed to rehabilitate reef systems on their own. Expansion of the participation of the tourism industry in Jamaica can be an effective approach to help scale up coral reef restoration.

(v) Utilise Existing Policies and Legislation

Jamaica is not short of environmental policies and legislation. Coral reef restoration activities are overseen by the lead environmental government agency, NEPA, granting two (2) licences and permits for related activities.

The tourism industry is not excluded from restoration activities once submitted applications can demonstrate clear goals for natural resource conservation with no adverse significant impacts.

(vi) Streamlined Permitting System

Permits for coral reef restoration are streamlined so that up to three permits are required and they are all administered by a single agency, i.e. NEPA. This has reduced bottlenecks and deterrents to applicants.

Notwithstanding, a closer look at the nature and needs of the tourism industry is needed to ensure that the licenses and permitting system is conducive to greater inclusion of the tourism industry.

(vii) Collaboration – Important Approach

Jamaica's tourism industry does not have to wait on any changes in the existing policy and legislative framework, i.e. tourism and marine conservation, to engage in coral reef restoration.

The most important approach is collaboration with existing NGO and academia that are already involved in coral reef restoration activities in Jamaica.

(viii) Tourism Buy-In

While the Ministry of Tourism is interested in coral reef restoration, greater awareness and buy-in from tourism stakeholders in both the public and private sectors are needed.

(ix) Restoration Versus Tourism Activity-Communication Approach

While the tourism industry may see coral reef restoration as a good blend of a tourism attraction with protection and sustainability inbuilt, some marine conservationists in Jamaica see it more as a restoration activity guided by scientific knowledge and not as "another tourist activity".

Both parties' views are valid but both groups must come to a common consensus and recognise that coral reef restoration can serve their respective purposes. The language or packaging of coral reef restoration for buy-in, must cater to the view of each.

6.2 RECOMMENDATIONS

(i) Facilitate Tourism in Conservation Policy Frameworks

The extensive environmental legislation and policy framework in Jamaica can be further audited to see how the tourism industry can be incorporated into coral reef restoration.

(ii) Incorporate Coral Reef Restoration in Tourism Policies

Coral reef restoration and the involvement of tourism must be led by formal policy statements. The Ministry of Tourism is open

to and is supported in ensuring that it is factored into its Sustainable Tourism Policy that is currently being updated as well as in its Tourism Master Plan which is also currently being revised.

(iii) **Closer Collaboration between Tourism & Environmental Agencies**

Closer collaboration between tourism and environmental agencies in Jamaica is needed to specifically support the increased involvement of the tourism industry in coral reef restoration.

(iv) **Restoration Efforts Embedded in Science**

Restoration efforts should be designed and implemented using a scientific framework and guiding principles. Environmental NGOs and research institutions should be consulted to assist in defining indicators of success and monitoring protocols¹³.

(v) **Ensure Sustainable Practices**

The intention to include coral reef restoration as a tourism product should not come at the expense of the very habitat practitioners are hoping to conserve. Feasibility and carrying capacity studies should be conducted to ensure there are no adverse significant impacts.

(vi) **Capacity Building/Training**

The goals of coral reef restoration and restoration options will need to be understood before any activities commence. Equipment and infrastructure will need to be procured and maintained.

To improve the chances of success, operators will need to facilitate training opportunities, inclusive of dry runs, on reef monitoring, maintenance of nursery structures and out-planting.

Science communication and visitor interaction should also be considered to enhance visitor experience and understanding of the activity.

(vii) **Funding and Investment**

Funding for coral reef restoration projects and for the engagement of the tourism industry must be secured. Funding sources must include, inter alia, public-private partnerships, and international funding

(viii) **Regional Policy Dialogue**

A Regional Policy Dialogue on Coral Reef Restoration in which public agencies in both tourism and environmental management in Jamaica are invited to participate. This dialogue must also have the involvement of tourism industry stakeholders.

This Dialogue would help to discuss regulatory frameworks, best practices, institutional capacity, governance, and innovative funding mechanisms for coral reef restoration.

It should aim to exchange knowledge, attract donors, and foster cooperation and collaboration.

Most importantly, it will encourage public, private and other stakeholders in Jamaica to better recognize the need for a strengthened national policy framework that specifically facilitates coral reef restoration with the participation of the tourism industry.

¹³ It is noted that NEPA is currently preparing a National Ecosystem Restoration Plan for all Ecosystems that may address some of these issues

(ix) **Regional Coordination & Collaboration**

A key factor in the regional dialogue and in moving ahead is the coordination and support that is needed at the regional level. TNC, CHTA and CAST are positioned in Jamaica (and regionally) to encourage buy-in from their respective partners and to exemplify what is needed at the national level, regionally.

Regional leadership and coordination will greatly advance the role that the tourism industry can play in coral reef restoration in Jamaica (and likely in each associated destination across the region).

