



# **Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**



**Ministry of Industry,  
Commerce, Agriculture and  
Fisheries**

**JM-MICAF-82599-CS-  
CQS**



## **Final Draft Community-Based Strategy and Action Plan**

Submitted as a collaboration between



**MRAG**

**LUMIN**  
CONSULTING | A UWI COMPANY

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

MRAG Ltd is an independent fisheries and aquatic resource consulting company dedicated to the sustainable use of natural resources through sound, integrated management practices and policies.

Established in 1986, MRAG has successfully completed projects in more than 60 countries. Our in-house experts have a wide variety of technical expertise and practical experience across all aspects of aquatic resource management, policy and planning, allowing us to take a multi-disciplinary approach to every project. Our capability to service an extensive array of resource management needs is further extended through our network of associations with internationally acclaimed experts in academic institutions and private organisations worldwide.

MRAG Ltd  
18 Queen Street  
London  
W1J 5PN  
United Kingdom

T: +44 (0) 20 7255 7755  
F: +44 (0) 20 7499 5388  
W: [www.mrag.co.uk](http://www.mrag.co.uk)  
E: [enquiry@mrag.co.uk](mailto:enquiry@mrag.co.uk)

Project code:	JM2722
Version:	V001
Prepared by:	Stephen Mangi Chai, John Pearce, Karl Aiken, Pippa Howarth and Danielle Kitson
Approved by:	Stephen Mangi Chai

## Table of Contents

<b>1</b>	<b>Background.....</b>	<b>7</b>
1.1	Special Fishery Conservation Areas in Jamaica .....	8
1.2	Challenges in managing the SFCAs .....	10
1.3	Monitoring, Control and Surveillance.....	14
1.4	Rationale for an MCS strategy and action plan .....	15
<b>2</b>	<b>Method and Approach .....</b>	<b>16</b>
2.1	Literature review .....	16
2.2	Capacity assessment.....	16
2.3	Stakeholder consultation.....	17
<b>3</b>	<b>Situation overview .....</b>	<b>18</b>
3.1	National plans, policies and legislation.....	18
3.1.1	Fisheries and aquaculture policy.....	18
3.1.2	Legal framework for community-based MCS&E .....	18
3.1.3	National plans related to climate change.....	19
3.2	Community assessment and readiness of stakeholder entities .....	19
3.3	Issues impacting SFPAs due to climate change.....	21
<b>4</b>	<b>Potential funding institutions.....</b>	<b>22</b>
<b>5</b>	<b>Potential Regional Fisheries Management Organisations (RFMOs) and Regional Fisheries Bodies (RFBs) that can provide support .....</b>	<b>23</b>
<b>6</b>	<b>Vision and guiding principles .....</b>	<b>24</b>
6.1	Vision.....	24
6.2	Guiding principles .....	24
<b>7</b>	<b>Strategic outcomes and goals .....</b>	<b>25</b>
<b>8</b>	<b>Action Plan .....</b>	<b>28</b>
8.1	Strategic Outcome 1: Effective participation/involvement of local communities and other stakeholders in the management of SFCAs including MCS&E. ....	28
8.2	Strategic Outcome 2: An enhanced SFCA system with financial sustainability that ensures adequate funding to achieve and maintain management objectives.....	31
8.3	Strategic Outcome 3: Healthier marine and coastal ecosystems that are under effective local management.....	33
8.4	Strategic Outcome 4: Improved management effectiveness and capacity of community-based organisations with adequate communication strategies in place .....	42
8.5	Strategic Outcome 5: Stakeholder awareness and engagement in SFCA activities improved and contributing to the effective management of coastal and marine resources. 46	
8.6	Strategic Outcome 6: Local communities that are resilient to economic and climate shocks.....	48
<b>9</b>	<b>Institutional arrangements for implementation .....</b>	<b>49</b>
9.1	Implementation partners .....	49
9.2	Information management and sharing.....	49
9.3	Communication.....	50

9.4	Prioritisation .....	50
<b>10</b>	<b>Monitoring and evaluation.....</b>	<b>52</b>
<b>11</b>	<b>References .....</b>	<b>58</b>
<b>Annex 1</b>	<b>Summary of the key aspects of each SFCA gathered through the evaluation form .....</b>	<b>60</b>
<b>Annex 2</b>	<b>Historic funding in Jamaica.....</b>	<b>89</b>

## **List of Tables**

Table 1 Jamaican fish sanctuaries (Special Fishery Conservation Areas, SFCA) in 2021.....	8
Table 2: Summary of status and challenges facing SFCAs reported by TNC (2017).....	11
Table 3: Summary of strategic outcomes, goals and specific objectives for the community-based fisheries management plan that includes MCS&E. ....	25
Table 4: Action plan for Strategic Outcome 1. ....	28
Table 5: Action plan for Strategic Outcome 2. ....	31
Table 6: Action plan for Strategic Outcome 3. ....	33
Table 7: Action plan for Strategic Outcome 4. ....	42
Table 8: Action plan for Strategic Outcome 5. ....	46
Table 9: Action plan for Strategic Outcome 6. ....	48
Table 10: Monitoring and evaluation of the different goals in the community-based fisheries management Strategy and Action Plan for MCS&E. ....	52

## **Acronyms**

CARICOM	Caribbean Community
CBOs	Community-Based Organizations
CCAM	Caribbean Coastal Area Management Foundation
CMBP	Caribbean Marine Biodiversity Program
COPPESAALC	Commission for Small-Scale and Artisanal Fisheries and Aquaculture of Latin America and the Caribbean
CRFM	Caribbean Regional Fisheries Mechanism
FAO	Food and Agriculture Organisation of the United Nations
GoJ	Government of Jamaica
GCF	Green Climate Fund
ICCAT	International Commission for the Conservation of Atlantic Tunas
IDB	Inter-American Development Bank.
JCF	Jamaica Constabulary Force
JDF	Jamaica Defence Force
MCS&E	Monitoring, Control, Surveillance and Enforcement
MoAF	Ministry of Agriculture and Fisheries
MPA	Marine Protected Area
NEPA	National Environmental Protection Agency
NEPT	Negril Area Environmental Protection Trust
NFA	National Fisheries Authority
PPCR	Pilot Program for Climate Resilience
RFBs	Regional Fishery Bodies
RFMOs	Regional Fisheries Management Organizations
SFCA	Special Fishery Conservation Area
SIDS	Small Island Developing States
SPCR	Strategic Program for Climate Resilience
TNC	The Nature Conservancy
UNFCCC	Nations Framework Convention on Climate Change
WECAFC	Western Central Atlantic Fishery Commission

## **Executive Summary**

In an effort to improve its fisheries, conserve marine and coastal biodiversity, and build resilience to climate change, Jamaica has established Special Fishery Conservation Areas (SFCAs) to protect near shore marine areas. SFCAs are no-fishing zones reserved for the reproduction of fish populations and maintenance of fish habitats. It is hoped that the SFCAs will gradually increase fish populations threatened by overfishing, restore degraded marine and coastal habitats, and provide coastal protection during extreme events. While a considerable amount of effort has been invested in establishing the SFCAs, Jamaica's fisheries are currently monitored through a centralised, top-down approach with government-led regulations and little involvement of local communities. To ensure compliance with the SFCA management measures, Jamaica plans to move away from the traditional monitoring and enforcement by government towards participatory or co-operative management in partnership with local fishing communities and NGOs.

The aim of this Strategy and Action Plan is to support community-led sustainable fisheries management including monitoring, control and surveillance, in order to facilitate the building of climate resilience and adaptation of marine and coastal ecosystems. The Strategy and Action Plan focuses on strengthening legislation towards community-based organisations, strengthening existing partnerships between the SFCA management teams with the National Fisheries Authority (NFA) and law enforcement agencies (Marine Police and Coast Guard), and proposes key actions and activities that should be undertaken to improve management of the protected areas.

The development of this Strategy and Action Plan for community-based fisheries management including monitoring, surveillance, compliance and enforcement (MCS&E) involved three main activities: (i) A literature review of relevant national laws, policies and plans to identify legislation towards community-based organisations and Jamaica's obligations relating to climate change. (ii) Capacity assessment to assess the institutional capacity of SFCA management teams to participate in an integrated fisheries management approach for the SFCAs that includes MCS&E. (iii) Stakeholder consultations with relevant organizations including SFCA management teams, NFA, National Environmental Protection Agency (NEPA), law enforcement agencies and other key stakeholders including Jamaica's Fishers Cooperative Union.

The vision of this community-based MCS&E Strategy and Action Plan is: "Empowered fishing communities managing their local coastal and marine ecosystems in ways that enrich livelihoods, provide resilience to climate change, and sustain healthy marine and coastal environments for generations to come". To achieve it, six Strategic Outcomes have been defined.

- Strategic Outcome 1: Effective participation/involvement of local communities and other stakeholders in the management of SFCAs including MCS&E.
- Strategic Outcome 2: An enhanced SFCA system with financial sustainability that ensures adequate funding to achieve and maintain management objectives.
- Strategic Outcome 3: Healthier marine and coastal ecosystems that are under effective local management.
- Strategic Outcome 4: Improved management effectiveness and capacity of community-based organisations with adequate communication strategies in place.
- Strategic Outcome 5: Stakeholder awareness and engagement in SFCA activities improved and contributing to the effective management of coastal and marine resources.

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

- Strategic Outcome 6: Local communities that are resilient to economic and climate shocks.

An action plan has been developed for each Strategic Outcome including proposed activities, the responsible institution, benchmarks/objectively verifiable indicators (OVIs), financial sources, financial needs and timeframe/milestones for the successful implementation of the Strategy and Action plan. Institutional arrangements for implementation are also provided including the key implementation partners, information sharing and coordination, and communication mechanisms.

To ensure effective implementation of the Strategy and Action Plan, a monitoring and evaluation framework has also been developed. For each strategic goal, the monitoring and evaluation framework includes target date for implementation, indicators, means of verification and frequency of monitoring and evaluation. The key priority areas to progress this community-based MCS&E Strategy and Action Plan are also provided. These include the need to (i) ensure there is enough financial support to cover SFCA management activities, (ii) enact policies towards user fees, spear fishing and buffer zone, (iii) use of standardized templates, uniforms, buoys etc across the SFCAs, (iv) increased collaboration with NFA and law enforcement agencies, and (v) establish a framework for regular monitoring of the biophysical and socio-economic variables within the SFCA and in the surrounding areas.



## **1 Background**

Management of the coastal zone and its natural resources is critical to Jamaica, as the majority of its 2.7 million residents live within 2 km of the coast and there is a heavily economic reliance on fisheries and tourism. The island provides a range of recreational opportunities, while the surrounding coral reefs and seagrass beds serve as fishing grounds for key commercial species. In protecting these habitats and other important natural areas on land and in the sea, Jamaica wants to ensure that these ecosystems continue to provide a range of services for human-wellbeing. Jamaica has therefore created fish sanctuaries in multiple locations around the island to manage its natural resources and ensure they continue to provide the range of ecosystem services that are essential to its people. Currently, 17 fish sanctuaries have been designated that permit selective fishing for research and control of invasive species (J. Squire, Senior Fisheries Officer- Fisheries Protected Area Manager, pers. comm.). They form a network of legally gazetted protected areas (referred to as Special Fishery Conservation Areas (SFCAs)) around the island and were designed explicitly to restore locally valuable fish populations throughout the coastal and marine environment.

The Small Island Developing States (SIDS) of the Caribbean are considered among the most vulnerable to climate change. Increased storm intensity, sea level rise, coastal erosion, sedimentation, coral bleaching, ocean acidification, pollution and declining marine fisheries threaten the region. In addition, multiple drivers of change (e.g., coastal development) are producing cumulative effects that are complex and growing. At stake are the health of the coastal and marine ecosystems and the livelihoods and wellbeing of Jamaicans. Jamaica's vulnerability to natural hazards is likely to worsen with climate change, which is projected to exacerbate floods linked to extreme rainfall events, rising sea level and tropical storms. The latest National Development Plan "Vision 2030 Jamaica" therefore includes a framework to ensure that the risks associated with climate change and natural hazards are reduced, and the Ministry of Agriculture and Fisheries (MoAF) has made the adoption of climate resilient fishing practices a policy priority (Government of Jamaica 2009). Jamaica has developed a Strategic Program for Climate Resilience (SPCR) as part of the Pilot Program for Climate Resilience (PPCR) that will assist in climate-proofing the country's development. The SPCR is aligned to Vision 2030, and also builds on gaps and challenges identified in Jamaica's development strategy. The focus on SFCAs is therefore critical, as protected areas have emerged as a significant marine conservation and climate change adaptation strategy with substantial implications for coastal communities (Roberts et al., 2017).

One of the key ways to maximise sustainability and use of fisheries resources in the face of climate change is to undertake monitoring, control and surveillance (MCS) including enforcement of rules and regulations in protected areas. This is because MCS provides information to underpin analysis and subsequent decision making. MCS is often regarded as a set of tools or mechanisms for implementation of agreed policies, plans or strategies for fisheries management (Flewellling 1994, Laurec 1999). When managed well, MCS should encompass and embrace both traditional and contemporary technological systems for data collection, as well as the implementation of legislation frameworks and of management plans through participatory planning.

Management of fisheries is a complex task. However, strategies such as community-based fisheries management that take an integrated management approach have the potential to be more productive in achieving management objectives than centralised management (Cudney-Bueno and Basurto, 2009; Blythe et al., 2017). When communities or organizations of fishers are included as partners in the planning, design and implementation of the regulations, they grant full

legitimacy to the regulations, and are the strongest advocates, monitors, enforcers, and implementers of management decisions (Bergh and Davies 2002). Community and non-governmental organisations (NGO) partners may even help agencies reconceptualize a problem and develop a better strategy for attacking it (Bergh and Davies 2002).

## **1.1 Special Fishery Conservation Areas in Jamaica**

In an effort to improve its fisheries, conserve marine and coastal biodiversity, and build resilience to climate change Jamaica has established SFCAs to protect near shore marine areas. SFCAs are no-fishing zones reserved for the reproduction of fish populations and maintenance of fish habitats. They are declared by the Minister for Agriculture and Fisheries as nature reserves under orders privileged through Section 18 of the Fishing Industry Act of 1975. It is therefore, illegal and punishable by law to engage in any unauthorized fishing activities in the declared zones. Currently, there are 17 declared SFCAs that range in size from approximately 1 km<sup>2</sup> to 18.7 km<sup>2</sup> (Table 1). The majority are located close to shore and therefore accessible to small-scale fishers that use a mixture of gear such as fish traps, hand lines and spear guns to target many species including conch, lobster and reef fish.

**Table 1 Jamaican fish sanctuaries (Special Fishery Conservation Areas, SFCA) in 2021.**

	<b>Name</b>	<b>Location &amp; inception</b>	<b>Resources protected</b>	<b>Management information</b>	<b>Approx. Size (km<sup>2</sup>)</b>
1	Three Bays	St. Catherine, 2009	Seagrass beds, coral reef	Caribbean Coastal Area Management Foundation (CCAM); <a href="http://www.ccam.org.jm">www.ccam.org.jm</a>	12.61
2	Galleon Harbour	St. Catherine, 2009	Mangroves, seagrass beds	Caribbean Coastal Area Management Foundation (CCAM); <a href="http://www.ccam.org.jm">www.ccam.org.jm</a>	18.7
3	Salt Harbour	Clarendon, 2009	Mangroves, seagrass beds	Caribbean Coastal Area Management Foundation (CCAM); <a href="http://www.ccam.org.jm">www.ccam.org.jm</a>	10.2
4	Bluefields Bay	Westmoreland, 2009	Coral reef, seagrass beds	Bluefields Bay Fishermen's Friendly Society	13.6
5	South West Cay	Pedro Bank, 2017	Coral reefs	National Fisheries Authority, Min. Agriculture & Fisheries; <a href="http://www.moa.gov.jm/">http://www.moa.gov.jm/</a>	13
6	Orange Bay	Hanover, 2009	Coral reef lagoon	Negril Area Environmental Protection Trust (NEPT); <a href="http://www.negrilepa.com">www.negrilepa.com</a>	5.4

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	<b>Name</b>	<b>Location &amp; inception</b>	<b>Resources protected</b>	<b>Management information</b>	<b>Approx. Size (km<sup>2</sup>)</b>
7	Bogue Lagoon	St. James, 1979	Mangroves, seagrass beds	Montego Bay Marine Park Trust; <a href="http://www.mbmpt.org">www.mbmpt.org</a>	4.5
8	Discovery Bay	St. Ann, 2009	Coral reef lagoon	Alloa Fisherman's Cooperative	13.6
9	Sandals Boscobel	St. Mary, 2010	Coral reefs, Seagrass beds, Mangroves	Sandals Foundation; <a href="http://www.sandalsfoundation.org">www.sandalsfoundation.org</a>	13.5
10	East Portland	Portland, 2015	Coral reef, seagrass beds,	Alligator Head Foundation; <a href="http://www.alligatorheadfoundation.org">www.alligatorheadfoundation.org</a>	5.4
11	Sandals Boscobel (East and West)	St. Mary, 2016	Coral reefs, Seagrass beds, Mangroves	Sandals Foundation; <a href="http://www.sandalsfoundation.org">www.sandalsfoundation.org</a>	0.3
12	Oracabessa Bay	St. Mary, 2010	Coral reef	Oracabessa Fish Sanctuary; <a href="http://www.oracabessa.com">www.oracabessa.com</a>	0.8
13	White River	St. Mary, 2016	Coral reef	White River Foundation; <a href="http://www.whiteriverfishsanctuary.com">www.whiteriverfishsanctuary.com</a>	1.5
14	Sandals Whitehouse	Westmoreland, 2012	Coral reefs, Seagrass beds, Mangroves	Sandals Foundation; <a href="http://www.sandalsfoundation.org">www.sandalsfoundation.org</a>	2.9
15	Bowden Harbour	St. Thomas, 1986	Mangroves, seagrass beds	National Fisheries Authority, Min. Agriculture & Fisheries; <a href="http://www.moa.gov.jm/">http://www.moa.gov.jm/</a>	1.0
16	Montego/Airport Point	St. James, 2009	Coral reef, seagrass beds	Montego Bay Marine Park Trust Limited	3.0
17	Galleon Bay	St. Elizabeth, 2009	Seagrass beds	BREDS Foundation	2.6

According to Aiken (2014), the SFCAs are established in areas based on:

- Ecological characteristics including presence of seagrass beds, a reef system, and/or shallow waters adjoining mangroves.
- General agreement by the primary stakeholders (fishers, hotel and tourism businesses) for these areas to be declared as sanctuaries.
- The existence of an organized entity with the commitment and capacity to partner with the Government in the management of the SFCA.
- Consideration of potential impacts that point source pollutants may have on the site.

