

Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021 – 2030

United Nations Environment Programme - Caribbean Environment Programme (UNEP-CEP)
Caribbean Natural Resources Institute (CANARI), Technical Report No.2



Catalyzing implementation of the
Strategic Action Programme for the Caribbean and
North Brazil Shelf LMEs (2015-2020)

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Acronyms

AIDA	Interamerican Association for Environmental Defense
BBNJ	Biological diversity of areas beyond national jurisdiction
CaMPAM	Caribbean Marine Protected Area Management Network and Forum
CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CAR-RCU	UNEP Caribbean Regional Coordinating Unit
CARSEA	Caribbean Sea Ecosystem Assessment
Cartagena Convention	Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region
CBD	Convention on Biological Diversity
CBS	Caribbean Biodiversity Strategy
CCI	Caribbean Challenge Initiative
CEP	Caribbean Environment Programme
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLME+	Caribbean and North Brazil Shelf Large Marine Ecosystems
CMS	Convention on Migratory Species
CO₂	Carbon dioxide
COP	Conference of Parties
EBM	Ecosystem-based management
EBSA	Ecologically or Biologically Significant Area
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
GCRMN	Global Coral Reef Monitoring Network
GEF	Global Environment Facility
IAS	Invasive Alien Species
IBA	Important Bird and Biodiversity Area
ICM	Interim Coordination Mechanism
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IODE	International Oceanographic Data and Information Exchange
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
IUU	Illegal, unreported and unregulated
KAP	Knowledge, Attitudes and Practice
KBA	Key Biodiversity Area
LBS Protocol	Land-based Sources of Marine Pollution Protocol
LMEs	Large Marine Ecosystems

MEA	Multilateral Environmental Agreement
MOU	Memorandum of understanding
MPA	Marine Protected Area
MPACConnect	A learning network of Caribbean MPA managers, managed through a partnership between the Gulf and Caribbean Fisheries Institute (GCFI) and the Coral Reef Conservation Program of the National Oceanic and Atmospheric Administration (NOAA)
NDC	Nationally determined contributions
NOAA	National Oceanic and Atmospheric Administration
OECD	Organisation for Economic Co-operation and Development
OECS	Organisation of Eastern Caribbean States
PCM	Permanent Coordination Mechanism
RAMSAR Convention	Convention on Wetlands of International Importance
RSAP	Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021-2030
SAMOA Pathway	Small Island Developing States Accelerated Modalities of Action Path-way
SAP	Strategic Action Programme
SCTLD	Stony Coral Tissue Loss Disease
SDG	Sustainable Development Goal
SOCAR	State of the Cartagena Convention Area Report: An Assessment of Marine Pollution from Land-Based Sources and Activities in the Wider Caribbean Region
SocMon	Socio-economic Monitoring for Coastal Management
SOMEE	State of the Marine Environment and associated Economies
SoMH	State of Nearshore Marine Habitats in the Wider Caribbean
SPAW	Specially Protected Areas and Wildlife
SPAW Protocol	Protocol Concerning Specially Protected Areas and Wildlife
SPAW-RAC	Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region
STAC	Scientific and Technical Advisory Committee
TDA	Transboundary Diagnostic Analysis
UN Habitat	United Nations Human Settlements Programme
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEA	UN Environment Assembly
UNEP	United Nations Environment Programme, now referred to as UN Environment
UNEP-WCMC	UN Environment Programme World Conservation Monitoring Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WCR	Wider Caribbean Region
WECAFC	Western Central Atlantic Fishery Commission