Annexes follow



ANNEX 1

List Of Key Organizations Involved In Coral Reef Restoration In Jamaica

#	Name	Main sector Activity	Level of involvement	Financing Mechanism	Collaborating Partners
1	Alligator Head Foundation (AHF)	NGO: Environmental Research and Conservation	Actively involved: Manager of SFCA with ongoing research and restoration	Private and National\ International Grants	International Climate Initiative (IKI), Caribbean Biodiversity Fund (CBF), The Nature Conservancy (TNC), The University of the West Indies (UWI)
2	Iberostar Hotel	Hotel Resorts	Actively Involved: Directly through Wave of Change Initiative and Sustainable practices	Private	Wave of Change, Seascape Caribbean
3	The Nature Conservancy (TNC)	NGO: Environmental Conservation	Actively Involved: coral reef restoration, promotion of sustainable livelihoods, management of marine areas	Private and International Grants; Membership	AHF, IKI, CBF, USAID, UWI. TNC actually collaborates with the entire SFCA network in one form or another particularly with knowledge sharing and training and NFA and NEPA through consultation and sometimes other direct initiatives including training.
4	Oracabessa Marine Trust	Joint Philanthropic-Hotel Resorts and Fishing	Actively involved: Manager of SFCA with ongoing research and restoration	Private and National\ International Grants	GoldenEye Foundation, Oracabessa Fishers' Association, National Conservation Trust Fund of Jamaica (NCTFJ), Sandals Foundation, National Fisheries Authority (NFA), Jamaica Fish Sanctuary Network
5	Sandals Foundation	Philanthropic-Hotel Resorts	Actively Involved: Manager of SFCAs with ongoing restoration	Private	Jamaica Fish Sanctuary Network, Oracabessa Marine Trust, Whitehouse Fishers Association, Seascape Caribbean
6	Seascape Caribbean	Consultancy Services for reef restoration	Actively involved: coral reef restoration consultancy through reefscape engineering	Private and National\ International Grants	Oracabessa Marine Trust, Coral Reef Restoration Consortium, Iberostar Hotel, Wave of Change, Round Hill Hotel & Villas, Dressel Divers
7	The University of the West Indies, Mona	Education and Research	Actively involved: Coral research, restoration, education, and diver safety treatment	Private and National\ International Grants	Kingston Freeport Terminal Limited (KFTL), Tourism Enhancement Fund (TEF), Inter-American Development Bank (IDB), National Environment and Planning Agency (NEPA), AHF
8	White River Fish Sanctuary	Fisheries Management	Actively involved: coral Manager of SFCA with ongoing research & restoration	Private and National\ International Grants	Sandals Foundation, Jamaica Fish Sanctuary Network, Marine Police, NFA, TEF

Summary Overview of Coral Reef Restoration Policy Analysis Framework Indicators & Finding

#	Indicators	Summary Finding	#	Indicators	Summary Finding
1	Key Public Sector Regulatory/Governing Bodies Impacting Coastal and Marine Conservation and Coral Reef Restoration	(i) National Environment and Planning Agency (ii) National Fisheries Authority (iii) Ministry of Economic Growth and Job Creation (This Ministry also has under its portfolio Water, Land, Environment and Climate Change)	7	Tourism Policy	(i) Established Legislation/Policy for: - tourism promotion - accommodation standards/licensing (ii) Accommodation sector has more tourism legislation than other sub-sectors (Hotel Incentives Act; Resort Cottages (Incentives) Act; Hotel Keeper's Liability Act)
2	Key Public Sector Regulatory/ Governing Agencies for Tourism	(i) Ministry of Tourism	8	NGO/Public/Private Partnerships for Coral Reef Restoration	(i) Existing Private/NGO Partnerships (ii) Opportunities to build on and expand partnerships
3	Agencies most involved in /opportune for Coral Reef Restoration Regulation	(i) National Environment and Planning Authority (NEPA)	9	Tourism Operator/ Private Sector Support for Coral Reef Restoration	(i) In place (ii) Best Practice Noted (iii) Still to be effectively developed
4	Key NGOs & Private Sector leading in Coral Reef Restoration Activities & Sensitization (See Annex 1 for details)	(i) Alligator Head Foundation (ii) The Nature Conservancy (iii) Oracabessa Marine Trust (iv) Seascope Caribbean (v) UWI (vi) White River Fish Sanctuary (vii) Sandals Foundation (viii) Iberostar Hotel	10	Existing Frameworks for Blue Economy Tourism Operations	(i) No Explicit Policy/Legislation for Blue Economy Tourism operations (ii) In 2023 World Bank (WB) published recommendations for a blue economy roadmap for Jamaica (iii) In February 2024 CAPRI published a study on the development of Jamaica's Blue Economy with focus on artisanal fishers, sustainable fisheries, eco-tourism & blue financing.
5	Government Coordination and Procedures	(i) Tourism product development licensing does not directly incorporate coral reef restoration activities. (ii) Operationalisation of connection/linkages between Tourism and Coastal and Marine Conservation and/or Coral Reef Restoration needed	11	Coral Reef Restoration	(i) Existing Framework in place
6	Permit/Licensing Procedures	(i) Up to 3 main coral reef restoration permits required (ii) Permitting Time/Cost/ Procedures for coral reef restoration permits are not overly bureaucratic (iii) Tourism Operators must first have tourism operator's license. High level of documentation, associated business/tourism licenses and good standing clearances required	12	Existing Frameworks for Coral Reef Management, Conservation, and/or Restoration Implementation in Tourism Sector	(i) Existing framework under conservation management (ii) Tourism encourages management & use of natural resources (iii) No specific tourism policy for coral reef restoration
10	Tourism/Sustainable Tourism	(ii) Significant established Legislation/Policy for Tourism/Sustainable Tourism			

END OF POLICY ANALYSIS DOCUMENT