It is hoped that the SFCAs will gradually increase fish populations threatened by overfishing, restore degraded marine and coastal habitats, and provide coastal protection during extreme events. This is because the coastal and marine habitats inside the SFCAs provide species the opportunity to reach full sexual maturity therefore increasing their egg producing/spawning potential and survival of the species overall. The SFCAs also offer socio-economic benefits through improvement in economic opportunities for fishers, opportunities for eco-tourism, and providing marine and coastal environments for research and education activities.

In terms of management, Jamaica's SFCAs are managed through cooperative arrangements between the Government and community organisations including NGOs. The partnership for each SFCA is formalized through a Memorandum of Agreement (MoA) between the Ministry of Agriculture and Fisheries (MoAF) and the collaborating organization. Under the MoA, the Government provides financial resources for the partner communities/NGOs to undertake the day-to-day operations of the SFCA. In most cases, surveillance of the SFCA is provided by Jamaica Constabulary Force (JCF) Marine Police and Jamaica Defence Force (JDF) Coast Guard and supplemented by the partner NGOs who engage in patrolling the SFCAs and enforcing the laws.

## **1.2 Challenges in managing the SFCAs**

While a considerable amount of effort has been invested in establishing fish sanctuaries and the network of SFCAs, Jamaica's fisheries are currently monitored through a centralised, top-down approach with government-led regulations and little involvement of local communities. To ensure compliance with the SFCA management measures, Jamaica plans to move away from the traditional monitoring and enforcement by government towards participatory or co-operative management in partnership with local fishing communities and NGOs. There are many advantages to this approach, involving local communities in the management of SFCAs will: (i) increase their understanding and knowledge of the fishery resources, (ii) the chance of violations due to lack of knowledge will decrease, and (iii) their desire to comply and assist in ensuring that others comply with controls will increase.

A recent (2017) capacity assessment and evaluation of the management effectiveness of the SFCAs conducted by The Nature Conservancy (TNC) under the Caribbean Marine Biodiversity Program (CMBP) (TNC 2017) showed that each SFCA management team is steadily developing capacity across a range of critical management areas such as enforcement, education and outreach, organizational infrastructure and staffing. The TNC (2017) report also shows that the SFCAs have clear objectives (e.g., increase fish biomass), strive to secure broad community support and are expanding their enforcement operations (Table 2). However, the assessment also identified performance gaps in critical areas of management planning, monitoring and evaluation, fundraising and capacity to operate as a functioning network (Table 2).

**Table 2: Summary of status and challenges facing SFCAs reported by TNC (2017).**

Aspect	Status	Challenges
Site values and ecological representativeness	SFCA managers have a relatively clear understanding of the values and ecological representativeness of species and habitats within their sites	<p>More biophysical monitoring and evaluation is needed to better understand current resource conditions and determine the effectiveness of management activities and interventions over time.</p> <p>Lack of socio-economic monitoring to inform social values of SFCAs</p>
Threats and pressures	Key threats and pressures are known. They include: Overfishing and illegal fishing; Depletion of keystone species; Invasive species; Coastal/upland development; Deforestation; Agriculture; Sewage and solid waste; Climate change; and Hurricane damage	<p>For some SFCAs, there is:</p> <ul style="list-style-type: none"> <li>• Lack of/limited management</li> <li>• Lack of community support</li> </ul> <p>Lack of compliance from fishers outside the SFCA community</p>
Public awareness	There has been an increase in stakeholder awareness / concern about resource condition since the establishment of SFCAs	Need for greater monitoring of stakeholder perceptions on the purpose and benefits of SFCAs to gain needed public support for the goals and management activities conducted at individual SFCAs.
Sanctuary objectives	<p>Management at each SFCA is guided by clear management objectives (e.g., increase fish biomass) including supporting activities</p> <p>Management objectives are guided by formal MoA between the Government and management organization</p>	High level government planning is often too ambitious than the financial resources can cover; managers need to narrow and prioritize management objectives and associated activities in line with available financial resources
Sanctuary design	<p>Baseline biophysical studies informed initial SFCA design</p> <p>The National Fisheries Authority (NFA) has provided guidelines on how SFCA managers should work with fishers and other stakeholders to secure buy-in during the sanctuary design and designation process.</p> <p>Fishers were consulted early in sanctuary design and boundary designation; they helped identify boundaries they could live with.</p>	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Aspect	Status	Challenges
Management planning	Five SFCAs have management plans	<p>12 SFCAs are yet to develop and adopt formal management plans</p> <p>Most important present and future elements of management include:</p> <ul style="list-style-type: none"> <li>• Enforcement, compliance and reduction of violations</li> <li>• Outreach and education</li> <li>• Management activities which lead to an increase in fish biomass</li> <li>• Sustained acquisition of funds to advance management</li> </ul>
Enforcement	<p>SFCAs have a high number of staff trained and certified as fisheries inspectors and/or sanctuary wardens.</p> <p>Positive working relationship between SFCA managers and national Marine Police.</p> <p>Recently increased fines helping to reduce violations.</p>	<p>Enforcement is at times difficult due to a lack of understanding of fisheries laws by the judiciary.</p> <p>Key enforcement issues include:</p> <ul style="list-style-type: none"> <li>• Allowing lionfish harvesting</li> <li>• Managing tourism operations</li> <li>• Protection of marine biodiversity.</li> </ul>
Staff capacity and competencies	<p>SFCAs have utilized funding from government, private foundations or grants to build staff capacity</p> <p>Staff numbers range from 4 - 14 depending on budget and number of sites managed.</p> <p>SFCA managers also utilize part-time staff and volunteers.</p> <p>Current staff competencies include:</p> <ul style="list-style-type: none"> <li>• Local ability to enforce/operate</li> <li>• Seamanship/boat handling</li> <li>• Public outreach, awareness and effective communication skills</li> </ul>	<p>There are several staff training needs including:</p> <ul style="list-style-type: none"> <li>• Field science, data collection and data analysis</li> <li>• Public speaking and public relations, stakeholder coordination and conflict management</li> <li>• Policing, self-defence and enforcement techniques</li> <li>• Basic accounting, financial management and general office management</li> </ul>
Equipment and infrastructure	<p>SFCA managers have access to:</p> <ul style="list-style-type: none"> <li>• Boats, engines and associated equipment (e.g., lifesaving equipment, binoculars, first aid kits, radios etc.)</li> </ul>	<p>Need for equipment to build management capacity and effectiveness including:</p> <ul style="list-style-type: none"> <li>• Newer boats, engines and associated equipment (e.g., VHF radios, binoculars, drones, spotlights and night vision equipment)</li> </ul>

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Aspect	Status	Challenges
	<ul style="list-style-type: none"> <li>Computers, printers and audio-visual equipment for presentations</li> <li>Dive gear and compressors</li> </ul>	<ul style="list-style-type: none"> <li>SCUBA and snorkel gear, tanks and a working compressor</li> <li>Laptop computers</li> <li>Monitoring gear</li> <li>Handheld GPS device</li> <li>Accounting software (e.g., QuickBooks)</li> <li>Office, storage space and interpretive centre</li> <li>Land ownership (to prevent runoff from poorly planned development)</li> </ul>
Stakeholder awareness and engagement	<p>SFCA managers have developed and distributed educational materials to increase stakeholder awareness on purpose and value of fish sanctuaries.</p> <p>SFCA managers regularly conduct outreach and face-to-face stakeholder meetings, mostly with fishers.</p>	Outreach and education are largely ad hoc
Monitoring and evaluation	<p>Biophysical monitoring informed design of sanctuaries across the SFCA network</p> <p>SFCA managers use at least one basic indicator to guide their monitoring efforts</p> <p>Several examples where monitoring has informed and improved management e.g., biophysical surveys to increased patrolling with better techniques to application of management effectiveness tools which help managers identify and target priority stakeholders.</p>	<p>More biophysical monitoring is needed to track priority issues and assess progress towards management objectives</p> <p>More socio-economic monitoring is needed</p> <p>Information needs on the status of sanctuary resources include:</p> <ul style="list-style-type: none"> <li>Fish biomass</li> <li>Reef conditions</li> <li>Water quality</li> <li>User carrying capacity</li> <li>Currents</li> </ul> <p>Need for more resources to support and advance monitoring of biophysical, socioeconomic and governance indicators</p>
Legislative/policy framework	<p>Presence of a legal framework enabling fish sanctuaries</p> <p>Increased fines (due to the 2015 Fisheries Act amendments) are a positive step in reducing fishing violations within sanctuary boundaries.</p>	Need to further strengthen relations with the Marine Police

Aspect	Status	Challenges
Sustainable finance	<p>Most SFCAs depend on the Government for their core funding.</p> <p>Some benefit from private foundations and regional initiatives such as the CMBP although these tend to provide short-term funding.</p>	<p>Lack of timely release of Government funds mean that SFCAs struggle to keep staff engaged and find it difficult to maintain annual work plans</p> <p>Need to diversify funding streams to support fish sanctuary management</p>

### **1.3 Monitoring, Control and Surveillance**

Monitoring, control and surveillance (MCS) is about compliance with SFCA management measures. It involves the gathering of information on the SFCA including the resources contained within to support the development and assessment of appropriate management measures, and using this information to ensure that the established controls are complied with. The objective of MCS is to contribute towards good SFCA management through ensuring that appropriate controls are set, monitored and complied with. The options available for an MCS system range from components of hardware in varying degrees of sophistication, human resources and various approaches to implementation ranging from military type enforcement to community driven compliance programmes.

Monitoring, control and surveillance is therefore an integral part of SFCA management requiring information to set the management measures, and also feeding information into the management system to assist in producing management decisions. In other words, the type of controls set will influence the monitoring and surveillance, while at the same time the monitoring and surveillance should influence the type of controls set. While MCS and enforcement is crucial for successful resource management and conservation, in many contexts the capacity and resources of public authorities to adequately monitor conservation regulations is lacking. The challenge of monitoring and enforcement is particularly salient in the context of newly established conservation initiatives where long-term outcomes often depend critically upon the establishment of supportive local communities in the early stages of implementation (Hersoug and Paulsen 1996, Kuperan and Sutinen 1998, Bergh and Davies 2002).

Community-based management has a special role to play in MCS and for many countries, it is the most feasible option to encourage compliance. For example, even high penalties and deterrence will not be effective if resource users are either financially desperate or have little alternatives. In these cases, the number of violations will increase. In such a situation, community intervention may be able to influence the resource users. Apart from the obvious advantages of voluntary compliance, it also has considerable financial implications for the SFCA: if the compliance is greater, then costs of enforcement are less.



## **1.4 Rationale for an MCS strategy and action plan**

Developing an MCS Strategy and Action Plan for the SFCAs would allow the local fishing communities to engage in the monitoring and management of their own fish sanctuaries and provide them with both the data and information to do so. It would also provide some powers to the SFCA management teams to implement appropriate management measures to ensure sustainable management is in place. For this to be achieved, the provision of guidelines and recommendations for legislative considerations to empower local communities to participate in community based MCS including enforcement (MCS&E) effectively is critical. While the Fisheries Act and other primary pieces of legislation related to fisheries have regulations to allow local community members to conduct surveillance and enforcement activities in a variety of positions (e.g., Fisheries Inspectors), a key issue with the current legislative environment is that the legislation does not contain specific provisions on community-based management and while it does purport to embrace the ecosystem approach which is expressed in terms of recognising social needs, it is generally rather community unfriendly even though section 4(g) does provide that “to the extent practicable, stakeholder participation in the management of fishery and aquaculture resources shall be promoted”. There is not much guidance given, however, as to how this is to be done. There is therefore need to develop a Strategy and Action Plan that ensures there is sufficient state will to empower community-based organisations to undertake MCS&E. This document identifies the roles of key stakeholders involved in the MCS&E including what they have to do and why they are doing it. This should potentially lead to increased compliance and potentially reduced costs/increased efficiency with the management of the SFCAs.

## **2 Method and Approach**

The development of this Strategy and Action Plan for community-based fisheries management including MCS&E involves three main activities: Literature review, capacity assessment and stakeholder consultation.

### **2.1 Literature review**

A desk-based review has been undertaken on several relevant reports and policies as follows:

- National plans, conventions, protocols, treaties, reports, and international and regional plans of actions that define Jamaica's obligations surrounding climate change. These were reviewed to identify what Jamaica's obligations under each of the agreement are.
- Draft fisheries and aquaculture policies and their alignment with Jamaica's stated policy goal to ensure that the strategies being developed are in alignment with policy goals.
- Existing legislation and whether these provide the necessary legal framework required to enact responsible community-based fisheries management including MCS&E.
- The scientific literature to determine international and regional best practice for community-based MCS and enforcement and how these might apply to Jamaica with a view to make recommendations and strategies.
- Identification of potential funding institutions (local and overseas) which are capable of providing financial support.
- Identification of potential Regional Fisheries Management Organizations (RFMOs) or Regional Fishery Bodies (RFBs) which can provide the necessary technical, advisory and scientific support to the Fisheries Division for assistance in developing climate smart and resilient strategies and action plans to effect community-based enforcement.

### **2.2 Capacity assessment**

Institutional capacity assessment of the SFCAs was gathered from a recent survey carried out by TNC (2017). Their report presents the findings of a rapid capacity assessment and management effectiveness evaluation of Jamaica's 17 declared SFCAs. Under the overarching goals of the CMBP, TNC tasked a third-party contractor to conduct the evaluation and subsequently utilize results to develop a weeklong professional development workshop to address priority training needs and interests of the SFCA management organizations. The evaluation provided an opportunity for organizations to work in an individual capacity (i.e., self-assessment interviews) and a collaborative context (i.e., as a full network at the workshop) to:

- Document site values, threats and pressures, and management objectives.
- Identify and address capacity gaps and training needs of each organization.
- Develop minimum performance standards for priority management topics.
- Identify needed performance improvements and action steps to advance work.
- Produce a comprehensive baseline of management performance across the network.

The findings from the TNC report are used here to summarise the current situation regarding the capacity of the SFCAs.

## **2.3 Stakeholder consultation**

Key SFCA stakeholders were consulted through three main activities

- An SFCA evaluation form was developed and sent to NFA for them to fill it in with details of each SFCA. The form was a modified version of the scorecard used to assess marine protected areas (MPAs) based on the 2004 IUCN Guidebook, which provides a basic and generic starting point for evaluating MPAs (World Bank 2004). The form therefore included a series of questions relating to design issues (context and planning), appropriateness of management systems and process (input and process), and the delivery of protected area objectives (outputs and outcomes).
- A week-long field trip was undertaken to conduct soft surveillance and hold discussions with seven SFCA management teams: Alligator Head Foundation, Oracabessa, Sandals Boscobel, White River, Discovery Bay, Bogue Lagoon and Montego/Airport point.
- The project team hosted an online stakeholder workshop where representatives of the NFA, National Environmental Protection Agency (NEPA), Jamaica Fisheries Co-operative Union, JDF Coast Guard and SFCA management teams attended. Discussions at the workshop focused on the key issues and challenges facing the SFCAs and how the different stakeholders could work together to support the initiative.

### **3 Situation overview**

The following overview is based on information gathered through the literature review and stakeholder consultation including the workshop.

#### **3.1 National plans, policies and legislation**

##### **3.1.1 Fisheries and aquaculture policy**

Jamaica's fishing industry has provided a means of livelihood for the people of Jamaica for many years, contributing to the direct and indirect employment of over 40,000 persons (FAO, 2019). Capture fisheries and aquaculture activities play a critical role in both the economic growth of the country and food security, with domestic production currently accounting for about 20 per cent of supply (FAO, 2019). The social importance of the industry is particularly apparent in fishing communities which are characterised by rural surroundings with often high rates of poverty (Chan et al., 2019). Depletion of fish stocks has been a major concern for Jamaican fleets (Soares, 2017), particularly in relation to near-shore reef fisheries, and has led to more severe regulation. With high levels of fishing pressure from the artisanal sector, which has limited alternative livelihoods, efforts at regulation have proven costly.

The National Fisheries Policy has become a major national priority. The National Fisheries Policy must be consistent with accepted principles of sustainable development, such as the ecosystem approach, and be closely coordinated with related policies for national development, such as environmental, economic and social development policies. The main goals of the National Fisheries Policy are to:

- Contribute to economic growth and reduction of poverty.
- Contribute to sustainable livelihoods of Jamaicans through employment in fisheries and related activities.
- Contribute to the provision of food security.