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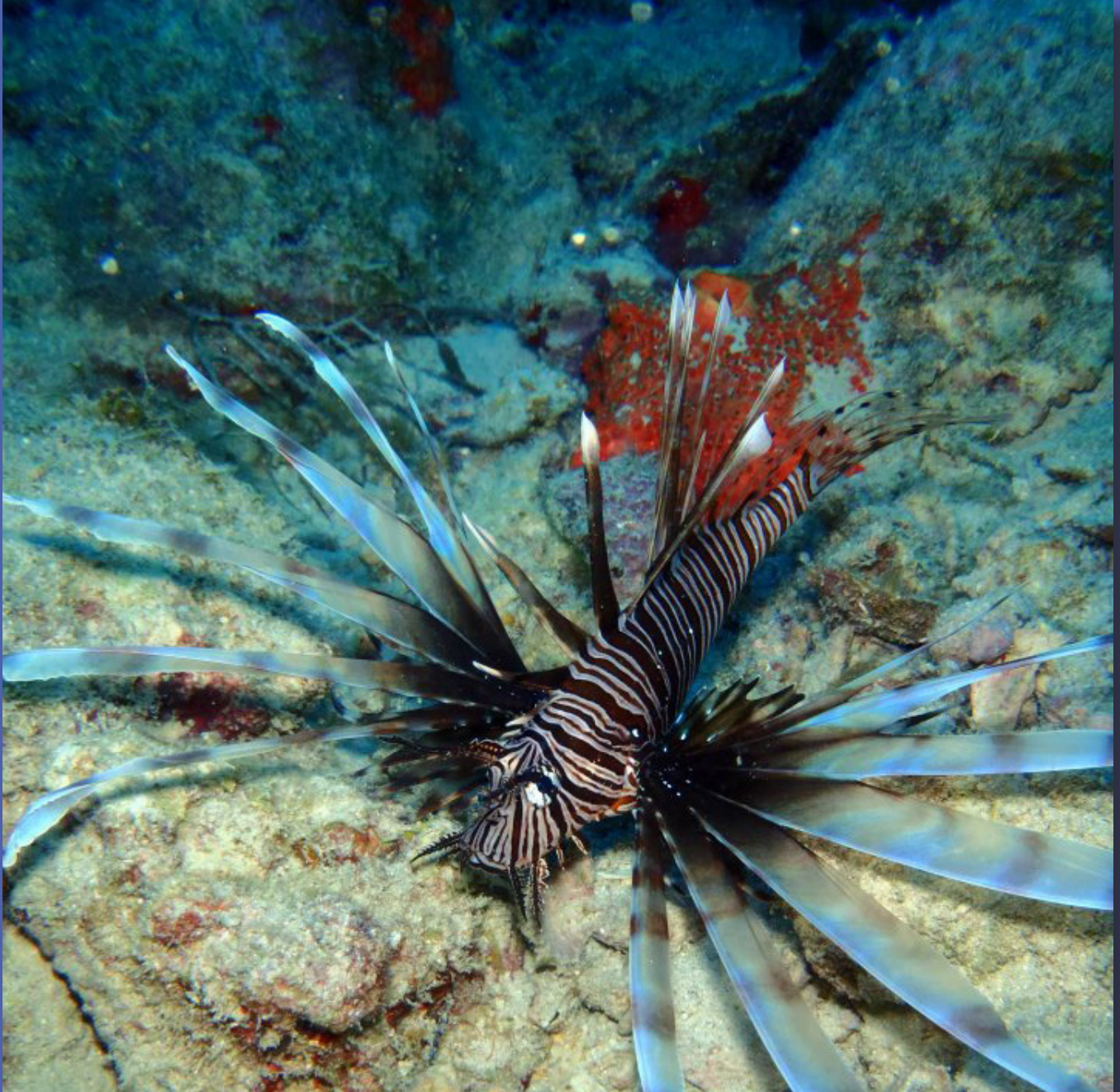
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This regional strategy sets out management actions to address lionfish and other alien invasive species, direct over-exploitation and pollution which are threatening Caribbean marine habitats.

Photo by L. Henderson

Executive Summary

Protecting the Large Marine Ecosystems (LMEs) and associated living resources that make up the wider Caribbean region is vital to safeguarding the future of the 26 countries and 18 overseas territories in this region, stretching from the USA in the north to Brazil and the Guianas in the south. The more than 134 million people who live on or near the coast in the wider Caribbean are supported socially and economically by one of the most valuable and productive ecological systems in the world, the coral reef-mangrove-seagrass complex. However, this vitally important ecosystem complex is imperiled by stresses from human activity and natural processes that compromise its ability to continue being an economic driver for the region and provide the goods and ecosystem services, intrinsic, and sociocultural benefits, that support the well-being of all living things within the region and beyond.

The Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021-2030 (RSAP) is one of the tools developed by the Specially Protected Areas and Wildlife (SPAW) Sub-Programme of the United Nations Environment Programme (UN Environment) - Caribbean Environment Programme (CEP) to support conservation and sustainable use of coastal and marine ecosystems in the wider Caribbean.

Notwithstanding sub-regional and localised improvements, there is an **overall trend of habitat loss and declining quality in coral reefs, mangroves and seagrass beds**. This is being caused by multiple **pressures and threats**, including alien invasive species, direct over-exploitation and pollution. Ongoing chronic degradation from these local stressors has synergistic interactions with growing global pressures linked to climate change, including ocean warming, intensified hurricanes, sea level rise and ocean acidification. Emerging issues and threats, like *Sargassum* accumulation and Stony Coral Tissue Loss Disease, also jeopardise marine ecosystem and habitat health. Research and investigation are needed to determine the nature and scope of the ecological changes occurring, to formulate and implement appropriate responses.