##### **3.1.2 Legal framework for community-based MCS&E**

Community-based MCS&E have specific requirements to enable them to be implemented and effective. These include elements referring to data collection (as an example of monitoring), recording of vessel activity (as an example of surveillance) and defining and establishing where to fish (as an example of control). Essential to allow for the several dimensions of community-based MCS&E is an enabling legal framework that empowers members of the community to conduct such activities. We have reviewed the existing legislations to determine if the legal framework exists to create the necessary enabling environment for the responsible enactment of community-based fisheries management including MCS&E. Findings show that while it is recognised that the Fisheries Act and other primary pieces of legislation related to fisheries have regulations to allow local community members to conduct surveillance and enforcement activities in a variety of positions e.g., Fisheries Inspectors, a key issue with the current legislative environment is that the legislation does not give full autonomy to the community or community-based partners to manage the coastal and marine areas. However, Jamaica has ample policies and plans that address both social and environmental aspects of ecosystem-based fisheries management (EBM) of coastal and marine areas, including fisheries. These policies specifically address environmental protection and capture the importance of community-based management. NGOs and community-based organizations (CBOs) have an important role in ensuring the

sustainable use of coastal and marine resources. These organizations appear to be mutually supportive.

### **3.1.3 National plans related to climate change**

As one of the largest SIDS in the Caribbean, Jamaica is considered particularly vulnerable to climate change due to its physical and socio-economic attributes (FAO 2019; Stennett-Brown et al., 2019). Climate associated stressors and risks threatening Jamaica include weather-related disasters such as hurricanes, rising sea levels, coral bleaching and declining fish stocks (Alexander et al., 2015), the impacts of which are felt across a wide range of sectors. The Jamaican Government regards climate change resilience and adaptation a high priority for the island and its people (Government of Jamaica, 2009).

At an international level, Jamaica, as a Party to the UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol, has been active in advocating for substantial reductions in the global level of greenhouse gases (GHG) as well as the provision of adequate financing to assist SIDS in undertaking adaptation and mitigation measures at the national level. In 2020, Jamaica became the first Caribbean nation to submit their nationally determined contribution (NDC) at the five-year milestone of the 2015 Paris Agreement. The NDC committed Jamaica to deeper emission reductions in the energy sector, and to addressing land use change and forestry emissions (Government of Jamaica, 2020).

At the national level, a number of projects focused on adaptation to climate change have been implemented. These include community-driven initiatives to raise the public's awareness of climate change and how it can be addressed, targeting vulnerable groups in particular. Within the last decade, institutional changes have been made within Government to establish a Climate Change Division (with a specific mandate to address climate change issues), the appointment of a Climate Change Advisory Committee, and the establishment of the Climate Change Focal Point Network to facilitate a multi-sectoral approach to climate change. Jamaica's long-term National Development Plan (Vision 2030) along with the National Climate Change Policy Framework are key instruments leading the call for the creation of sector-specific climate change strategies for the island's most vulnerable sectors.

## **3.2 Community assessment and readiness of stakeholder entities**

A summary of the key aspects of each SFCA gathered through the evaluation form is presented in Annex 1. While there are several challenges and opportunities facing the SFCAs, managers across all sites are willing and have the drive to manage the fish sanctuaries including undertaking MCS&E activities.

The main points raised at the stakeholder workshop, to be addressed/included in the Strategy and Action Plan comprise of:

- Monetary value of sanctuaries to the economy needs to be determined. It is hoped that this will encourage the Government to place priority on the sanctuaries, especially in terms of budgeting, so that the subventions given will be on time, and adequate for the needs of the sanctuary. This dollar figure should be based on:
  - Tourism value
  - Ecological value
  - Fisheries production value

The Government of Jamaica (GoJ) has a mandate to support the sanctuaries, which are managed by community groups on behalf of the government of Jamaica. A suggestion was made for a tax to be collected from tourists to help fund the sanctuaries (or a portion of the funds collected by TEF, to be reallocated to sanctuaries).

- Policy support from the NFA to allow for the institution of user fees, to be paid by those entities which utilize the sanctuaries for tourism/recreation purposes.
- Communication with the SFCAs and the NFA needs to be improved, with the fisheries inspectors working more closely with the SFCA managers, especially in terms of sharing of information and support for alternative livelihoods. Additionally, the NFA needs to take a stronger supervisory role, where they can identify and address, when necessary, issues with management. Reports are good, but the NFA needs to have more presence on the ground to identify the situations which may not be captured in the report. Feedback on the reports submitted is also needed.
- Standardization of the SFCAs is needed. A management plan template should be created which is then customized to each sanctuary. Certain elements should be standard across the board, such as design of uniforms, marker buoys, the provision of ID cards for the wardens, etc. A buffer zone policy was needed to determine if this zone would be 15 or 20 meters or more.
- The MoUs between the SFCAs and the GoJ need to have more input from the SFCAs
- The SFCAs can, and are willing to, do more within the local fishing communities. The NFA should determine what additional role the SFCA managers can play (with the appropriate funding), and provide guidance. The SFCAs should each have a management board with members from the surrounding communities, which can set goals/targets for the SFCA.
- More technology needs to be procured and employed by the SFCA managers.
- Increased collaboration with Law Enforcement (especially JCF Marine Police) is needed. More Marine Police outposts would be helpful.
- There is need for a central database managed by the NFA where all the monitoring data are stored and accessed.
- There is need for technical support to the sanctuaries based on international standards.
- There is need for an environmental impact assessment (EIA) led by NEPA to be carried out on all of the fish sanctuaries. Sanctuary managers are willing to help carry out regular National Coral Reef Surveys.
  - NEPA has a great interest in Jamaican protected areas and would therefore be happy to host a database for the sanctuaries.
  - NEPA is happy to provide training to SFCA management teams in terms of monitoring/data collection but presently it does not possess much funding for such purposes. NEPA would consider such requests for training over the next five-year period.
- JDF Coast Guard supports cooperation with sanctuaries and would like to know when and which staff from sanctuaries were going out on patrols. JDF Coast Guard is keen to enhance cooperation between the JDF Coast Guard and staff of the SFCAs.

### **3.3 Issues impacting SFPAs due to climate change**

The coastal and marine environment where the SFCAs are located includes several habitats such as beach, rocky shore, sea grass beds, mangroves and coral reefs that provide a number of critical ecosystem services. Under future climate change, there is a high likelihood that these ecosystems to change due to higher frequency of intense storms, ocean acidification, sea surface temperatures and sea-level rise. The impacts of climate change have already been observed throughout the Caribbean and in Jamaica, e.g., mass coral bleaching events in 1998 and 2005 (McWilliams et al., 2005). Fishers are vulnerable to these events, and among other impacts, can experience substantial financial and economic losses from damage to their boats, gear, equipment and loss of income (Sainsbury et al., 2018; Tietze and Van Anrooy, 2018). Further, these marine and coastal ecosystems have an important function of coastal protection during adverse weather and extreme events, providing natural barriers to the coastline and helping to reduce wave power and erosion (Ferrario et al., 2014; Beck et al., 2018; Reguero et al., 2018). Healthy coral reefs are expected to provide greater coastal protection than those that are degraded, overexploited and in poorer condition (Reguero et al., 2018). The synergistic and cumulative effects of climate change may significantly alter the structure and function of coastal and marine environments, which in turn could influence their ability to deliver the critical ecosystem services currently supporting society. Sustainable fisheries management is therefore crucial to limit the negative impacts of fishing activities on reef systems, such as overexploitation of reef fish populations or damage from fishing gears, and it can help improve coral reef health, condition and maintain key ecosystem functions and services including shoreline protection (Darling and D'agata, 2017; Steneck et al., 2018).

The Caribbean Community Climate Change Centre (CCCCC) has developed a National Adaptation Strategy and Action Plan for the Fisheries Sub-sector for Jamaica (CCCCC 2015). It concluded that climate change poses a real and immediate threat to Jamaica's fisheries sector. Their assessment of readiness of Jamaica's fisheries sector for climate change adaptation is based on the concepts of adaptive governance. The approach promoted in the strategy is one of building resilience through the strengthening of SFCAs among other initiatives.

## **4 Potential funding institutions**

In many parts of the world, financial institutions play a major role in the social and economic development of nations with developing or transitional economies. It is common that many financial institutions share mutual goals and objectives centred on:

- Reducing global poverty and improvement of living conditions;
- Supporting socio-economic, environmental and institutional development; and
- Promoting regional cooperation and integration.

Financial support across these objectives can be provided by both domestic and foreign bodies, ranging from large international financial institutions (e.g., the World Bank) to smaller environment funding NGOs (e.g., The Pew Charitable Trusts and WWF) and preferential purchasing agreements. There has also been the establishment of the National Conservation Trust Fund of Jamaica, which was established to provide funding for initiatives such as SFCA management (<https://conservejamaica.org/who-we-are/>).

In recent years, there has been an increase in financial institutions giving focus to climate change related strategies and programmes through a variety of mechanisms. Examples of multilateral climate funding institutions (i.e., governed by multiple national governments) include the Green Climate Fund (GCF) and Inter-American Development Bank (IDB). The GCF is one of the largest multilateral climate funds, established within the framework of the United Nations Framework Convention on Climate Change (UNFCCC) to assist developing countries in adaptation and mitigation practises to counter climate change. The IDB is a more regionalised source of development financing specifically for countries within Latin America and Caribbean.

Further examples include debt-for-climate (or debt-for-nature) swaps, where debt accumulated by a country is repaid in local currency and redirected to domestic projects that boost climate mitigation and adaptation activities. For example, the Seychelles, in collaboration with TNC undertook a debt-for-nature swap where \$27 million of debt was redirected to establish marine parks, ocean conservation and ecotourism activities. The Environmental Foundation of Jamaica, a grant making institution, was founded as a result of a debt swap initiative (<https://jis.gov.jm/efj-provides-record-grants-to-54-organisations/>). The longevity and success of community-based management in Jamaica of any scale or form requires appropriate financial and technical support for stakeholders. Jamaica has long been a recipient of international and domestic funding in order to support national development initiatives (Annex 2).



## **5 Potential Regional Fisheries Management Organisations (RFMOs) and Regional Fisheries Bodies (RFBs) that can provide support**

Jamaica is already a member of a number of RFMOs and RFBs including the Caribbean Community (CARICOM) and the Caribbean Regional Fisheries Mechanism (CRFM). In addition, Jamaica is a member of the Western Central Atlantic Fishery Commission (WECAFC) and the Commission for Small-Scale and Artisanal Fisheries and Aquaculture of Latin America and the Caribbean (COPPESAALC). Although larger RFMOs such as the International Commission for the Conservation of Atlantic Tunas (ICCAT) have not traditionally been involved in co-management initiatives, where small-scale fisheries and tuna and tuna-like fisheries overlap, some advice and support may be available to provide data from these fisheries to ICCAT to ensure Jamaica is in compliance with ICCAT recommendations.

In relation to climate change, RFMOs / RFBs may look at climate change with differing degrees of importance at the moment and indeed many are shown to be lagging behind where they need to be. Climate change is likely to impact migration, spawning and recruitment of many fish species. However, as the potential responses and mechanisms remain largely unknown as the impacts themselves are unknown or not fully understood for many species, it remains difficult to build responses into planning. A multidisciplinary approach to begin to address this knowledge gap has started within some RFMOs but this will be a long process. MCS requirements e.g., those of ICCAT which are probably the most developed for the region, are again a very top-down approach, with requirements for observer programmes, monitoring at sea and port state control being well developed. Although these may not be the most appropriate for community-based management or fisheries for species that are not large pelagics, many of the principles and data collection mechanisms will apply (e.g., collection of length frequency data) and can be implemented as standards across fisheries with minimal input.

The overlap between RFMOs / RFBs and community-based management is not high. Typically, as RFMOs / RFBs are government level organisations, the discussions and management are at a high level and it is left to the individual members as to how they implement the management at the national level. However, some guidelines on the collection of data and MCS are available where these are high contributors to the overall fishery. For example, in the Indian Ocean tuna fisheries catches are over 50% from artisanal fisheries and the data collection from these fisheries is key to overall stock assessment. Therefore, recent attention has been paid in making sure that these data are collected, processed and analysed for submission to IOTC to use in regional stock assessments.

## 6 Vision and guiding principles

This section provides statements for the vision and guiding principles towards development of the community-based fisheries management for SFCAs including MCS&E.

### 6.1 Vision

The vision of this community-based MCS&E Strategy and Action Plan is **“Empowered fishing communities managing their local coastal and marine ecosystems in ways that enrich livelihoods, provide resilience to climate change, and sustain healthy marine and coastal environments for generations to come”**.

### 6.2 Guiding principles

This community-based MCS&E Strategy and Action Plan will ensure that SFCA communities provide information to restore and improve the marine and coastal resources, thereby improving the lives of the individuals and households who use and depend on them. It takes into consideration the following principles.

- Principle 1: A community-based MCS&E system that is based on the practical requirements needed to implement the SFCA management measures.
- Principle 2: An MCS&E system that leads to the identification of threats, problems, solutions and opportunities for SFCAs
- Principle 3. An MCS&E system providing data and information to assess positive and negative impacts of the management measures including assessment of the effectiveness of the SFCA management.
- Principle 4. An MCS&E system that builds stakeholder participation and appropriate education and awareness programmes.

## 7 Strategic outcomes and goals

Below, we summarise the Strategic Outcomes and Goals for this community-based fisheries management plan that includes MCS&E. This Strategy and Action Plan for Jamaica's SFCAs provides a roadmap for establishing community-led sustainable fisheries management including MCS&E. The MCS&E by local fishers and NGOs will therefore focus on the following cross-cutting strategic outcomes.

- **Strategic Outcome 1:** Effective participation/involvement of local communities and other stakeholders in the management of SFCAs including MCS&E.
- **Strategic Outcome 2:** An enhanced SFCA system with financial sustainability that ensures adequate funding to achieve and maintain management objectives.
- **Strategic Outcome 3:** Healthier marine and coastal ecosystems that are under effective local management.
- **Strategic Outcome 4:** Improved management effectiveness and capacity of community-based organisations with adequate communication strategies in place.
- **Strategic Outcome 5:** Stakeholder awareness and engagement in SFCA activities improved and contributing to the effective management of coastal and marine resources.
- **Strategic Outcome 6:** Local communities that are resilient to economic and climate shocks.

**Table 3: Summary of strategic outcomes, goals and specific objectives for the community-based fisheries management plan that includes MCS&E.**

Strategic outcomes	Goals	Specific objectives
1. Effective participation/ involvement of local communities and other stakeholders in the management of SFCAs including MCS&E.	1.1 Ensure there is sufficient political will and legal framework for community-based fisheries management	1.1.1 Make specific provision for community-based management in fisheries legislation
	1.2 Strengthen institutional and organisational environment for effective involvement of community-based organization.	1.2.1 Strengthen the level and quality of interactions between government, NGOs scientific and community-based organizations to enable effective management and development programs
		1.2.2 Work closely with academic or research institutions to gather independent / objective advice
2. An enhanced SFCA system with financial sustainability that ensures adequate funding to achieve and maintain management objectives	2.1 Ensure there is sufficient financial resources to effectively manage SFCAs	2.1.1 Make sufficient allocation in the national budget to cover the costs associated with effective management of SFCAs
	2.2 Explore ways to raise funds to support management activities	2.2.1 To diversify funding streams to support SFCA management activities

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Strategic outcomes	Goals	Specific objectives
<b>3. Healthier marine and coastal ecosystems that are under effective local management</b>	<b>3.1</b> Support and strengthen monitoring and surveillance of SFCA regulations	<b>3.1.1</b> Deter infringements and enforce control measures
		<b>3.1.2</b> Promote recognition of SFCA regulations and restrictions including boundaries
		<b>3.1.3</b> Develop consistent and coherent enforcement operations with JDF Coast Guard and JCF Marine Police
		<b>3.1.4</b> Review compliance reports
	<b>3.2</b> Use participatory approach to establish and monitor input and output controls for the SFCAs	<b>3.2.1</b> Inventory all fishing activities adjacent to SFCA site
		<b>3.2.2</b> Inventory all recreation activities at each SFCA site
		<b>3.2.3</b> Collect data at sea that can be time, date and position referenced in relation to both activities and catch
		<b>3.2.4</b> Assess the volume and value of landings
		<b>3.2.5</b> Collect market and supply chain information
	<b>3.3</b> Develop and coordinate monitoring of bio-physical and socio-economic variables for each SFCA	<b>3.3.1</b> Develop and use indicators for bio-physical monitoring
		<b>3.3.2</b> Develop and use indicators for social and economic monitoring
		<b>3.3.3</b> Coordinate data collection and monitoring with Government scientists and academic institutions
		<b>3.3.4</b> Analyse data and compile assessment reports
		<b>3.3.5</b> Use lessons learnt from monitoring to adapt and improve marine and coastal resource management
	<b>3.4</b> Promote economically and ecologically sustainable resource use	<b>3.4.1</b> Promote alternative livelihoods and diversification through improvements in local infrastructure and develop mariculture and tourism industries
<b>4. Management effectiveness and</b>		<b>4.1.1</b> Use common standards across all SFCA

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Strategic outcomes	Goals	Specific objectives
capacity of community-based organisations improved with adequate communication in place	<b>4.1</b> Develop and adopt common standards across the SFCAs	<b>4.1.2</b> Ensure SFCA management teams adopt and deliver formal management plans for the sites they manage
	<b>4.2</b> Address staff training needs	<b>4.2.1</b> Build skills in coastal and marine management measures and MCS&E in particular
	<b>4.3</b> Address equipment needs	<b>4.3.1</b> Address equipment needs for building management capacity and effectiveness
<b>5.</b> Stakeholder awareness and engagement in SFCA activities improved and contributing to the effective management of coastal and marine resources	<b>5.1</b> Develop and consistently use outreach and education approaches	<b>5.1.1</b> Develop guidelines for stakeholder awareness and engagement
		<b>5.1.2</b> Develop a coordinated stakeholder approach with NFA's fisheries Inspectors to work closely as collaborators for information and livelihood support
	<b>5.2</b> Communicate findings from monitoring activities to stakeholders	<b>5.2.1</b> Use different ways to communicate findings
<b>6.</b> Local communities that are resilient to economic and climate shocks	<b>6.1</b> Ensure coastal and marine ecosystems are well managed	<b>6.1.1</b> Restore and improve mangrove, seagrass and coral reef health and condition

## 8 Action Plan

An action plan has been developed for each Strategic Outcome including proposed activities, the responsible institution, benchmarks/objectively verifiable indicators (OVIs), financial sources, financial needs and timeframe/milestones for the successful implementation of the Strategy and Action plan.