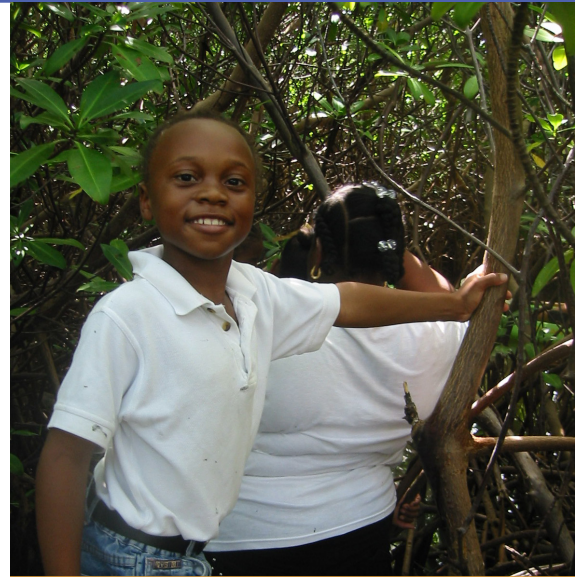


Photo by P. Rothenberger

More than 134 million people in the wider Caribbean are supported socially and economically by the coral reef-mangrove-seagrass complex.



Photo by L. Henderson

Marine Protected Areas and Marine Managed Areas are tools used to protect key marine ecosystems and species and the livelihoods that depend on them.

These **threats are driven by underlying socio-economic issues**. The region continues to face low levels of economic growth, poverty and inequality. Coastal zone development and resulting destruction and fragmentation of habitats is part of the development agenda. Increasing urbanisation in coastal areas is occurring, alongside growing vulnerability in the coastal zone and increasing costs of natural disasters.

However, **there are also potential opportunities** for positive transformation through blue economy approaches to protect and enhance marine habitats, strengthening development of sustainable livelihoods, using marine genetic biodiversity, and leveraging Marine Protected Areas and other Marine Managed Areas.

In response to these threats and opportunities, the **overarching goal** of the RSAP is to strengthen national and collective action by Member States to manage coastal ecosystems, particularly coral reefs, mangroves and seagrasses, in order to maintain the integrity of the habitats and ensure the continued flow of ecosystem goods and services necessary for national development.



To deliver this overarching goal, the RSAP is structured around four interdependent strategic pillars with corresponding goals and ten objectives that guide action between 2021 and 2030 as follows:

<p>Pillar 1 Ecosystem health and resilience</p>	<p>Goal 1 Improve eco-system health, biodiversity and resilience</p>	<p>Objective 1 Enhance ecological integrity and function of coral reefs, mangroves and seagrass beds</p> <p>Objective 2 Decrease and reverse habitat loss</p> <p>Objective 3 Support species diversity and species populations within the three habitats</p>
<p>Pillar 2 Sustainable use</p>	<p>Goal 2 Sustainably use coastal and nearshore marine resources for national and regional development</p>	<p>Objective 4 Mainstream coral reefs, mangroves, seagrasses, and associated sub-ecosystems and essential species in sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems</p> <p>Objective 5 Reduce threats to the habitats from coastal/marine-based sectors and development activities that impact coral reefs, mangroves and seagrasses</p>
<p>Pillar 3 Governance and partnerships</p>	<p>Goal 3 Strengthen regional governance systems and partnerships for the management of the marine/coastal resources of the wider Caribbean</p>	<p>Objective 6 Enhance coordination and reduce conflicts and gaps to improve programme synergies</p> <p>Objective 7 Improve governance of marine and coastal resources at national, sub-regional and regional levels</p>
<p>Pillar 4 Enabling systems and capacity</p>	<p>Goal 4 Strengthen legal and institutional frameworks to effectively manage the marine/coastal resources of the wider Caribbean</p>	<p>Objective 8 Improve science-based decision-making and use of local/traditional knowledge in policy, planning, and management of coastal ecosystems</p> <p>Objective 9 Improve the effectiveness of resource and protected area management institutions and the impact of management interventions</p> <p>Objective 10 Enhance the sustainability of financing mechanisms for protected areas and other site-based conservation efforts</p>

Successful implementation of the RSAP requires **joint effort by national, sub-regional, regional and intergovernmental stakeholders and broad-based participation** by government agencies, civil society, the private sector and the research/academic community.