### 8.1 Strategic Outcome 1: Effective participation/involvement of local communities and other stakeholders in the management of SFCAs including MCS&E.

This Strategic Outcome focuses on the need to strengthen policies and legislation to ensure effective implementation of community-based fisheries management that includes MCS&E. Findings from the literature review and stakeholder consultation show that harmonization of the legal framework, mandates and policies at various levels of fisheries management are needed. Clear legal and policy mandates are required for cross-jurisdictional and governmental agency cooperation and to achieve the desired SFCA outcomes. While the Fisheries Act has regulations to empower local community members to conduct surveillance and enforcement activities, there is need to develop a system that ensures true co-management where the community-based management partners have authority to manage the SFCAs. Other aspects to consider include the level and quality of interactions between governmental, non-governmental, scientific, private sector and community-based organizations both vertically and horizontally since these influences the effectiveness of management and development programs. Similarly, external agents (academic or research institutions) assist the local communities in defining the problem, provide independent advice and expertise, provide training and technical assistance, and assist in developing management plans, and therefore are important under this Strategic Outcome.

**Table 4: Action plan for Strategic Outcome 1.**

Goal 1.1 Ensure there is sufficient political will and legal framework for community-based fisheries management						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/milestones
<b>Specific objective 1.1.1:</b> Make specific provision for community-based management in fisheries legislation						
<b>Strategy 1.1.1:</b> Strengthen policies and legislation related to community-based fisheries management						
Make specific provisions for community-based management in fisheries legislation	Define the legal entity or mechanism to represent the community	Ministry of Agriculture and Fisheries (MoAF), Government of Jamaica (GoJ)	Presence of a legal entity or mechanism in Jamaica's legislation responsible for community-based	Government funds	Parliamentary process to set up legal entity under GoJ law	Short-term

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 1.1 Ensure there is sufficient political will and legal framework for community-based fisheries management</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
			fisheries management			
	Define the role of local communities in the management of coastal and marine areas	MoAF, GoJ	Paragraphs in fisheries legislation specifying role of community-based organisations in fisheries management	Government funds	Parliamentary process to define roles and responsibilities of local communities under GoJ law	Short-term
	Define the functions of SFCA Wardens towards MCS&E	MoAF, GoJ	Entries in fisheries legislation specifying functions of SFCA Wardens in MCS&E	Government funds	Parliamentary process to set up functions of Wardens under GoJ law	Short-term
	Delineate power sharing and decision making	MoAF, GoJ	Code of conduct with roles and responsibilities for each organisation	Government funds	Parliamentary process to discuss and set up code of conduct	Short-term

<b>Goal 1.2 Strengthen institutional and organisational environment for effective involvement of community-based organisations</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 1.2.1:</b> Strengthen the level and quality of interactions between government, NGOs scientific and community-based organizations to enable effective management and development programs						
<b>Strategy 1.2.1:</b> Strengthen organisational set up for community-based fisheries management						
Strengthen cross-sectoral efforts to effectively manage	Create accountability for institutional arrangements	MoAF, NFA and SFCA management teams	Code of conduct with roles and responsibilities for each organisation	Government funds, current SFCA budget	Staff time to discuss and set up code of conduct	Short-term

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 1.2 Strengthen institutional and organisational environment for effective involvement of community-based organisations</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
and develop MCS programs	Ensure SFCAs provide input towards MoUs between SFCAs and the GOJ	MoAF, NFA and SFCA management teams	Number and position of people consulted during the development of MoUs	Government funds, current SFCA budget	Staff time to input into MoUs	Short-term
<b>Specific objective 1.2.2:</b> To work closely with academic or research institutions to gather independent/objective advice						
<b>Strategy 1.2.2:</b> Ensure there is an academic/research institution willing to provide independent/objective advice						
Integrated working to maximise economic, social and environmental outcomes of SFCAs	Develop a list of technical experts (ecologists, economists etc) and start networking with them	SFCA management team, NFA and NEPA	Contact list with technical experts	Current SFCA budget	Staff time to contact experts and establish rapport with them	Short to medium term
	Use the list of experts to acquire national and international best practices and technical support including training to SFCAs	SFCA management team, NFA and NEPA	Minutes and reports for meetings, workshops and advice provided to SFCAs by the experts	Current SFCA budget	Staff time to contact experts and establish rapport with them	Short to medium term
	Provide training to SFCA teams towards biophysical and socio-economic monitoring	NFA and NEPA	Number trained, course/module notes	NFA and NEPA budget	Staff time and field work/practical lessons	Short to medium term



## 8.2 Strategic Outcome 2: An enhanced SFCA system with financial sustainability that ensures adequate funding to achieve and maintain management objectives

This Strategic Outcome focuses on the need for adequate financial resources/budget to ensure management of the SFCAs is effective. Most SFCAs depend on a government subvention, provided annually by the NFA for their core funding. Some benefit from private foundations and regional initiatives such as the CMBP. Some SFCAs find it challenging to keep staff engaged and maintaining annual work plans due to a lack of timely dispersal of government subventions. SFCAs need to diversify funding streams to support management activities and some stakeholders indicated that acquiring non-profit status could secure greater financial resources.

**Table 5: Action plan for Strategic Outcome 2.**

Goal 2.1: Ensure there is sufficient financial resources to effectively manage SFCAs						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/milestones
<b>Specific objective 2.1.1:</b> Make sufficient allocation in the national budget to cover the costs associated with effective management of SFCAs						
<b>Strategy 2.1.1:</b> Ensure there is an effective and sustainable funding model for SFCAs						
Generate financial resources to sustain management of resources in SFCAs	GoJ to prioritise SFCAs, especially in terms of budgeting, so that the subventions given are on time.	MoAF, NFA	Total budget received and timeliness of money transfer	Government funds, Current SFCA budget	Money transfer from NFA to SFCAs	Continuous
	Using net realizable value (NRV) and other methods to determine the fiscal benefit of SCFAs to fisheries and tourism as well as ecological benefits	SFCA management team, NFA, academic/research institutions	Estimate of the monetary value of SFCAs	Government funds	Budget to undertake the assessment	Short to medium term
	Use a proportion of the tax collected from tourists to help fund the sanctuaries	Ministry of Finance, MoAF, NFA	Amount given to SFCA as a proportion of the total amount raised through the tourism tax	Government budget	Money transfer from NFA to SFCAs	Continuous

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 2.2: To diversify funding streams to support SFCA management activities</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 2.1.1:</b> Explore ways to raise funds to support SFCA management activities						
<b>Strategy 2.2.1:</b> Ensure there is adequate financial resources/budget to promote effectiveness of the SFCAs						
Develop ways to attract more funding to support management activities	Work with GoJ to acquire non-profit status and use it to raise funds	SFCA management team, NFA	Acquisition of not-for-profit status	Current SFCA budget	Staff time to develop a plan and discuss with GoJ	Short to medium term
	Provide policy support to allow SFCAs to charge user fees	GoJ, NFA	Presence of legislation/policy towards user fees	Government budget	Staff time for MoAF and NFA to put policy proposals to GoJ	Medium to long term
	Develop revenue generating activities related to tourism	SFCA management team, NFA	Number of activities/project and the income they generate	Current SFCA budget	Financial investment towards income generating activities	Short to medium term
	Develop proposals and use them to solicit external funding from philanthropic organisations	SFCA management team, NFA	Number of proposals submitted per year	Current SFCA budget	Staff time to develop proposals	Short to medium term
	Formulate business plans aiming at promoting SFCAs as premier tourism destination	SFCA Management team and Government	Business plan	Part of current budget	SFCA staff time	Medium to long term
	Develop marketing strategies to attract broad-based revenue sources through the private sector. For example, could use mangrove cover and protection to engage airline companies to see whether they can ask passengers to provide online donation to offset their carbon footprint	SFCA Management team and Government	Marketing initiatives	Part of current budget	SFCA staff time	Medium to long term

### 8.3 Strategic Outcome 3: Healthier marine and coastal ecosystems that are under effective local management

This Strategic Outcome focuses on the implementation of MCS&E activities that would lead to restoration of degraded coastal and marine ecosystems protected by the SFCAs. Jamaica's seascape is comprised of diverse coastal and marine ecosystems most of which are degraded due to overexploitation and the use of destructive fishing gear. These pressures are exacerbated by coral bleaching related to ocean warming, sedimentation and an increase in destructive storms which reduce coral cover and reef productivity. Key strategic goals including supporting and strengthening of monitoring and surveillance of SFCA regulations, development and coordinated monitoring of bio-physical and socio-economic variables, the promotion of alternative livelihoods and diversification through improvements in local infrastructure and development of mariculture and tourism industries, and adaptive management (a process that emphasizes learning by doing and feedback, and links the progressive accumulation of information and knowledge with management) are detailed.

**Table 6: Action plan for Strategic Outcome 3.**

<b>Goal 3.1: Support and strengthen monitoring and surveillance of SFCA regulations</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 3.1.1: Deter infringements and enforce control measures</b>						
<b>Strategy 3.1.1: Conduct and strengthen MCS&amp;E operations/patrols at sea and on land</b>						
Use patrol vessels and drones to monitor and enforce SFCA regulations	Conduct enforcement patrols with JCF Marine Police and JDF Coast Guard	SFCA management team, JCF Marine Police, JDF Coast Guard	Number of patrols  Number of infringements recorded	GoJ, SFCA budget	Fuel for patrol vessel, SFCA staff time, travel and subsistence	Ongoing delivery of enforcement
Use beach patrols to enforce SFCA regulations	Conduct beach patrols to check for fishing licences, size and gear restrictions	SFCA management team	Number of patrols  Number of infringements recorded	Government, SFCA budget	SFCA staff time, travel and subsistence	Ongoing delivery of enforcement
<b>Specific objective 3.1.2: Develop consistent and coherent enforcement operations with JDF Coast Guard and JCF Marine Police</b>						
<b>Strategy 3.1.2: Consistent and coherent enforcement operations undertaken with JDF Coast Guard and JCF Marine Police</b>						
Work closely with JCF Marine Police and JDF Coast Guard to develop a joined-up	Develop a prioritised, risk-based approach to providing continuous enforcement of regulations	SFCA management team, JCF Marine Police and JDF Coast Guard	Implementation of integrated enforcement activities	Government, SFCA budget	SFCA staff time during patrols	Ongoing delivery of enforcement

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 3.1: Support and strengthen monitoring and surveillance of SFCA regulations</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
approach to enforcing SFCA regulations	Implement a risk-based and intelligence-led approach to enforcement, using technological improvements to maintain a focus on high-risk fisheries activities.	SFCA management team, JCF Marine Police and JDF Coast Guard	Continuous enforcement activities	Government, SFCA budget	SFCA staff time during patrols	Ongoing delivery of enforcement
<b>Specific objective 3.1.3: To promote recognition of SFCA regulations and restrictions including boundaries</b>						
<b>Strategy 3.1.3: Promote recognition of SFCA regulations and restrictions including boundaries</b>						
Promote recognition of the SFCA regulations and restrictions including boundaries	Conduct public communication, education and awareness raising	SFCA Management team, NFA	Number of posts in schools and social media	Donors/ grants; Government	SFCA staff time	Short term
	Engage MCS&E collaborators to promote mutual respect and collective learning	SFCA Management team, JCF Marine Police, NFA, JDF Coast Guard, Academic institutions	Number of joint awareness campaigns, publications	Donors/ grants; Government	SFCA staff time	Short term
	Employ participative governance structures and processes	SFCA Management team	Existence of a multi-stakeholder task force in charge of planning	Donors/ grants; Government	SFCA staff time	Short term
	Use transparent participation and decision-making processes	SFCA Management team	Number of consultations used to gather stakeholder input into SFCA regulations, existence of lines of communication between stakeholders and SFCA management team	Donors/ grants; Government	SFCA staff time	Short term
<b>Specific objective 3.1.4: Review compliance reports</b>						

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 3.1: Support and strengthen monitoring and surveillance of SFCA regulations</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Strategy 3.1.4:</b> Review compliance reports regularly						
Analyse, compile and share compliance reports with Government enforcement agencies	Set up an enforcement working group together with JCF Marine Police and JDF Coastguard	SFCA management team, JCF Marine Police and JDF Coast Guard	Existence of an enforcement working group	Government, SFCA budget	SFCA staff time to set up group	Every 6 months
	Collate, analyse and write reports on compliance including details of infringements	SFCA management team, Marine Police and JDF Coast Guard	Compliance report	Government, SFCA budget	SFCA staff time	Every 6 months
	Review compliance reports and develop forward look actions	SFCA management team, Marine Police and JDF Coast Guard	Enforcement action plan/ recommendations	Government, SFCA budget	SFCA staff time	Every 6 months
	Develop a manual containing MCS&E guidelines on regulations and procedures for enforcement	SFCA management team, Marine Police and JDF Coast Guard	Best practice guidelines	Government, SFCA budget	SFCA staff time	Develop once, review regularly

<b>Goal 3.2: Use participatory approach to establish and monitor input and output controls for the SFCAs</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 3.2.1:</b> Inventory all fishing activities adjacent to each SFCA site						
<b>Strategy 3.2.1:</b> Full inventory of the boats, engines, fishers and gears used in fishing grounds adjacent to each SFCA						
Collect details of boat and engine including boat ownership	Gather data on vessel length, horsepower, vessel capacity, ownership	NFA, SFCA management team	Full list of vessels used, size, power, details of ownership	Part of current budget	SFCA staff time to collate information from fishers	Annually

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 3.2: Use participatory approach to establish and monitor input and output controls for the SFCAs</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
Collect data on fisherfolk	Gather data on fishers, their age, gender, licences	NFA, SFCA management team	Full list of fishers in the area surrounding the SFCA and their details	Part of current budget	SFCA staff time to collate information from fishers	Annually
Collect number and types of gears used	Gather data on gear types and number used by each fisher including mesh size for nets	NFA, SFCA management team	Full list of gears used in the area surrounding the SFCA	Part of current budget	SFCA staff time to collate information from fishers	Each season; at least twice each year
<b>Specific objective 3.2.2:</b> Inventory all recreation activities at each SFCA site						
<b>Strategy 3.2.2:</b> Full inventory of recreational activities at each SFCA						
Collect details of recreational activities inside and adjacent to SFCA	Gather data on recreational activities including ownership	SFCA management team	Full list of recreational activities	Part of current budget	SFCA staff time to collate information from recreational users	Annually
	Gather data on use patterns including frequency and location of activities	SFCA management team	Map of use patterns of recreational activities	Part of current budget	SFCA staff time to collate information from recreational users	Annually
<b>Specific objective 3.2.3:</b> Collect data at sea that can be time, date and position referenced in relation to both activities and catch						
<b>Strategy 3.2.3:</b> Conduct and strengthen MCS operations/patrols at sea and on land						
Design and equip fishers with logbooks to collect data during fishing operations	Design logbooks and give them to fishers  Record catch, effort, location and gear during fishing activities	NFA, SFCA management team  Individual fishers supervised by SFCA	Logbooks with key variables  Number of logbooks filled in and return to SFCA/NFA by fishers	Part of current budget	SFCA staff time to design and collate fishing activities data from fishers	Design once but review usability of logbooks annually  Collate data from fisher logbooks weekly
Use Vessel Monitoring System (VMS) to provide	Source and install low-cost VMS	SFCA management team, NFA	Number of vessels with VMS	Donor/grants	Funds to purchase the transponders, cover running costs	Short term

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 3.2: Use participatory approach to establish and monitor input and output controls for the SFCAs</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
real-time position, course and speed of fishing activities	transponders on fishing vessels				including data transfer	
<b>Specific objective 3.2.4: Assess the volume and value of landings</b>						
<b>Strategy 3.2.4: Collect data and information on landings</b>						
Collect data at landings sites including beaches.	Collect weight and value of landings at markets and on beaches  Collect length frequency data in catches  Cross-check vessel details and collect logbooks	SFCA Management team, NFA	Database with volume and value landed at different landings sites  Species composition of catch  Length profiles of key species  Adherence to output controls	Part of current budget	SFCA staff time to collate landings data	Monthly
Inventory of fish buyers	Collect data on buyers of fish including their registration/licences  Target markets and marketing mechanisms	SFCA Management team, NFA	Number of buyers and proportion bought by each buyer	Part of current budget	SFCA staff time to collate data	Monthly
<b>Specific objective 3.2.5: Collect market and supply chain information</b>						
<b>Strategy 3.2.5: Knowledge of markets, processing and supply chain information</b>						
Inventory of fish processors capacity and location	Collect data on the fish processors, their capacity, location including number of employees and their gender	SFCA Management team, NFA	Number of processors, employees, capacity processed	Part of current budget	SFCA staff time to collate data	Annual

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Purpose 3.3: Develop and coordinate monitoring of bio-physical and socio-economic variables for each SFCA</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 3.3.1: Develop and use indicators for bio-physical monitoring</b>						
<b>Strategy 3.3.1: Collect biological and ecological data</b>						
Monitoring of bio-physical information on mangroves, coral reefs, seagrass beds and fish biomass	Compilation of historic bio-physical database for future comparisons	SFCA Management team, NFA, NEPA	Long-term dataset	Part of current budget	Staff time	Once
	Develop indicators to monitor the status and condition of reefs, seagrass beds and mangroves	SFCA Management team, NFA, NEPA	List of indicators	Part of current budget	Staff time, training, ongoing monitoring of the status of the habitats	Develop once and review usability
	Collect and compile monitoring data into suitable databases	SFCA Management team, NFA, NEPA	Databases on cover, condition, species diversity etc of habitats protected by SFCAs	Part of current budget	SFCA staff time to collate data	Annual
<b>Specific objective 3.3.2: Develop and use indicators for social and economic monitoring</b>						
<b>Strategy 3.3.2: Collect social and economic data and information</b>						
Information to enable time-series comparisons	Compilation of historic socio-economic information for future comparisons	SFCA Management team, NFA	Database containing social and economic data	Donors/grants; Government	Staff time to collate information from past studies	Once
Information related to stakeholders	Collect data to assess the following aspects: <ul style="list-style-type: none"> <li>Attitudes and perception</li> <li>Membership in SFCA and participation</li> <li>Awareness programme</li> <li>Gender roles and responsibilities</li> </ul>	SFCA Management team, NFA	Database containing social and economic data	Donors/grants; Government	Budget to cover staff time to conduct interviews and collate secondary data, travel and subsistence during field work, and stationery/office supplies	Annual
Information on coastal and marine activities	Collect data to assess the following aspects: <ul style="list-style-type: none"> <li>Main activities in the SFCA</li> </ul>	SFCA Management team, NFA	Database containing social and economic data	Donors/grants; Government	Budget to cover staff time to conduct interviews and collate secondary	Annual



**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Purpose 3.3: Develop and coordinate monitoring of bio-physical and socio-economic variables for each SFCA</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
	<ul style="list-style-type: none"> <li>• Use patterns</li> <li>• Levels and type of impact</li> <li>• Target markets and marketing mechanisms</li> <li>• Tourist profiles</li> </ul>				data, travel and subsistence during field work, and stationery / office supplies	
Information on governance aspects	Collect data to assess the following aspects: <ul style="list-style-type: none"> <li>• Management plan</li> <li>• Resources</li> <li>• Community incentives</li> <li>• Power and influence</li> </ul>	SFCA Management team, NFA	Database containing social and economic data	Donors/grants; Government	Budget to cover staff time to conduct interviews and collate secondary data, travel and subsistence during field work, and stationery/office supplies	Annual
<b>Specific objective 3.3.3:</b> Coordinate data collection and monitoring with Government scientists and academic institutions						
<b>Strategy 3.3.3:</b> Develop and maintain links with Government and academic institutions						
Work with government and academic institutions to develop an approach to improved monitoring of bio-physical and socio-economic data	Develop an approach to undertaking improved and periodic SFCA condition assessments	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Improved overall marine evidence base	Donors/grants; Government	SFCA staff time to collate data	Continuous (as new data become available)
	Improve maps of the extent and distribution of marine habitats	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Improved overall marine evidence base	Donors/grants; Government	SFCA staff time to collate data	Continuous
	Improve accessibility of bio-physical and socio-economic marine monitoring data	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Improved overall marine evidence base	Donors/grants; Government	SFCA staff time to collate data	Continuous

<b>Purpose 3.3: Develop and coordinate monitoring of bio-physical and socio-economic variables for each SFCA</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 3.3.4:</b> Analyse data and compile assessment reports						
<b>Strategy 3.3.4:</b> Collate and analyse evidence to inform SFCA management measures						
Develop an approach to providing more targeted conservation advice for SFCA management	Compile all the data	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Number of new data sheets ready for entry into	Donors/grants; Government	SFCA staff time to analyse data	Continuous
	Prepare the data	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Number of new entries into database	Donors/grants; Government	SFCA staff time to analyse data	Continuous
	Store the data	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Database containing social and economic data	Donors/grants; Government	SFCA staff time to analyse data	Continuous
	Interpret the data	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Tables and figures with findings from the data collection/monitoring	Donors/grants; Government	SFCA staff time to analyse data	Continuous
	Agree on the key learnings	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Number of recommendations	Donors/grants; Government	SFCA staff time to analyse data	Continuous
	Validate the data	SFCA Management team, NEPA, NFA, University of West Indies (Mona Campus), Scientists	Number of meetings held to discuss and validate the data	Donors/grants; Government	SFCA staff time to analyse data	Continuous
<b>Specific objective 3.3.5:</b> Use lessons learnt from monitoring to adapt and improve marine and coastal resource management						

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Purpose 3.3: Develop and coordinate monitoring of bio-physical and socio-economic variables for each SFCA</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Strategy 3.3.5:</b> Adaptive management						
Sustainable management of marine and coastal resources in SFCA	Explore whether management actions taken have produced the desired results	SFCA Management team, NFA	Number of guidelines and recommendations based on collected data and information	Part of current budget	SFCA staff time	Annual
	Identify opportunities and constraints in relation to potential future improvement of management	SFCA Management team, NFA	Number of guidelines and recommendations based on collected data and information	Part of current budget	SFCA staff time	Annual

<b>Purpose 3.4: Promote economically and ecologically sustainable resource use</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Specific objective 3.4.1:</b> Promote alternative livelihoods and diversification through improvements in local infrastructure, develop mariculture and tourism industries						
<b>Strategy 3.4.1:</b> Promote alternative livelihoods and diversification						
Support socio-economic needs of local communities affected by SFCA designation	Promote alternative income sources for local communities – through tourism, mariculture	SFCA Management team and Government	Improvement in local infrastructure, living standards	Donors / grants; Government	SFCA staff time	Medium to long term
	Set up a micro-finance facility run by the local community that provides capital for small businesses among residents	SFCA Management team and Government	Number of loans provided to local residents, Performance of micro-finance facility using indicators such as Portfolio at Risk (PAR)	Donors / grants; Government	SFCA staff time	Medium to long term

#### 8.4 Strategic Outcome 4: Improved management effectiveness and capacity of community-based organisations with adequate communication strategies in place

The focus of this Strategic Outcome is on activities that ensure full integration of the community-based organisations into the management and governance of the SFCAs including acquisition of required skills and tools. Stakeholders suggested the need to standardize several SFCA management aspects including the use of a management plan template, design of uniforms, marker buoys and the provision of identify cards for the wardens. Similarly, stakeholders would like to see improved communication between the SFCAs and NFA, and their staff training and equipment needs addressed.

**Table 7: Action plan for Strategic Outcome 4.**

Goal 4.1: Develop and adopt common standards across the SFCAs						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/ milestones
<b>Specific objective 4.1.1</b> Use common standards across all SFCAs						
<b>Strategy 4.1.1:</b> Common standards are applied across all SFCAs						
Develop and adopt standardized management practises across SFCA sites	Create a management plan template and customize to each SFCA	NFA, SFCA Management team	Existence of a template to manage the SFCA	Part of current budget	SFCA staff time	Short term
	Establish a management board for each SFCA drawn from the surrounding community	NFA, SFCA Management team	Existence of a management board at each SFCA site	Part of current budget	SFCA staff time	Short term
	Design of uniforms and marker buoys, the provision of ID cards for the wardens	NFA, SFCA Management team	Presence of staff uniforms, marker buoys, ID cards	Part of current budget	SFCA staff time	Short term
	Provide regular feedback on reports from SFCAs	NFA	Written correspondence between SFCA and NFA	Part of current budget	NFA budget	Short term

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 4.1: Develop and adopt common standards across the SFCAs</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
	Hold regular meetings/ workshops between SFCA teams and NFA	NFA, SFCA Management team	Number and frequency of meetings	Part of current budget	SFCA and NFA budget	Short term
	Provide incentives to wardens so that they can stay motivated	NFA	Package of incentives, Perceptions of Wardens	NFA budget	SFCA staff time	Short term
<b>Specific objective 4.1.2:</b> Ensure SFCA management teams adopt and deliver formal management plans for the sites they manage						
<b>Strategy 4.1.2:</b> Ensure SFCA management teams adopt and deliver formal management plans for the sites they manage						
Develop and adopt formal management plan for each SFCA comprised of the following activities	Enforcement, compliance and reduction of violations	SFCA Management team	Existence of a management plan	Part of current budget	SFCA staff time	Short term
	Outreach and education	SFCA Management team	Existence of a management plan	Part of current budget	SFCA staff time	Short term
	Management activities which lead to an increase in fish biomass	SFCA Management team	Existence of a management plan	Part of current budget	SFCA staff time	Short term
	Sustained acquisition of funds to advance management	SFCA Management team	Existence of a management plan	Part of current budget	SFCA staff time	Short term

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 4.2: Build skills in coastal and marine management measures and MCS&amp;E in particular.</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
<b>Objective 4.2.1:</b> Address staff training needs						
<b>Strategy 4.2.1:</b> Address staff training needs						
Training needs	Field science, data collection and data analysis	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Public speaking and public relations, stakeholder coordination and conflict management	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Policing, self-defence and enforcement techniques	SFCA Management team and Marine Police	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Basic accounting, financial management and general office management	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Marketing, campaigning and communication	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Computer literacy	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 4.2: Build skills in coastal and marine management measures and MCS&amp;E in particular.</b>						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/ milestones
	Website development	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Dive training	SFCA Management team and JDF Coast Guard	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year
	Report writing	SFCA Management team and academic institutions	Number trained, Number of mentorships, Existence of training materials	Donors/ grants; Government	SFCA staff time	Train once and offer refresher course every year

<b>Goal 4.3: Address the equipment needs for building management capacity and effectiveness.</b>						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/ milestones
<b>Objective 4.3.1:</b> Seek funding from private and government sources to address equipment needs						
<b>Strategy 4.3.1:</b> Address equipment needs						
Acquire funding to address the following equipment needs	Newer boats, engines and associated equipment (e.g., VHF radios, binoculars, drones, spotlights and night vision equipment)	SFCA Management team and NFA	Acquisition of boats and engines	Donors/grants; Government	Resources to purchase equipment	Short term
	SCUBA and snorkel gear, tanks and a working compressor	SFCA Management team and NFA	Acquisition of scuba gear	Donors/grants; Government	Resources to purchase equipment	Short term
	Laptop computers	SFCA Management team and NFA	Acquisition of computers	Donors/grants; Government	Resources to purchase equipment	Short term

Goal 4.3: Address the equipment needs for building management capacity and effectiveness.						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/ milestones
	Handheld GPS device	SFCA Management team and NFA	Acquisition of GPS devices	Donors/grants; Government	Resources to purchase equipment	Short term
	Accounting software (e.g., QuickBooks)	SFCA Management team and NFA	Acquisition of software	Donors/grants; Government	Resources to purchase equipment	Short term
	Office, storage space and interpretive centre	SFCA Management team and NFA	Acquisition of office plus storage	Donors/grants; Government	Resources to purchase equipment	Short term

## 8.5 Strategic Outcome 5: Stakeholder awareness and engagement in SFCA activities improved and contributing to the effective management of coastal and marine resources.

Coastal and marine resource management can only be effective if managers collaborate and share information from monitoring activities. The attitudes of the local community towards, and uses of, coastal resources have serious implications on the biophysical health of coastal marine systems. Similarly, the management of coastal resources has serious implications for the socioeconomic needs of the community. Activities in this Strategic Outcome therefore address key goals including the development and use outreach and education approaches, and the communication of findings from MCS&E activities back to stakeholders.

**Table 8: Action plan for Strategic Outcome 5.**

Goal 5.1: Develop guidelines for stakeholder awareness and engagement						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/ milestones
<b>Objective 5.1.1:</b> Develop and consistently use outreach and education approaches						
<b>Strategy 5.1.1:</b> Develop and use outreach and education approaches consistently.						
Develop a communication plan comprising of who needs to be informed of the	Identify stakeholders who need to be informed of the findings	SFCA Management team	List of stakeholders	Donors/grants; Government	SFCA staff time	Continuous
	Clearly summarize what the findings mean for the stakeholders identified	SFCA Management team	Slides, tables, figures with findings	Donors/grants; Government	SFCA staff time	Continuous



**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

<b>Goal 5.1: Develop guidelines for stakeholder awareness and engagement</b>						
<b>Actions</b>	<b>Key Activities</b>	<b>Responsible institution</b>	<b>Benchmarks/OVI</b>	<b>Financial sources</b>	<b>Financial needs</b>	<b>Timeframe/ milestones</b>
findings, what is the best communication mechanism to use, what resources are required.	Identify the best media to use in order to communicate the findings	SFCA Management team	Newsletters, papers, reports, websites	Donors/grants; Government	SFCA staff time	Continuous
	Identify and plan the budget required for communicating findings to the stakeholders	SFCA Management team	Communication budget	Donors/grants; Government	Budget	Continuous
<b>Objective 5.2.2:</b> Communicate findings from monitoring activities to stakeholders						
<b>Strategy 5.2.2:</b> Communication findings from MCS&E activities back to stakeholders (community members, policy-makers, academic researchers, NGOs).						
Use different ways to communicate findings	Prepare and use written materials (reports, papers), visual materials (posters), mass media posts, articles on websites	SFCA Management team	List of articles, posts, reports etc	Donors/grants; Government	SFCA staff time	Continuous
	Conduct oral presentations at meetings, group discussions	SFCA Management team	Number of presentations, meetings held	Donors/grants; Government	SFCA staff time	Continuous

## 8.6 Strategic Outcome 6: Local communities that are resilient to economic and climate shocks.

The focus of this Strategic Outcome is on activities that seek to build resilience and adaptation to the impacts of climate change.

**Table 9: Actin plan for Strategic Outcome 6.**

Goal 6.1: Ensure coastal and marine ecosystems inside SFCAs are sustainably managed						
Actions	Key Activities	Responsible institution	Benchmarks/OVI	Financial sources	Financial needs	Timeframe/ milestones
<b>Specific objective 6.1.1</b> Restore and improve mangrove, seagrass and coral reef health and condition						
<b>Strategy 6.1.1:</b> Identify and address issues affecting mangrove, seagrass and coral reef health and condition						
Address issues leading to degradation of coral reef, loss of mangroves	Consolidate data and information and generate greater understanding on drivers and pressures causing habitat loss and reduced productivity of marine and coastal ecosystems	NFA, University of West Indies (UWI) scientists	Reports, production of relevant guidance and policy proposals	NFA, University budgets	Staff time to analyse and report	Ongoing programme
	Implement management actions needed to ensure marine and coastal ecosystems stay healthy and in good condition	MoAF, NFA	Evident management actions	Government budget		Ongoing programme

## **9 Institutional arrangements for implementation**

The community-based MCS&E Strategy and Action Plan detailed above not only provides the SFCAs with different sources of data and information on their bio-physical and socio-economic attributes but also offers an overview of the resource use patterns both from an information and deterrence point of view. While the community-based MCS&E programme needs to consider all the aspects detailed in Section 8, prioritisation of the activities is key to achieving the different management objectives. The desired and expected level of MCS&E, the policy priority and the value of the marine and coastal resources are important factors in determining the level of resources allocated towards MCS&E. It is worth noting that every MCS&E system requires regular assessment in order to ascertain if it is achieving the strategic targets in the most cost effective and efficient manner.

### **9.1 Implementation partners**

The SFCAs have a number of key stakeholders including the fisher Folk, NFA, NEPA, NGOs, hospitality and tourism sector, JCF Marine Police, JDF Coast Guard, Fishermen's Co-operative Union, coastal developers and the aquaculture sector. The key implementation partners for this Strategy and Action Plan are the SFCA management teams, the NFA, NEPA and the marine enforcement agencies (JCF Marine Police and JDF Coast Guard). As presented in the action plan, collaborations among these key stakeholder groups need to be strengthened to facilitate effective fisheries management including MCS&E. Further, while the policy level aspects of community-based fisheries management including MCS&E have been agreed by the Government, the operational aspects still need to be detailed. For instance, lack of funding means that basic aspects of SFCAs cannot be delivered by the Wardens

### **9.2 Information management and sharing**

The MCS&E system will produce large amounts of data and information through the different activities. Some of these data and information are required immediately for surveillance activities and to coordinate the effective deployment of MCS components, while other data and information are needed in a less timely manner but over a longer time-series. These different requirements call for a good information management and sharing system including mechanisms for data ownership, storage, privacy and accessibility. It is important to consider both information sharing inside the SFCAs and dissemination of the findings to stakeholders. Even if exact data requirements differ among the SFCA management teams, NFA, NEPA and the enforcement agencies (JCF Marine Police and JDF Coast Guard), there is a usually large overlap and the sharing of information is important. For example, the JCF Marine Police could improve deployment of officers and sea patrols if infringements recorded by SFCA management teams within the different SFCAs were shared with the JCF Marine Police, JDF Coast Guard and NFA. Whichever data hub is used, it should be assured that the data are kept confidential, where necessary, and a data share agreement is in place with the SFCA and other stakeholders.

### 9.3 Communication

A key aspect of the MCS&E process is to communicate the results related to the management objectives back to the stakeholders. This involves discussing the findings with the stakeholders, seeking feedback and validation, and seeking appropriate decisions and actions to make use of the results. This communication process is critical to adaptive coastal management, which uses the information to improve the way management will be done in the future. Specific objective 5.2.2 under the Action Plan therefore sets out the communications mechanisms that could be used. As discussed during the stakeholder workshop, an annual reporting workshop could be set up where the results are presented and discussed with the NFA. That way the SFCAs would feel they are part of a group working together while the NFA could use these workshops to assess progress.

### 9.4 Prioritisation

The following are the main priority areas to progress this community-based MCS&E Strategy and Action Plan.