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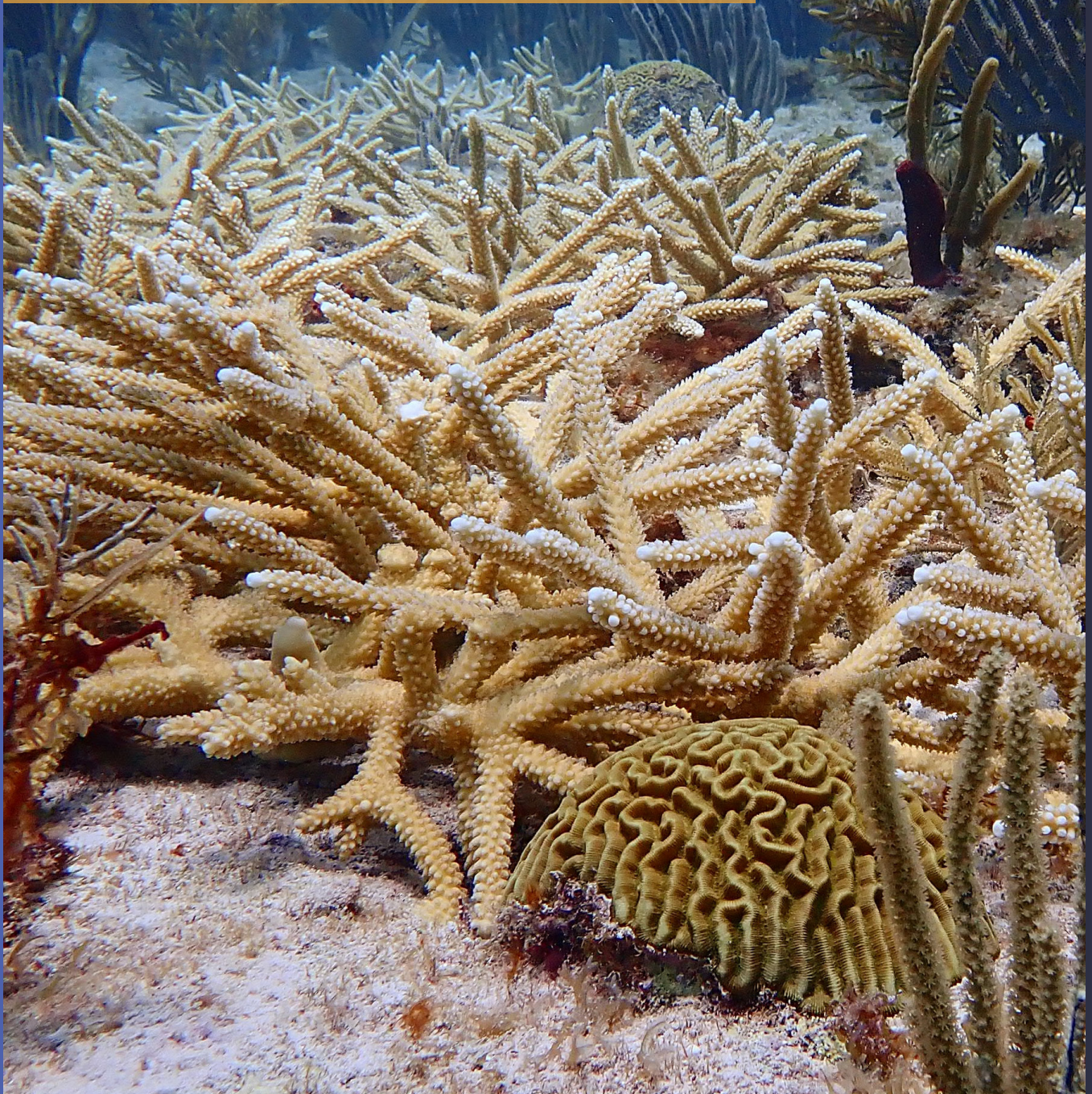


Photo by L. Henderson

1 Introduction

1.1 Overview

Protecting the Large Marine Ecosystems (LMEs) and associated living resources that make up the wider Caribbean¹ region is vital to safeguarding the future of the 26 countries and 18 overseas territories in this region, stretching from the USA in the north to Brazil and the Guianas in the south. The more than 134 million² people who live on or near the coast in the wider Caribbean are supported socially and economically by one of the most valuable and productive ecological systems in the world, the coral reef-mangrove-seagrass complex. This complex includes shallow-water coral reefs, mangroves, seagrass beds, lagoons, estuaries and beaches as well as coral banks and rocky outcrops in deep waters. It supports three of the major fisheries of the region (reef fishes, spiny lobster and conch). It is the foundation of the region's tourism industry, especially that of the island states and territories. Coral reefs, mangroves, and seagrasses are also vital for coastal and shoreline protection, a function of growing importance in the face of the region's current and future climate reality. Coastal ecosystems are also important sources of blue carbon contributing to climate mitigation.

However, this vitally important ecosystem complex is imperiled by stresses from human activity and natural processes that compromise its ability to continue being an economic driver for the region and provide the goods and ecosystem services, intrinsic, and sociocultural benefits, that support the well-being of all living things within the region and beyond. The shared marine species and interconnected ecosystems of the three adjacent LMEs with a combined area of approximately 5.9 million km² – Gulf of Mexico (1,530,387 km²), Caribbean Sea (3,305,077 km²), North Brazil Shelf (1,034,575 km²)³ – of the wider Caribbean, together with the transboundary threats and shared challenges, support cross-boundary and multi-stakeholder approaches to facilitate ecosystem-based management along with information and technology transfer.

1.2 Purpose

The Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021 - 2030 (RSAP) is one of the tools developed by the Specially Protected Areas and Wildlife (SPAW) Sub-Programme of the United Nations Environment Programme

1 The term "wider Caribbean" is used in the RSAP to refer to the combined SPAW and CLME+ regions, namely the three adjacent LMEs - Gulf of Mexico, Caribbean Sea, North Brazil Shelf. This geography covers an area that is larger than that defined as the Wider Caribbean Region in the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78), and as used in the Cartagena Convention.