- Ensure there is enough financial support to cover SFCA management activities. The current level of funding from the Government does not cover all the costs and is not received by the SFCAs in a timely manner. New funding models therefore need to be initiated.
- Enact policies towards
  - User fees - SFCAs to charge user fees from those entities which utilize the sanctuaries for tourism/recreation purposes.
  - Spear fishing – to address whether spear fishers can be allowed to swim into and across fish sanctuaries or not
  - Buffer zone - to determine the size of the buffer zone and accompanying restrictions
- Standardization of the SFCAs. A management plan template should be created which is then customized to each sanctuary. Certain elements should be standard across the board, such as design of uniforms and marker buoys, the provision of ID cards for the wardens, etc
- Improve communication and interactions between SFCAs and NFA including
  - Ensure Fisheries Inspectors work more closely with the SFCA managers, especially in terms of sharing information and support for alternative livelihoods.
  - Provision of a stronger supervisory role from NFA to identify and address issues related to SFCA management. This would include more on the ground presence to identify situations which may not be captured in the report.
  - Provision of regular written feedback on reports from SFCAs
  - Hold regular workshops for SFCA and NFA staff
- Increase collaboration with law enforcement agencies especially the JCF Marine Police. Key aspects to consider include setting up more outposts for Marine Police at the sanctuaries and developing an enforcement handbook for SFCAs with guidelines towards specific laws affecting sanctuaries.
- Establish a framework for regular monitoring of the biophysical and socio-economic variables within the SFCA and in the surrounding areas. This framework needs to take into consideration various aspects including

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

- An environmental impact assessment (EIA) should be undertaken led by NEPA on all of the fish sanctuaries.
- Regular National Coral Reef Surveys.
- Provide training to SFCA management teams in terms of monitoring/data collection
- There is need for technical support to the sanctuaries based on international standards
- Central database to store all the data collected

## 10 Monitoring and evaluation

The action plan (Section 8) includes Objectively Verifiable Indicators (OVIs) for each specific objective that should provide benchmarks for the evaluation and successful implementation of the community-based fisheries management plan. Below, we summarise a framework for monitoring and evaluation for each of the goals (Table 10).

**Table 10: Monitoring and evaluation of the different goals in the community-based fisheries management Strategy and Action Plan for MCS&E.**

Goal	Target	Indicator	Means verification	Monitoring	Evaluation
<b>1.1</b> There is sufficient political will and legal framework for community-based fisheries management	<b>2023.</b> Specific legal entity/ mechanism for community-based management in fisheries legislation adopted	Legislation drafted, Fisheries legislation includes a legal entity or mechanism representing local communities	Jamaica's legislation  Fisheries policy documents	Set up once in law	Review after 5 years
<b>1.2</b> Strengthen institutional and organisational environment for effective involvement of community-based organisation	<b>2023.</b> Regular interactions between Government, NGOs scientific and community-based organizations established	Code of conduct with roles and responsibilities for each organisation	MoUs and co-management agreements	Annually	Mid-term review
	<b>2022.</b> SFCA teams routinely work with academic or research institutions	Number of joint projects/ interactions  Number of SFCA teams trained by research institutes	Documents from SFCAs and research institutes  Peer reviews	Annually	Mid-term review
<b>2.1</b> There is sufficient financial resources to effectively manage SFCAs	<b>2022.</b> Sufficient allocation in the national budget made that covers costs to effective management SFCAs	Total budget received and timeliness of money transfer	Ministry of Finance records, Government budget	Annually	Mid-term review

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Goal	Target	Indicator	Means verification	of Monitoring	Evaluation
<b>2.2</b> Develop ways to raise funds to support management activities	<b>2023.</b> Diverse funding streams are used to deliver SFCA management activities	Acquisition of non-profit status  Collection of user fees  Revenue generating activities  Business plans	NFA spending plans, SFCA reports	Annually	Mid-term review
<b>3.1</b> Support and strengthen monitoring and surveillance of SFCA regulations	<b>2022.</b> Infringements are deterred and control measures enforced	Number of patrols  Number of infringements recorded	SFCA, Marine Police and Coast Guard activity log books	Monthly	End of year
	<b>2022.</b> Full recognition of SFCA regulations and restrictions including boundaries	Number of enforcement activities, awareness meetings	Activity plans for SFCA, Marine Police and Coast Guard	Monthly	End of year
	<b>2022.</b> Consistent and coherent enforcement operations conducted jointly with JDF Coast Guard and JCF Marine Police	Number of posts in schools and social media  Number of joint awareness campaigns, publications  Existence of a multi-stakeholder task force for enforcement	Activity plans for SFCA, Marine Police and Coast Guard	Monthly	End of year
<b>3.2</b> Use participatory approach to establish and monitor input and output controls for the SFCAs	<b>2022.</b> Full inventory all fishing activities adjacent to each SFCA site	Full list of vessels used, size, power, details of ownership	NFA activity database  SFCA records	Annually	End of year

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Goal	Target	Indicator	Means of verification	Monitoring	Evaluation
		Full list of fishers in the area surrounding the SFCA and their details  Full list of gears used in the area surrounding the SFCA			
	<b>2022.</b> Full inventory of all recreation activities at each SFCA site	Full list of recreational activities  Map of use patterns of recreational activities	NFA activity database  SFCA records	Annually	Mid-term review
	<b>2022.</b> Collection of data at sea that can be time, date and position referenced in relation to both activities and catch	Logbooks with key variables  Number of logbooks filled in and returned to SFCA/NFA by fishers  Number of vessels with VMS	NFA activity database  SFCA records	Annually	Mid-term review
	<b>2022.</b> Collection of volume and value of landings	Database with volume and value landed at different landings sites; Species composition of catch	NFA activity database  SFCA records	Annually	Mid-term review
	<b>2022.</b> Collection of market and supply chain information	Number of processors, employees, volumes processed	NFA activity database  SFCA records	Annually	Mid-term review



**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Goal	Target	Indicator	Means of verification	Monitoring	Evaluation
<b>3.3</b> Develop and coordinate monitoring of bio-physical and socio-economic variables for each SFCA	<b>2022.</b> Indicators for bio-physical monitoring developed and being used	List of indicators  Databases on cover, condition, species diversity etc of habitats protected by SFCAs	NFA, NEPA and SFCA records and reports	Annually	Mid-term review
	<b>2022.</b> Indicators for social and economic monitoring	Database containing social and economic data	NFA and SFCA records and report	Annually	Mid-term review
	<b>2022.</b> Data collection and analysis	Number of new data sheets ready for entry into database  Improved overall marine evidence base	Technical reports and per-reviewed publications	Annually	Mid-term review
	<b>2022.</b> Adapt management	Number of guidelines and recommendations	Guidelines documents  Interview with fisheries managers	Annually	Mid-term review
<b>3.4</b> Promote economically and ecologically sustainable resource use	<b>2022.</b> Alternative livelihoods and diversification adopted.	Improvement in local infrastructure, living standards  Existence of micro-finance facility	SFCA operational documents  Interviews with SFCA managers	Annually	Mid-term review
<b>4.1</b> Develop and adopt common standards across the SFCAs	<b>2022.</b> Common standards area applied across all SFCA	Existence of management templates	SFCA operational documents	Annually	Mid-term review

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Goal	Target	Indicator	Means of verification	Monitoring	Evaluation
		Presence of staff uniforms, marker buoys, ID cards  Package of incentives  Regularity of meetings / workshops between SFCA teams and NFA	Perceptions of Wardens  NFA records		
	<b>2022.</b> SFCA management teams using formal management plans for the sites they manage	Existence of management plans	NFA and SFCA records	Bi-annually	Mid-term review
<b>4.2</b> Address staff training needs	<b>2023.</b> Technical expertise and capacity increased.	Number trained,  Number of mentorships,  Existence of training materials	NFA and SFCA records	Annually	Mid-term review
<b>4.3</b> Address equipment needs	<b>2023.</b> Delivery of required equipment	Availability of equipment	Finance documents, NFA and SFCA reports	Annually	Mid-term review
<b>5.1</b> Develop and consistently use outreach and education approaches	<b>2022.</b> Guidelines for stakeholder awareness and engagement developed and used.	List of stakeholders  Slides, tables, figures with findings  Newsletters, papers, reports, websites  Budget for communication	NFA and SFCA operational documents	Annually	Mid-term review

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Goal	Target	Indicator	Means of verification	Monitoring	Evaluation
	<b>2022.</b> A coordinated stakeholder approach with NFA's fisheries Inspectors developed and used	List of articles, posts, reports etc  Number of presentations, meetings held	NFA and SFCA documents	Annually	Mid-term review
<b>5.2</b> Communicate findings from monitoring activities to stakeholders	<b>2022.</b> Findings from SFCA monitoring are communicated regularly.	List of articles, posts, reports etc  Number of presentations, meetings held	NFA and SFCA documents	Annually	Mid-term review
<b>6.1</b> Ensure coastal and marine ecosystems inside SFCAs are sustainably managed	<b>2026.</b> Mangrove, seagrass and coral reefs show improved condition	Reports, publications  Evident management actions	Scientific publications	Annually	Review after 5 years

## 11 References

Aiken, K.A. (2014) Report on investigation of Jamaica's sea cucumber nearshore resources—Phase 1. GoJ Ministry of Agriculture and Fisheries Workshop on Sea Cucumber Fishery Management, June 13–14, Kingston, Jamaica.

Alexander, S., Armitage, D., Charles, A. (2015) Social networks and transitions to co-management in Jamaican marine reserves and small-scale fisheries. *Global Environmental Change* 35, 213–225. <https://doi.org/10.1016/j.gloenvcha.2015.09.001>

Beck, M.W., Losada, I.J., Menéndez, P., Reguero, B.G., Díaz-Simal, P. and Fernández, F. (2018) The global flood protection savings provided by coral reefs. *Nature Communications*, 9: 2186. <https://doi.org/10.1038/s41467-018-04568-z>

Blythe, J., Cohen, P., Eriksson, H., Cinner, J., Boso, D., Schwarz, A.-M., Andrew, N. (2017) Strengthening post-hoc analysis of community-based fisheries management through the social-ecological systems framework. *Marine Policy* 82, 50–58.

Roberts CM., O’Leary BC., McCauley DJ., Cury PM, Duarte CM, Lubchenco J, Pauly D, Sa’enz-Arroyo A, Sumaila UR, Wilson RW, Worm B, and Castilla JC (2017) Marine reserves can mitigate and promote adaptation to climate change. *PNAS* 114; 6167–6175.

Caribbean Community Climate Change Centre (CCCCC) (2015). National adaptation strategy and action plan for the fisheries sub-sector for Jamaica. Belmopan, Belize.

Chan, C., Armitage, D., Alexander, S.M., Campbell, D., (2019) Examining linkages between ecosystem services and social wellbeing to improve governance for coastal conservation in Jamaica. *Ecosystem Services* 39, 100997. <https://doi.org/10.1016/j.ecoser.2019.100997>

Cudney-Bueno, R., Basurto, X., (2009) Lack of cross-scale linkages reduces robustness of community-based fisheries management. *PloS one* 4, e6253.

Darling, E. S. and D’agata, S. (2017) Coral Reefs: Fishing for Sustainability. *Current Biology*, 27: 65–68. <https://doi.org/10.1016/j.cub.2016.12.005>

FAO 2019 - Fishery and Aquaculture Country Profiles – Jamaica

Ferrario, F., Beck, M.W., Storlazzi, C.D., Micheli, F., Shepard., C.C. and Airolidi, L. (2014) The effectiveness of coral reefs for coastal hazard risk reduction and adaptation. *Nature Communications*, 5: 3794. <https://doi.org/10.1038/ncomms4794>

Flewwelling, P. (1994) An introduction to monitoring, control and surveillance systems for capture fisheries. *FAO Fish.Tech.Pap.*, 338. FAO, Rome. 217 pp.

Government of Jamaica (2009) Vision 2030 Jamaica: National Development Plan. Planning Institute of Jamaica, Kingston, Jamaica.

Government of Jamaica, 2020. Update of Nationally Determined Contribution (NDC) of Jamaica to the United Nations Framework Convention on Climate Change (UNFCCC).

Laurec, A. (1999) Monitoring fisheries for better research and/or better enforcement. Proceedings of the International Conference on Integrated Fisheries Monitoring. Sydney, Australia, 1-5 February 1999. FAO, Rome. 378 pp

McWilliams, J.P., Cote, I.M., Gill, J.A., Sutherland, W.J., and Watkinson, A.R. (2005) Accelerating impacts of temperature-induced coral bleaching in the Caribbean. *Ecology* 86: 2055–2060.

Bergh PE and Davies S (2002) Fishery monitoring, control and surveillance. In Cochrane KL (Editor) *A Fishery Manager's Guidebook - Management Measures and their Application*. FAO Fisheries Technical Paper 424.

Reguero, B.G., Beck, M.W., Agnostini, V.N., Kramer, P. and Hancock, B. (2018) Coral reefs for coastal protection: A new methodological approach and engineering case study in Grenada. *Journal of Environmental Management*, 210: 146–161. <https://doi.org/10.1016/j.jenvman.2018.01.024>

Sainsbury, N.C., Genner, M.J., Saville, G.R., Pinnegar, J.K., O'Neill, C.K., Simspon, S.D. and Turner, R.A. (2018) Changing storminess and global capture fisheries. *Nature Climate Change*, 8: 655–659. <https://doi.org/10.1038/s41558-018-0206-x>

Soares, L.K. (2017) Walking the Talk of the Small-Scale Fisheries Guidelines in Jamaica, in: Jentoft, S., Chuenpagdee, R., Barragán-Paladines, M.J., Franz, N. (Eds.), *The Small-Scale Fisheries Guidelines: Global Implementation*, MARE Publication Series. Springer International Publishing, Cham, pp. 115–135. [https://doi.org/10.1007/978-3-319-55074-9\\_7](https://doi.org/10.1007/978-3-319-55074-9_7)

Steneck, R.S., Mumby, P.J., MacDonald, C., Rasher, D.B., and Stoyle, G. (2018) Attenuating effects of ecosystem management on coral reefs. *Science Advances*, 4: eaao5493. <https://doi.org/10.1126/sciadv.aao5493>

Stennett-Brown, R.K., Stephenson, T.S., Taylor, M.A., (2019) Caribbean climate change vulnerability: Lessons from an aggregate index approach. *PLOS ONE* 14, e0219250. <https://doi.org/10.1371/journal.pone.0219250>

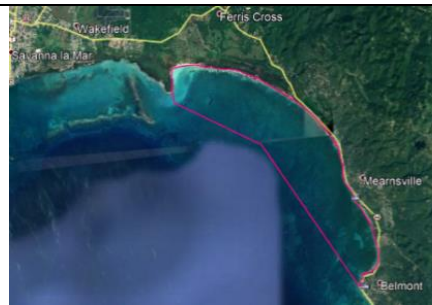
The Nature Conservancy (TNA) (2017) *A Capacity Assessment and Management Effectiveness Evaluation of the Jamaica Fish Sanctuary Network*. Caribbean Marine Biodiversity Program Report: 101pp.

Tietze, U. and Van Anrooy, R. (2018). *Assessment of insurance needs and opportunities in the Caribbean fisheries sector*, FAO Fisheries and Aquaculture Circular No. 1175. Rome, FAO. 62 pp.

World Bank (2004) *Score Card to assess progress in achieving management effectiveness goals for Marine Protected Areas*. The World Bank. 30pp

## Annex 1 Summary of the key aspects of each SFCA gathered through the evaluation form

### 1. Bluefields Bay Special Fishery Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	Bluefields Bay Special Fishery Conservation Area Declared: 2009	
Size of SFCA	1359.4 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that they are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction in the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	No. Note that SFCAs were designated under the Ministry of Agriculture and Fisheries.	
Reasons for designation	<p>To reduce the negative impacts of fishing activities on the reef fishery</p> <p>To enhance fish populations.</p>	Partner NGOs are tasked to: make observations, detect and report breaches.
Brief description of the primary habitats represented in the SFCA	The site is situated along the southern coastline of Jamaica and is characterized by shallow seagrass beds and patch reefs with a reasonable amount of predominantly red mangroves	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for research and culling of invasive species through a special permit.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	<ol style="list-style-type: none"> <li>1. Local marine police are the main enforcement arm.</li> <li>2. Jamaica Defence Force Coast Guard provides support to the Jamaica</li> </ol>	In this partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act.

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	Constabulary Force Marine Police. 3. Partner NGOs through a delegation instrument.	Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	This site is not as challenging as others, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and empowerment are needed to build competence
Are there additional sources of control (e.g., volunteers)	Observers with a keen interest for law and order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	
Key stakeholders	Fisher Folk, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal developers (construction) and Aquaculture	
Number of staff	Total staff 9; Permanent 9. More staff training need	
Equipment / resources	1 office, 2 patrol boats - 1 owned; 1 rented	
Is the current budget sufficient?	No	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes Opportunity to access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation, International Donor Funds supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. Sandals Resorts have constructed a Villa over the water which attracts premium rates.	
Are stakeholders aware of the SFCA?	Yes	
Is there a management plan and is it being implemented?	Yes	
What are the most important threats to the SFCA?	Sewage and solid waste	
What are the critical management activities for the SFCA?	Patrols to maintain a presence, enforcement and education	
Assessment of the degree of readiness	Results of the self-evaluation by TNC (2017) show an aggregate score of 75%.	

## 2. Discovery Bay Special Fishery Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	Discovery Bay Special Fishery Conservation Area Declared: 2010	
Size of SFCA	169 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed as they are lost or destroyed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	No	
Reasons for designation	<p>To reduce the negative impacts of fishing activities on the reef fishery;</p> <p>To provide opportunities for eco-tourism;</p> <p>To enhance fish populations;</p>	Partner NGOs are tasked to make observations, detect and report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the northern coastline of Jamaica and is characterized by shallow seagrass beds and patch reefs and mangroves	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	4. Local Marine Police. Main enforcement arm.	In this partnership, The Government of Jamaica funds the day-to-day



**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	<p>5. Jamaica Defence Force Coast Guard provides support to the Marine Police</p> <p>6. Partner NGOs through a delegation instrument.</p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p>operations of the SFCA. This routinely involves activities to Detect, Deter, and Prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.</p>
Is enforcement effective?	Enforcement is becoming challenging, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. Training and empowerment are needed to build competence	This sometimes have to do with improper case preparation
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for law and order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed through more studies	
Stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aqua culturists	
Total staff	5	
Are there enough people employed to manage the SFCA?	Yes	
Training - is there enough training for staff?	More training is needed for all staff members	
Equipment / resources	1 office, 1 patrol boat. Boat needs repairs and maintenance	
What is the annual budget?	\$ 743,256.00	
Is the current budget sufficient?	No	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes. GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects	
What are the sources of finance?	Donor Funds	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	None	
Are stakeholders aware of the SFCA?	Manager believes that <50% of the public is aware or concerned. However, awareness does not always translate into concern or support for the fish sanctuary.	
Is there a management plan and is it being implemented?	Yes	
What are the most important threats to the SFCA?	Climate change	
What are the critical management activities for the SFCA?	Development of ecotourism projects, coral restoration, education and awareness, and monitoring of human behaviour	
Assessment of the degree of readiness	Results of the self-evaluation by TNC (2017) show an aggregate score of 49%.	

### **3. East Portland Special Fishery Conservation Area**

Background		Remarks
Name of Special Fishery Conservation Area. (SFCA)	East Portland Special Fishery Conservation Area Declared: 2015	
Size of SFCA	538 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the Markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	No.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	Partner NGOs are tasked to make observations, detect and report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the north eastern coastline of Jamaica and is characterized by seagrass beds and mud and patch reefs, several bays with coralline substrates	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	<p>7. Local Marine Police. Main enforcement arm.</p> <p>8. Jamaica Defence Force Coast Guard provides support to the Marine Police</p>	In this Partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to

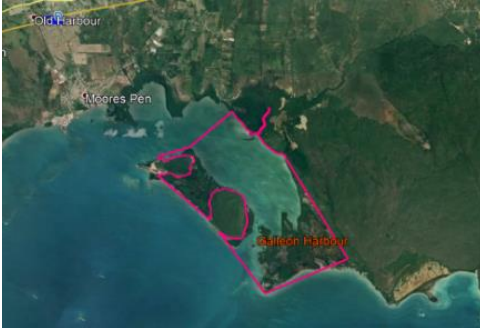
**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	9. Partner NGOs through a delegation instrument. •	Detect, Deter, and Prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	Enforcement is becoming challenging, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed through more studies	
Stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Total staff	14: 10 Permanent; 2 part time and 2 volunteers	
Are there enough people employed to manage the SFCA?	No, they require two more wardens	
Training - is there enough training for staff?	More training is needed in enforcement as well as drones and smart trackers and apps	
Equipment / resources	1 office, 1 vehicle and 2 patrol boats (one for water sports and one for the foundation)	
What is the annual budget?	\$ 200,000.00	
Is the current budget sufficient?	No	
Is the budget secure for the SFCA and its management needs on a multi-year basis	No. Currently not funded by the GOJ	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Donor Funds	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	Provides snorkelling, scuba diving and training and tours; Yes they assist with day to day running.	
Are stakeholders aware of the SFCA?	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
What are the most important threats for the SFCA?	Overfishing, illegal fishing, depletion or local extinction of keystone species, invasive or overabundant species	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

What are the critical management activities for the SFCA?	Development of ecotourism projects, coral restoration, education and awareness, and monitoring of human behaviour
Assessment of the degree of readiness	Results of self-evaluation by TNC (2017) indicates a 61% aggregate score

#### 4. Galleon Harbour Special Fisheries Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	Galleon Harbour SFCA Declared: 2009	
Size of SFCA	1872.7 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	The boundaries are known by most of the fishers. The boundaries were clearly demarcated.	Boundaries were discussed and agreed upon with fisher folks.
Is the SFCA part of a larger coastal management plan?	Three Bays SFCA falls within a larger protected area; the Portland Bight Protected Area, that is designated under the Ministry of Environment.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	
Brief description of the primary habitats represented in the SFCA	This site is a shallow bay with mud flats fringed with seagrass beds. The area is lined with extensive stands of black and red mangroves. The area has several fresh water intrusion points and is a prime nursery for juvenile fish and crustaceans.	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	
How are regulations enforced?	Local Marine Police. Main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police Partner NGOs through a delegation instrument.	The Partner NGO is provided with a yearly Subvention from the Government of Jamaica to aid in the day-to-day operations which is to Detect, Deter, and Prosecute breaches under the Act.
Is enforcement effective?	No.	
Are infractions regularly prosecuted and fines levied	No.	
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for law and order	
Condition of resources	Degraded habitats, evidence of severe fishing pressure	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Resource inventory - is there enough information to manage the SFCA?	No.
Stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists
Number of Staff	10: 6 Permanent; 1 Part-time; 4 Volunteers
Are there enough people employed to manage the SFCA?	Yes. However, the staff need more training.
Equipment / resources	2 offices, 2 vehicles, 5 patrol boats
Stakeholder awareness and concern	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.
What are the most important threats to the SFCA?	Inadequate legal status/protection, hurricane damage
What are the critical management activities for the SFCA?	Patrolling/enforcement, education and outreach, monitoring (long distance makes patrolling less effective), habitat enhancement (e.g. artificial reefs, mangrove restoration)
Assessment of the degree of readiness	Self-evaluation aggregate score provided by TNC assessment is 68%

## 5. Montego Point Special Fishery Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	Montego Point Fish Sanctuary Declared: 2009	
Size of SFCA	302.796 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	No.	
Reasons for designation	<p>To reduce the negative impacts of fishing activities on the reef fishery</p> <p>To enhance fish populations.</p>	Partner NGOs are tasked to make observations, detect and report breaches.

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the north western coastline of Jamaica and is characterized by seagrass beds, patch reefs, several bays with coralline substrates	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	10. Local Marine Police. Main enforcement arm. 11. Jamaica Defence Force Coast Guard provides support to the Marine Police 12. Partner NGOs through a delegation instrument.	In this partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to Detect, Deter, and Prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	Enforcement is becoming challenging, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed through more studies	
Stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal, Developers, Aqua culturists	
Number of Staff	11	
Are there enough people employed to manage the SFCA?	No, they require two- five more wardens; sales / marketing	
Training - is there enough training for staff?	More training is needed in enforcement	
Equipment / resources	1 office, 1 vehicle, 2 patrol boats	
What is the annual budget?	\$ 1.6M per quarter for both Bouge Island and Montego point	
Is the current budget sufficient?	No	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Is the budget secure for the SFCA and its management needs on a multi-year basis	No. Currently not funded by the GOJ	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Donor Funds	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	Provides snorkelling, scuba diving and training and tours; Yes they assist with day to day running.	
Stakeholder awareness and concern	Less than 50% of local community is aware	
Stakeholder involvement and participation	Lack of community support	
Is there a management plan and is it being implemented?	Overall marine park plan, not yet specific to Airport Point and Bogue Lagoon	
What are the most important threats to the SFCA?	Sewage and solid waste	
What are the critical management activities for the SFCA?	Patrol, research and public education	
Assessment of the degree of readiness	Self-evaluation aggregate score from TNC assessment is 58%	

## 6. Oracabessa Bay Special Fishery Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	Oracabessa Bay Special Fishery Conservation Area Declared: 2010	
Size of SFCA	83.7 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of Marker Buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the Markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	No.	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	Partner NGOs are tasked to: Make Observations, Detect and Report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the northern coastline of Jamaica and is characterized by shallow seagrass beds and patch reefs	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police. Main enforcement arm.  Jamaica Defence Force Coast Guard provides support to the Marine Police  Partner NGOs through a delegation instrument. •	In this Partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	Enforcement is becoming challenging, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed through more studies	
Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aqua culturists	
Number of Staff	12: 7 Permanent; 5 Part-time; 4 Volunteers	
Are there enough people employed to manage the SFCA?	Yes	
Training - is there enough training for staff?	More training is needed	



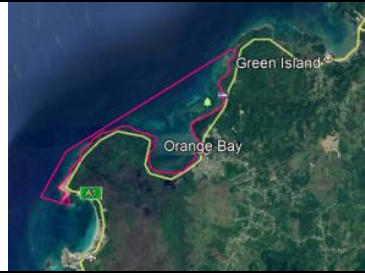
**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Equipment / resources	1 office, 3 boats (one patrol, one dive boat, one glass bottom boat)	
What is the annual budget?	\$ 1,033,517.00	
Is the current budget sufficient?	No	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes Opportunity access match funds from the Jamaica Environmental Trust Fund; hoteliers	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Donor Funds	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	Provides snorkelling, scuba diving and training and tours. Yes, they assist with day to day running.	
Stakeholder awareness and concern	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
Is there a management plan and is it being implemented?	Yes, but not implemented yet	
What are the most important threats to the SFCA?	Depletion or local extinction of keystone species, invasive or overabundant species, coastal/upland development, and deforestation	
What are the three critical management activities for the SFCA?	Patrols, coral reef restoration, engagement with communities, police, courts etc.	
Assessment of the degree of readiness	The aggregate self-evaluation score from TNC (2017) is 66%	

## 7. Orange Bay Special Fishery Conservation Area

Background		Remarks
Name of SFCA	Orange Bay Special Fishery Conservation Area Declared: 2010	
Size of SFCA	535.5 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of</p>

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

		the number of markers that can be maintained.
Is the SFCA part of a larger coastal management plan?	Yes. This SFCA is a part of the Negril Protected Area that is designated under the Ministry of Environment.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	PNGOs are tasked to: Make Observations, Detect and Report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the south-western coastline of Jamaica and is characterized by shallow seagrass beds and patch reefs with a reasonable amount of predominantly, Red Mangrove	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police. Main enforcement arm.  Jamaica Defence Force Coast Guard provides support to the Marine Police  Partner NGOs through a delegation instrument.	In this Partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	This site is not as challenging as others, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	
Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Number of Staff	5	
Are there enough people employed to manage the SFCA?	No. However the staff need more training	
Equipment / resources	1 office, 1 vehicle, 1 patrol boat	
Is the current budget sufficient?	No	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes. Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation plus Donor Funds; Supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part, no park fees are collected. Sandals Resorts have constructed a villa over the water which attracts premium rates.	
Stakeholder awareness and concern	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
Stakeholder involvement and participation	Lack of compliance from outside fishers (not local fishers):	
What are the most important threats to the SFCA?	Overfishing, illegal fishing	
What are the critical management activities for the SFCA?	Patrolling/enforcement, environmental education and outreach, conducting some monitoring but would like to strengthen this effort	
Assessment of the degree of readiness	Aggregate self-evaluation score reported by TNC (2017) = 57%	

## 8. Salt Harbour Special Fishery Conservation Area

Background		Remarks
Name of SFCA	Salt Harbour Special Fishery Conservation Area Declared: 2009	
Size of SFCA	1022.1 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	The boundaries are known by most of the fishers. Marker buoys were placed strategically at turning points, however more markers need to be deployed.	Boundaries were discussed and agreed upon with fisher folks. The adequate number of marker buoys is limited by unavailability of funding to construct and deploy them.

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Is the SFCA part of a larger coastal management plan?	Salt Harbour SFCA falls within a larger protected area; the Portland Bight Protected Area, that has been designated under the Ministry of Environment.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	Partner NGOs are tasked to make observations, detect and report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site a shallow bay with mud flats fringed with seagrass beds. The area is lined with Riparian vegetation and various species of mangroves. The area has several fresh water intrusion points and is a prime nursery area for juvenile fish and crustaceans.	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police - main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police Partner NGOs through a delegation instrument.	The Partner NGO is provided with a yearly Subvention from the Government of Jamaica to aid in the day-to-day operations which is to detect, deter, and prosecute breaches under the Act.
Is enforcement effective?	No. A major weakness is that Fisheries Wardens do not have the power to charge offenders.	
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for law and order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Degraded habitats, Evidence of severe fishing pressure	
Resource inventory - is there enough information to manage the SFCA?	No.	
Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Number of Staff	10; 6 Permanent: 1 Part-time, 3 volunteers	
Are there enough people employed to manage the SFCA?	Yes. However, current staff need more training	
Equipment / resources	2 offices, 2 vehicles and 5 patrol boats	
Is the current budget sufficient?	No	

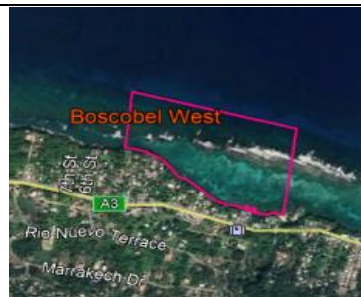
**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes. Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Government of Jamaica; Donor Funds Supplemented by an income generating stream such as Sea Moss culture, Boat tours etc	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. A few management/business plans have developed income generating proposals.	
Stakeholder awareness and concern	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
Management plan	Lack of/limited management	
What are the most important threats to the SFCA?	Climate change: Inadequate legal status/protection	
What are the critical management activities for the SFCA?	Patrolling/enforcement, education and outreach, monitoring, habitat enhancement (e.g. artificial reefs, mangrove restoration)	
Assessment of the degree of readiness	Self-evaluation aggregate score from TNC (2017) 68%	

**9. Sandals Boscobel (West) Special Fishery Conservation**

Background		Remarks
Name of SFCA	Sandals Boscobel (West) Special Fishery Conservation Area Declared: 2016	
Size of SFCA	21 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	No.	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	Partner NGOs are tasked: Make Observations, Detect and Report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the North coast of Jamaica and is characterized by shallow Patch reefs with a diversity of fish Carols and Sponges.	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2912 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police. Main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police Partner NGOs through a delegation instrument. •	In this Partnership, Sandal Foundation funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	This site is not as challenging as others, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	

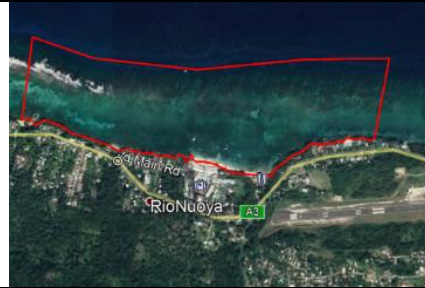
**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF, Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation. Donor Funds Sandals Foundation, International Donor Funds supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. Sandals Resorts have constructed a over-the-water Villa which attracts premium rates.	
Stakeholder awareness and concern	>75% of the public in the local community is aware or concerned about threats and conditions of coastal and marine resources in the area.	
What are the most important threats from to the SFCA?	Overfishing, illegal fishing,	
What are the critical management activities for the SFCA?	Regular patrols to ensure no one is violating sanctuary rules, Visual reef checks to monitor reef health, Education and outreach	
Assessment of the degree of readiness	Self-evaluation by TNC (2017) provided an aggregate score of 75%	

## 10. Sandals Boscobel Special Fishery Conservation Area

Background		Remarks
Name of SFCA	Sandals Boscobel Special Fishery Conservation Area Declared: 2009	
Size of SFCA	1359.4 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of Marker Buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Is the SFCA part of a larger coastal management plan?	No.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	PNGOs are tasked to: Make Observations, Detect and Report breaches.
Brief description of the primary habitats represented in the SFCA	The site is situated along the southern coastline of Jamaica and is characterized by shallow seagrass beds and patch reefs with a reasonable amount of predominantly, Red Mangrove	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police. Main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police Partner NGOs through a delegation instrument. •	In this Partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	This site is not as challenging as others, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. Training and Empowerment are needed to build competence	This sometimes have to do with improper case preparation
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	
Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Number of Staff	9	




**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Are there enough people employed to manage the SFCA?	No. However the staff need more training	
Equipment / resources	1 office, 2 patrol boats 1 owned; 1 rented	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation. Donor Funds Sandals Foundation, International Donor Funds supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. Sandals Resorts have constructed a over-the-water Villa which attracts premium rates.	
Are stakeholders aware of the SFCA?	Yes. Manager believes that <50% of the public is aware or concerned. However, awareness does not always translate into concern or support for the fish sanctuary.	
Is there a management plan and is it being implemented?	Yes	
What are the most important threats to the SFCA?	Overfishing, illegal fishing; Depletion or local extinction of keystone species	
What are the critical management activities for the SFCA?	Education (e.g. presentation, community meetings, fishermen's groups); Patrols to minimize or eliminate illegal activities; Coral enhancement (e.g. planting); Research on fish biomass and coral cover	
Assessment of the degree of readiness	Self-evaluation aggregate score from TNC assessment = 92%	

## 11. South West Cay Special Fishery Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	South West Cay Special Fishery Conservation Area Declared: 2017	
Size of SFCA	1515 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of Marker Buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results</p>