2 This includes the coastal population in the Caribbean Sea LME at 84,263,359; North Brazil Shelf LME at 9,550,602; and Gulf of Mexico LME at 40,522,728 (<http://www.lmehub.net/>).

3 <http://www.lmehub.net/>

(UNEP) - Caribbean Environment Programme (CEP) to support conservation and sustainable use of coastal and marine ecosystems in the wider Caribbean.⁴

The RSAP is aligned with and contributes to implementation of global, regional and sub-regional instruments relating to marine habitats and supports their implementation (see Section 6). It:

- provides a framework for strategic interventions by participating countries to strengthen the resilience of vital nearshore marine habitats (coral reefs, mangroves, and seagrasses) as part of their regional obligations under the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean (Cartagena Convention) and the Protocol Concerning Specially Protected Areas and Wildlife (SPAW Protocol);
- supports commitments under the Cartagena Convention to sustainably manage the common coastal and marine resources of the wider Caribbean and facilitates alignment of actions to meet obligations of supporting multilateral environmental agreements (MEAs);
- contributes to implementation of the Strategic Action Programme (SAP) for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+) region, and is linked with, and mutually supportive of, other strategies and plans implementing the CLME+ SAP⁵; and
- provides a platform for synergistic regional action by participating governments, relevant regional and international inter-governmental organisations, members of the Interim Coordination Mechanism (ICM) for Integrated Ocean Governance in the wider Caribbean⁶, and stakeholders from academia, civil society, and other Major Groups.

Strategic objectives of the SPAW sub-programme and CLME+ SAP supported by the RSAP

The RSAP supports the objectives of the SPAW Sub-programme component on Conservation and Sustainable Use of Coastal and Marine Ecosystems to:

- mobilise the political will and actions of Governments and other partners for the conservation and sustainable use of coral reefs and associated ecosystems such as mangroves and seagrass beds; and
- effectively communicate the value and importance of coral reefs, mangroves and seagrass beds, including their ecosystem services, the threats to their sustainability, and the actions needed to protect them (UN Environment 2017).

The strategy also supports the CLME+ SAP:

Strategy 4 to enhance the governance arrangements for ecosystem-based management of reefs and associated ecosystems, and especially:

Action 4.4 Coordinate and enhance (sub-)regional and national efforts for the conservation of the biodiversity of reef and associated habitats, including through the strengthening of networks of marine protected areas (MPAs) and initiatives for sustainable reef fisheries such as programmes for dealing with alien invasive species or regulating essential species population (biomass) as the herbivores fish and spawning aggregations.

The RSAP also supports Strategy 1 to enhance the regional governance arrangements for the protection of the marine environment.

⁴ The RSAP is directly linked to the 2017-2018 SPAW workplan.

⁵ These include: the State of Convention Area Report: An Assessment of Marine Pollution from Land-Based Sources and Activities in the Wider Caribbean Region; the State of the Marine Environment and associated Economies report, the CLME+ Regional Investment Plans, and the CLME+ Research Agendas.

⁶ Note that discussions are underway to replace the ICM with a Permanent Coordination Mechanism (PCM). See more in Section 7.1.



Figure 1: Mangroves can be found throughout the Caribbean, often found along coastlines and salt ponds. *Photo by P. Rothenberger, 2008*

For a list of Parties to the Cartagena Convention and other regional and global agreements, see Appendix A. For a description of the agreements, see Appendix B.

As an output of the SPAW Sub-programme, the RSAP is an integral part of the Caribbean Environment Programme Strategy (2021 – 2030) [under development]. It includes a Strategic Objective to ensure sustainable development of the marine and coastal area, safeguard habitats and biological diversity.

At the global level, the RSAP is aligned with UNEP’s Marine and Coastal Strategy to 2030. This new strategy was developed within the framework of UN Environment Assembly (UNEA) 2 Resolution 2/10. Oceans and Seas and builds on the Regional Seas Strategic Directions 2017-2020. It includes strategic directions related to science-based policy and decision-making, creating an enabling environment for integrated management and sustainable use of marine and coastal ecosystems in order to preserve their intrinsic value, maintain their ability to provide ecological, economic, and social services, and facilitate the adoption of sustainable consumption and production patterns.

The RSAP directly supports the declaration by the United Nations General Assembly of 2021-2030 as the UN Decade on Ecosystem Restoration. It also supports the declaration by the United Nations General Assembly of 2020-2030 as the decade of action and delivery on implementation of the 2030 Agenda for Sustainable Development. The RSAP will further contribute to the implementation of coastal/marine actions of the post-2020 Global Biodiversity Framework [under development] leading to the 2050 Vision of “Living in harmony with nature.” Together with the companion report on State of Nearshore Marine Habitats in the Wider Caribbean (SoMH), the RSAP embodies the institutionalisation of collaborative regional projects that, since 2006, have been supporting improved transboundary governance and management of the region’s shared living marine resources. The SoMH is the baseline against which the results of the RSAP will be measured. The 2007 and 2011 Transboundary Diagnostic Analyses (TDA) of the Wider Caribbean Region prioritised the coral reef sub-ecosystem for action as part of a regional strategy to address transboundary problems that compromise the ability of the Caribbean to support social and ecological well-being and resilience. Recognising the connectivity of the wider Caribbean’s ecosystems and the interdependence of human and natural systems, the TDAs also prioritised action in support of the pelagic fisheries ecosystem, the continental shelf ecosystem and regional fisheries governance. These ecosystems are being addressed separately under the CLME+ Project.