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

		in a reduction of the number of markers that can be maintained.
Is the SFCA part of a larger coastal management plan?	No.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery. To enhance fish populations.	Partner NGOs are tasked to make observations, detect and report breaches.
Brief description of the primary habitats represented in the SFCA	The site is situated along the southern coastline of Jamaica and is characterized by shallow seagrass beds and patch reefs with a reasonable amount of predominantly, Red Mangrove	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police. Main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police Partner NGOs through a delegation instrument.	Currently no partnership exists.
Is enforcement effective?	This site is not as challenging as others, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes has to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	
Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Number of Staff	9	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Are there enough people employed to manage the SFCA?	No. However the staff	
Training - is there enough training for staff?	More training is needed	
Equipment / resources	1 office, 2 Patrol boats: 1 owned; 1 rented	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation. Donor Funds Sandals Foundation, International Donor Funds supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. Sandals Resorts have constructed a Villa over the water which attracts premium rates.	
Are stakeholders aware of the SFCA?	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
Is there a management plan and is it being implemented?	A management plan has been developed for the wider Pedro Cays, though not yet specifically for South West Cay.	
What are the most important threats to the SFCA?	Climate change; Lack of/limited management; Lack of community support	
What are the critical management activities for the SFCA?	Patrolling/enforcement, Education and outreach, Monitoring	
Assessment of the degree of readiness	Self-evaluation aggregate score from TNC assessment = 57%	

## 12. Bogue Island Lagoon Fish Sanctuary

Background		Remarks
Name of Special Fishery Conservation Area	Bogue Island Lagoon Fish Sanctuary Declared: 1979	
Size of SFCA	450 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p>

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	argue that that are not aware of the sanctuary boundaries.	There is an annual licence fee that is charged by the Ministry of Environment to keep the Markers installed in the water. This results in a reduction of the number of markers that can be maintained.
Is the SFCA part of a larger coastal management plan?	No.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	Partner NGOs are tasked to make observations, detect and Report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the north western coastline of Jamaica and is characterized by seagrass beds, patch reefs with several bays with coralline substrates	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police. Main enforcement arm.  Jamaica Defence Force Coast Guard provides support to the Marine Police  Partner NGOs through a delegation instrument.	In this partnership, The Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act.  Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	Enforcement is becoming challenging, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. Training and Empowerment are needed to build competence	This sometimes has to do with improper case preparation
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for law and order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed through more studies	


**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers (construction) and Aqua culturists
Total staff	11
Are there enough people employed to manage the SFCA?	No, they require 2-5 more wardens; sales / marketing
Training - is there enough training for staff?	More training is needed in enforcement
Equipment / resources	1 office; 1 vehicle; 2 patrol boats
What is the annual budget?	\$1.6M per quarter for both Montego Point and Bouge Island Lagoon
Is the current budget sufficient?	No
Is the budget secure for the SFCA and its management needs on a multi-year basis	Currently not funded by the GoJ. GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Donor Funds
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	Provides snorkelling, scuba diving and training and tours; Yes they assist with day to day running.
Are stakeholders aware of the SFCA?	Manager believes that <50% of the public is aware or concerned. However, awareness does not always translate into concern or support for the fish sanctuary.
Do stakeholders have meaningful input to management decisions?	Lack of community support
Is there a management plan and is it being implemented?	There is an overall marine park plan, not yet specific to this SFCA.
What are the most important threats to the SFCA?	Coastal/upland development; Sewage and solid waste
What are the critical management activities for the SFCA?	Patrols, research, public education
Assessment of the degree of readiness	Self-evaluation conducted by TNC (2017) indicates as aggregate score of 55%.

### 13. Sandals Boscobel (East) Special Fishery Conservation Area

Background		Remarks
Name of Special Fishery Conservation Area	Sandals Boscobel (East) Special Fishery Conservation Area Declared: 2016	
Size of SFCA	99.1 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	The boundaries are known by most of the fishers.  Marker buoys were placed strategically at turning points, however more markers need to be deployed.	Boundaries were discussed and agreed upon with fisher folks.  The adequate number of Marker Buoys is limited by unavailability of funding to construct and deploy the required amount.

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.	There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of the number of markers that can be maintained.
Is the SFCA part of a larger coastal management plan?	No	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	Partner NGOs are tasked to make observations, detect and report breaches.
Brief description of the primary habitats represented in the SFCA	The site is situated along the North coast of Jamaica and is characterized by shallow patch reefs with a diversity of fish Carols and Sponges.	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	Local Marine Police - main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police Partner NGOs through a delegation instrument. •	In this Partnership, Sandals Foundation funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act. Government of Jamaica is responsible for setting Policy directions.
Is enforcement effective?	This site is not as challenging as others, however there needs to be improvement in enforcement activities.	A major weakness is that Fisheries Wardens do not have the power to charge offenders.
Are infractions regularly prosecuted and fines levied	No. This sometimes have to do with improper case preparation	Training and Empowerment are needed to build competence
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes. Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation. Donor Funds Supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. Sandals Resorts have constructed a villa over-the-water which attracts premium rates.	

#### 14. Three Bays Fish Special Fishery Conservation Area

Background		Remarks
Name of SFCA	Three Bays Fish Special Fishery Conservation Area (Sanctuary) Declared: 2009	3 Bays; Coquar Bay, Walker Bay and Manatee Bay combined
Size of SFCA	1261.3 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	The boundaries are known by most of the fishers. The boundaries were never clearly demarcated.	Boundaries were discussed and agreed upon with fisher folks.
Is the SFCA part of a larger coastal management plan?	Three Bays SFCA falls within a larger protected area; the Portland Bight Protected Area, that is designated under the Ministry of Environment.	
Reasons for designation	To reduce the negative impacts of fishing activities on the reef fishery To enhance fish populations.	
Brief description of the primary habitats represented in the SFCA	The site is characterized by shallow bays with patch reefs, in some sections. The site is dominated by large expanses seagrass beds. The area is lined with Mangroves, and has several fresh water intrusion points. The area is a prime nursery juvenile fish and crustaceans.	
Brief description of SFCA regulations	The SFCA s are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for Research and Culling of Invasive spp. by special permission.	
How are regulations enforced?	Local Marine Police - main enforcement arm. Jamaica Defence Force Coast Guard provides support to the Marine Police	The Partner NGO is provided with a yearly Subvention from the Government of Jamaica to aid in the day-to-day operations which is to

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

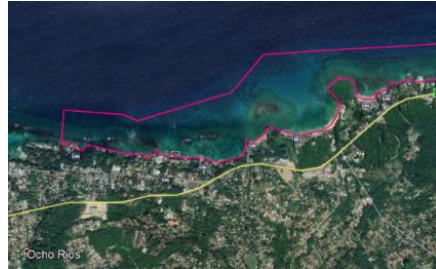
	Partner NGOs through a delegation instrument. •	detect, deter, and prosecute breaches under the Act.
Is enforcement effective?	No.	
Are infractions regularly prosecuted and fines levied	No.	
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for law and order	
Condition of resources	Degraded habitats - evidence of severe fishing pressure	
Resource inventory - is there enough information to manage the SFCA?	No.	
Stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Number of Staff	10	
Are there enough people employed to manage the SFCA?	Yes. However, the staff need more training	
Equipment / resources	2 offices, vehicle, 5 patrol boats	
Are stakeholders aware of the SFCA?	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
Is there a management plan and is it being implemented?	Yes, with limited implementation	
What are the most important threats to the SFCA?	Provide reasons why this is a major issue	
What are the critical management activities for the SFCA?	Patrolling/enforcement, Education and outreach, Monitoring (long distance makes patrolling less effective), Habitat enhancement (e.g. artificial reefs, mangrove restoration)	
Assessment of the degree of readiness	Self-evaluation aggregate score from TNC assessment = 68%	

**15. White River Fishery Conservation Area**

Background		Remarks
Name of Special Fishery Conservation Area	White River Fishery Conservation Area Declared: 2016	



**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Size of SFCA	150 Hectares	(Estimated using Google Earth Pro)
Are the boundaries known and demarcated?	<p>The boundaries are known by most of the fishers.</p> <p>Marker buoys were placed strategically at turning points, however more markers need to be deployed.</p> <p>Without adequate markers new entrant in to the fisheries will argue that that are not aware of the sanctuary boundaries.</p>	<p>Boundaries were discussed and agreed upon with fisher folks.</p> <p>The adequate number of marker buoys is limited by unavailability of funding to construct and deploy the required amount.</p> <p>There is an annual licence fee that is charged by the Ministry of Environment to keep the markers installed in the water. This results in a reduction of the number of markers that can be maintained.</p>
Is the SFCA part of a larger coastal management plan?	Yes. This SFCA is a part of the Ocho Rios Protected Area that is designated under the Ministry of Environment.	
Reasons for designation	<p>To reduce the negative impacts of fishing activities on the reef fishery</p> <p>To enhance fish populations.</p>	Partner NGOs are tasked to make observations, detect and report breaches.
Objectives of SFCA	The objective of the SFCA is to ensure sustainable management of fishery resources through the development of no-fishing zones reserved for the reproduction of fish populations and preservation of the genetic diversity of marine species within Jamaica's water.	
Brief description of the primary habitats represented in the SFCA	The site is situated along the North coast of Jamaica and is characterized by shallow seagrass beds and patch reefs and fresh water intrusion points.	
Brief description of SFCA regulations	The SFCAs are governed by the 2012 SFCA Regulations which defines the boundaries, prohibits commercial fishing. It allows for research and culling of Invasive spp. by special permission.	2012 Regulation was promulgated under the 1975 Fishing Industry Act. That Act has been repealed by the 2018 Fisheries Act. The 2012 SFCA Regulation now needs to be revised to bring it in line with the new parent Act.
How are regulations enforced?	<p>Local Marine Police. Main enforcement arm.</p> <p>Jamaica Defence Force Coast Guard provides support to the Marine Police</p> <p>Partner NGOs through a delegation instrument.</p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p>In this Partnership, the Government of Jamaica funds the day-to-day operations of the SFCA. This routinely involves activities to detect, deter, and prosecute breaches under the Act.</p> <p>Government of Jamaica is responsible for setting policy directions.</p>
Is enforcement effective?	This site is not as challenging as others, however there	A major weakness is that Fisheries Wardens do not have the power to charge offenders.

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

	needs to be improvement in enforcement activities.	
Are infractions regularly prosecuted and fines levied	No. Training and empowerment are needed to build competence	This sometimes have to do with improper case preparation
Are there additional sources of control (e.g. volunteers)	Observers with a keen interest for Law and Order will make reports to the authorities	However, most times they prefer to remain anonymous.
Condition of resources	Habitats are for most part intact.	
Resource inventory - is there enough information to manage the SFCA?	Some information exists but more data is needed.	
Key stakeholder groups	Fisher Folks, Hotel and Tourism, Water Sports and Entertainment, Marine Police and JDF Coast Guard, Judiciary, National Environment and Planning Agency (NEPA), Coastal Developers, Aquaculturists	
Equipment / resources	1 office, 1 patrol boat	
Is the budget secure for the SFCA and its management needs on a multi-year basis	Yes. Opportunity access match funds from the Jamaica Environmental Trust Fund.	GoJ provides financing to pay salaries and wages for SFCA staff with the understanding that the Partners will use the funds to leverage donor funds to implement projects.
What are the sources of finance?	Sandals Foundation. Donor Funds Sandals Foundation, International Donor Funds supplemented by an income generating stream.	
Fees - If fees (entry fees - tourism, fines) are applied, do they help the SFCA management?	For most part no park fees are collected. Sandals Resorts have constructed a villa over-the-water which attracts premium rates.	
Are stakeholders aware of the SFCA?	Manager believes that at least 50% - 75% of the public is aware or concerned about threats and conditions of coastal and marine resources.	
What are the most important threats to the SFCA?	Overfishing, illegal fishing, depletion or local extinction of keystone species, invasive or overabundant species, coastal/upland development, deforestation, sewage and solid waste, and climate change	
What are the critical management activities for the SFCA?	Enforcement of area (currently ad hoc, consisting primarily of meetings and education of fishers), outreach and education, restoration activities (e.g. coral nursery)	
Assessment of the degree of readiness	Self-evaluation aggregate score from TNC assessment = 33%	

## Annex 2 Historic funding in Jamaica

Institution	Type of organisation	Local or overseas	Has funding previously been allocated to Jamaica?	US\$
The World Bank (WB)	The World Bank is made up of two unique development institutions owned by 185 member countries—the <a href="#">International Bank for Reconstruction and Development (IBRD)</a> and the <a href="#">International Development Association (IDA)</a> .		18 <sup>th</sup> March 2021 - The World Bank's Board of Executive Directors approved financing of US\$150 million to Jamaica for COVID-19 Response and Recovery	US\$150 million
			16 <sup>th</sup> February 2021 - The World Bank's Board of Executive Directors approved additional financing of US\$10 million for the ongoing <a href="#">Jamaica Foundations for Competitiveness and Growth Project</a> .	
			Initial funding for the Jamaica Social Investment Fund (JSIF) was obtained from the World Bank through the IBRD, in the form of a US\$20 million loan. Loan Agreement No. 4088-JM signed on the 2nd of October 1996 effective on January 6, 1997 with a closing date of March 31, 2001. <sup>1</sup>	
			received grant funding of \$350 million (£1.9 million) from the United Kingdom (UK) to support the implementation of the Government's Strategic Public Sector Transformation Project. To be administered by the World Bank, the funds are being provided through the UK's Department for International Development (DFID). The project, which is being implemented by the Ministry of Finance and Planning, aims to strengthen public resource management and support selected public sector institutions in facilitating a more enabling environment for private sector growth <sup>2</sup>	

<sup>1</sup> <https://www.jsif.org/content/world-bank>

<sup>2</sup> [https://www.jamaicaobserver.com/news/Govt-receives--350m-grant-for-public-sector-transformation\\_18239026?fbclid=IwAR32onr4WnD0tJexAbh-ZA5KUHNbyBIIYgZH5DMvpZk93uOQQ\\_FwbPISwig](https://www.jamaicaobserver.com/news/Govt-receives--350m-grant-for-public-sector-transformation_18239026?fbclid=IwAR32onr4WnD0tJexAbh-ZA5KUHNbyBIIYgZH5DMvpZk93uOQQ_FwbPISwig)

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Institution	Type of organisation	Local or overseas	Has funding previously been allocated to Jamaica?	US\$
			<a href="#">Improving Climate Data and Information Management Project</a> <sup>3</sup> May 21 <sup>st</sup> 2015 – 6.8million US\$ Climate Information Systems and Disaster Risk Management Pilot Program for Climate Resilience	
			<a href="#">Promoting Community-based Climate Resilience in the Fisheries Sector of Jamaica</a> 2 <sup>nd</sup> October 2017 4.88 Million US\$ Under Pilot Program for Climate Resilience	
International Monetary Fund			The IMF Executive Board approved Jamaica's request for emergency financial assistance of about US\$520 million to help meet the urgent balance-of-payments needs stemming from the COVID-19 pandemic <sup>4</sup> , under the Rapid Financing Instrument (RFI), while catalyzing additional support from development partners.	
The Commonwealth			Through the support of the Climate Finance Access Hub, Jamaica has received a US\$0.6 million grant to fund REDD+ readiness actions as part of its Forest Policy. <sup>5</sup>	
Inter-American Development Bank (IADB)	Source of development financing for Latin America and Caribbean	Overseas, based in Washington D.C	Yes - In March 2017 the Inter-American Development Bank (IADB) allocated US\$17.5 million (J\$2 billion) to the Adaptation Programme and Financing Mechanism (AP&FM) project, one of five falling under Pilot Program for Climate Resilience (PPCR) in Jamaica <sup>6</sup>	US\$17.5 million
			Financing water adaptation in Jamaica's new housing sector – 5.75US\$ Oct 28 <sup>th</sup> 2015	

<sup>3</sup> <https://www.climateinvestmentfunds.org/country/jamaica>

<sup>4</sup> <https://www.imf.org/en/News/Articles/2020/05/15/pr20217-jamaica-imf-executive-board-approves-disbursement-to-address-the-covid-19-pandemic>

<sup>5</sup> <https://thecommonwealth.org/climate-finance-access-hub-jamaica>

<sup>6</sup> Case Study: Microfinance Readiness - Minimising first-mover adaptation costs: Jamaica. November 2018

**Consultancy to Formulate a Strategic Action Plan and Draft Regulations to Facilitate Community Based Fisheries Management, Monitoring, Control, Surveillance and Enforcement**

Institution	Type of organisation	Local or overseas	Has funding previously been allocated to Jamaica?	US\$
			Under Pilot Program for Climate Resilience Urban development theme	
Green Climate Fund (GCF)	Established within the ambit of the United Nations Framework Convention on Climate Change (UNFCCC)	Overseas, based in Incheon – South Korea	Yes – finance two projects aimed at facilitation a gender-responsive approach to climate change and mitigation (US\$272,797), and a Caribbean Green Bond listing on the Jamaica Stock Exchange (\$US 582,749) <sup>7</sup>	\$US855,546
			Jamaica has access to a US\$1.1-million grant from the Green Climate Fund (GCF), to commence preparation of Jamaica's first National Adaptation Plan (NAP) for the current financial year. The National Adaptation Plan aims at integrating climate-change initiatives into different departments and agencies of government. <sup>8</sup>	
UNICEF			KINGSTON, 29 September 2020 – The Ministry of Labour and Social Security has received \$40m from UNICEF Jamaica to help some of Jamaica's most vulnerable households cope with the crippling impact of COVID-19. The funding will cover cash transfer payments via the Programme of Advancement through Health and Education (PATH). Approximately 2,700 families with children with disabilities, as well as pregnant and lactating women are to benefit from this donation. <sup>9</sup>	
The Nature Conservancy (TNC)			Through the Caribbean Biodiversity fund (CBF)	US\$500,000

<sup>7</sup> <https://jis.gov.jm/govt-receives-120-3-million-grant-for-climate-projects/>

<sup>8</sup> <https://jis.gov.jm/jamaica-has-access-to-us1-1-million-from-green-climate-fund/>

<sup>9</sup> <https://www.unicef.org/jamaica/press-releases/path-gets-big-boost-unicef>