Photo by H. Tonnemacher

As an output of the SPAW Sub-programme, the RSAP is an integral part of the Caribbean Environment Programme Strategy (2021 – 2030) [under development]. It includes a Strategic Objective to ensure sustainable development of the marine and coastal area, safeguard habitats and biological diversity

1.3 Geographic Scope and Focus

The geographic coverage of the RSAP includes two overlapping programme areas: the SPAW Sub-programme area (Gulf of Mexico and Caribbean Sea) and the CLME+ SAP area (Caribbean and North Brazil Shelf Large Marine Ecosystem, CLME+ region) (Figure 1). The area comprises the adjacent Gulf of Mexico, Caribbean Sea and North Brazil Shelf LMEs. The combined area is approximately 5.9 million km², of which some 1.9 million km² is shelf area (Breton *et al.* 2006 cited in Fanning, Mahon *et al.* 2011). The three LMEs share marine species, provide complementary ecosystem services, and support the economies of wider Caribbean continental countries and island states and territories (Carrillo *et al.* 2017; Grober-Dunsmore & Keller 2008; Robertson & Cramer 2014; United Nations Industrial Development Organization [UNIDO] 2011).

The Large Marine Ecosystems (LMEs) of the Wider Caribbean

The combined area of the three contiguous transboundary large marine ecosystems (LMEs) of the wider Caribbean (Gulf of Mexico, Caribbean Sea and North Brazil Shelf) is approximately 5.9 million km², of which some 1.9 million km² is shelf area. LMEs are a scientific concept developed by the United States' National Oceanic and Atmospheric Administration (NOAA). They are considered meaningful geospatial units for ecosystem-based management (EBM). The three wider Caribbean LMEs are adjacent and thus share marine species, provide complementary ecosystem services, and support all the economies in the region.

The geographic area that is the focus of the RSAP and companion SoMH includes two overlapping programme areas, that of the UN Environment Cartagena Convention and its related sub-programmes (Gulf of Mexico and Caribbean Sea) and that of the CLME+ SAP (Caribbean Large and North Brazil Shelf Large Marine Ecosystems, CLME+ region)**. The Cartagena Convention area overlaps with the area under the mandate of the United Nations Food and Agriculture Organization (FAO) Western Central Atlantic Fishery Commission (WECAFC) as well as areas included in sub-regional integration mechanisms with an oceans mandate, such as the Organisation of Eastern Caribbean States (OECS) and the Caribbean Community (CARICOM). See map in Figure 1.

** The CLME+ Project is implemented by the United Nations Development Programme (UNDP) and co-financed by the Global Environment Facility (GEF).



Figure 2: The SPAW Sub-Programme area of the Cartagena Convention, the CLME+ region (including the Caribbean Sea LME and the North Brazil Shelf LME) in addition to the Gulf of Mexico LME and the Southeast US Continental Shelf LME.

Source: Cartagena Convention area (UNEP-CEP - 2017), LMEs (NOAA - 2009), land (GADM - 2018)

The RSAP prioritises addressing transboundary issues related to coral reefs, mangroves and seagrass beds that affect multiple countries and that would benefit from a regional approach. It seeks to address gaps in implementation at the national level and support action-oriented regional strategies to safeguard marine and coastal ecosystems and resources for the good of people and livelihoods.

1.4 Timeframe

The RSAP covers the ten years from 2021 to 2030, consistent with the timeframe for the Caribbean Environment Programme Strategy (2021-2030) [under development], the UN Environment’s Marine and Coastal Strategy to 2030 and the 2030 Agenda for Sustainable Development.

In addition to coinciding with the start of the post-2020 Global Biodiversity Framework, the implementation period also coincides with the United Nations Decade on Ecosystem Restoration (2020-2030).

1.5 Development of the RSAP

The RSAP was developed as a deliverable under the CLME+ Project between September 2018 and March 2020 through a participatory process to ensure stakeholder input into the content of the Strategy and to build ownership for implementation. This was achieved through two regional workshops (December 2018 and March 2019) and contributions through two rounds of stakeholder review by representatives of government, civil society and academia as well as an online survey (October 2019) that targeted SPAW Focal Points.

The RSAP prioritises addressing transboundary issues related to coral reefs, mangroves and seagrass beds that affect multiple countries and that would benefit from a regional approach



Photo CANARI

2 Regional Context

2.1 Importance of the Coral Reef-Mangrove-Seagrass Complex

The LMEs of the wider Caribbean are home to invaluable coastal and marine biodiversity, including endemic, endangered species, and essential⁷ species population (biomass) for vulnerable ecosystems. The wider Caribbean has globally significant percentages of coral reefs, mangroves, and seagrasses, which, when occurring together, make up what is considered one of the most biologically diverse and productive systems in the world. Close to 10% of the world's coral reefs are found in the Caribbean Sea LME and approximately 45% of the fish species and 25% of the coral species are found nowhere else in the world. With its unique and distinct marine biota, the tropical western Atlantic is one of four global centres of tropical marine biodiversity, within which the Gulf of Mexico and the Caribbean Sea are notably rich in biodiversity. With a mangrove forest extent of 10,429 km², which accounts for almost 1% of its total area, the North Brazil Shelf LME has the highest mangrove coverage of any LME.

The coastal and marine resources of the wider Caribbean support tourism, fisheries, maritime transportation, trade, and recreation. They are integral to economic and social development and quality of life of the region's people and make a significant contribution to the global ocean economy. The area of the Caribbean Sea LME alone makes up just 1% of the global ocean, but it accounts for between 14 and 27% of the ocean economy worldwide. A 2016 study by the World Bank put the economic value of marine habitats-related economic sectors/ industries of the Caribbean Sea to 37 states and territories of the region⁸ per year at US\$54.55 billion (Patil & Viridin *et al.* 2016). This value, which is based on 2012 data, is projected to nearly double by the year 2050. It should be noted that current and projected values are likely underestimated, in part because the region's ocean economy is poorly understood and measured (Patil & Viridin *et al.* 2016). While this provides useful indications of economic value, it is important to note that the geographic scope of this study does not include the full CLME+ region considered by the RSAP and many of the sociocultural benefits provided by these ecosystems are difficult to quantify due to inadequate data or valuation methods.

The coral reefs, mangroves and seagrass beds of the wider Caribbean provide goods and services both individually and through functional linkages among them, with the ecological processes of each enhanced by the others. Together, the three habitats have been found to supply more protection and

7 Criteria 10. Although ecosystems are best protected by measures focused on the system as a whole, species essential to the maintenance of such fragile and vulnerable ecosystems/habitats, as mangrove ecosystems, seagrass beds and coral reefs, may be listed if the listing of such species is felt to be an "appropriate measure to ensure the protection and recovery" of such ecosystems/habitats where they occur, according to the terms of Article 11 (1) (c) of the [SPAW] Protocol.

8 The study considered 37 coastal and island states and territories bordering the Caribbean Sea, plus The Bahamas. The full list is as follows: Anguilla, Antigua and Barbuda, Aruba, The Bahamas, Barbados, Belize, Bonaire, British Virgin Islands, Cayman Islands, Colombia, Costa Rica, Cuba, Curaçao, Dominica, the Dominican Republic, Grenada, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Puerto Rico, St. Barthelemy, St. Eustatius, St. Kitts and Nevis, Saint Lucia, St. Maarten, St. Martin, St. Vincent and the Grenadines, Trinidad and Tobago, U.S. Virgin Islands, and the Bolivarian Republic of Venezuela.

regulating services than any single habitat or any combination of two habitats (Guannel *et al.* 2016). Additionally, the transfer of materials, nutrients and energy that occurs among the three habitats is needed to sustain the high productivity and biodiversity of the coastal zone (Granek *et al.* 2009 cited in Rodríguez-Ramírez *et al.* 2010). The case for the wise stewardship of each habitat is strong, but given the functional linkages between the three, the argument for an integrated approach to their management and protection is compelling.

2.2 Trends, Challenges and Opportunities

The RSAP has been developed in response to the multiple threats facing marine habitats. Caribbean coral reefs, mangroves and seagrass beds are facing a general trend of steady overall habitat loss and degradation. These changes are often driven by the interaction of multiple pressures and threats. For example, the negative phase shift to algal-dominated reefs has been facilitated by the loss of major reef herbivores (ICRI, 2019). This is due to human over-exploitation in the case of parrotfish and disease in the case of the long-spined sea urchin, *Diadema antillarum*. Maintaining a healthy population (biomass) of essential species is critical for coral reefs that are under the major stress with the increasing temperature.

The pressures and threats to these habitats are influenced by underlying socio-economic drivers of change which have implications for decision-making about the marine environment, allocation of resources for conservation and habitat restoration and resource use.

Notably, within these socio-economic drivers of change are also opportunities to improve governance, management and sustainable use of resources to derive sociocultural and economic benefits (resulting from successfully mitigating these challenges and threats) from intact, healthy, restored, optimised habitats which can produce greater returns for society.

The trends, pressures and threats, and underlying drivers of change are presented below.

Trends

- **Steady overall habitat loss, combined with declining quality and community modification.**

Notwithstanding sub-regional and localised improvements, there is an overall trend of habitat loss and declining quality. Caribbean coral cover is estimated to have decreased by more than 80% between the 1970s and 2012 (Jackson *et al.* 2014). Live coral cover is decreasing, and there is a region-wide phase shift towards algal-dominated reefs. The wider Caribbean region lost mangroves at a rate of 0.12% per year between 2000 and 2012 (Hamilton and Casey 2016). Although areas of seagrass have shown degradation and recovery over time, the general trend has been towards significant degradation and even loss of some beds (van Tussenbroek *et al.* 2014; Sheppard 2018).

Pressures and threats

- **Alien invasive species competition and predation threaten habitats.** Alien invasive species are having a significant impact on coastal habitats, especially coral reefs, in the wider Caribbean. For example, the pervasive Indo-Pacific lionfish (*Pterois volitans*) has contributed to an increase in algal dominance in coral and sponge communities in the Caribbean region (Birchenough 2017). The invasive *Halophila stipulacea* species of seagrass has also been spreading fairly rapidly since being recorded in 2002 (Ruiz & Ballantine 2004). While there is some uncertainty regarding the full ecological impact of the species, its adaptability and rapid spread suggest it could change the species composition and trophic interactions in the shallow subtidal zone (Scheibling *et al.* 2018).



Figure 3: The Caribbean dive industry is dependent on healthy coral reefs.

Photo by CANARI

- **Direct over-exploitation.** Overfishing is the leading driver of the phase shift from coral dominated systems to those dominated by macroalgae (Gardner *et al.* 2003; Wilkinson 2004; Bongaerts *et al.* 2010; Jackson *et al.* 2014). In addition, overfishing of spawning aggregations has also affected other important species, where many aggregations have declined or collapsed, and today, several species are at risk of extinction (Erisman *et al.* 2018). Local harvesting of mangrove wood (e.g. fuelwood for cooking, material for building and fish pots) can also affect forest composition and structure (Caribbean Sea Ecosystem Assessment [CARSEA] 2007; FAO 2007). Exploration and exploitation of hydrocarbons at sea (offshore), can increase the risk of contamination for marine ecosystems and loss of ecosystem services, but conversely, if carefully monitored, could provide information that is seldom gathered or accessible, such as from deep ocean.
- **Pollution.** Nutrient pollution, primarily from inadequately treated sewage, is a major cause of widespread coral cover death across the region (Jackson *et al.* 2014; UNEP-CEP 2019). An emerging issue of concern is the high level of the use of personal care products, neurotoxicants, chemical herbicides, novel insecticides and pharmaceuticals on species and ecosystems. Coastal zone dredging and discharge of sediment into the sea resulting from poor erosion controls, construction, poor upland land-use practices, and deforestation all contribute to turbidity that affects corals and seagrasses. Seagrasses are also susceptible to stressors arising from water sports and *Sargassum* blooms. Marine litter and associated microplastics result in physical damage and mortality of marine fauna and can accumulate in mangroves (Garcés-Ordóñez *et al.* 2019), and other coastal and marine ecosystems. Coastal zone development (e.g. roads, ports, urban growth and tourism infrastructure) and associated pollution also threatens mangroves, along with conversion for agriculture, mariculture, rice and salt production (UNEP-CEP 2019). In addition to removal of mangrove forest, these activities disrupt the hydrology and alter delicate tidal regimes.
- **Ongoing chronic degradation from local stressors** (intensive fishing pressure, poor water quality, invasive alien species and disease) **has synergistic interactions with growing global pressures linked to climate change**, including ocean warming, intensified hurricanes, sea level rise and ocean acidification. The need for the shoreline protection services of coral reefs, mangroves and seagrasses from extreme weather events occurs alongside climate change-related weakening of the ecosystems. Warmer sea temperatures induce coral bleaching and



Figure 4: Coral reefs protect coastlines and shorelines and provide safe harbour.

Photo by CANARI

potentially burn seagrasses in shallow water sites (Baker *et al.* 2015). While mangroves have an inherent capacity to migrate landwards, studies have suggested that they may not be able to keep pace with sea level rise (Alongi 2015). Moreover, “coastal squeeze” from developments along the coastline limit the available space for intertidal habitat to retreat landward. The Caribbean basin is one of the fastest-changing chemical environments under ocean acidification (Andersson *et al.* 2019). Ocean acidification, associated with uptake of carbon dioxide (CO₂) from the atmosphere, reduces coral growth rates and, if unchecked, could reduce their ability to maintain their physical structure (Anthony *et al.* 2008; Cao *et al.* 2007). Damage associated with the extreme hurricanes linked to global warming (wave action, storm surge, and high winds) leaves ecosystems in a critical state and exacerbates pre-existent vulnerabilities leading to a decrease in ecosystem services provision in the short and medium terms. According to the Intergovernmental Panel on Climate Change (IPCC 2018; IPCC 2019), a global temperature rise of 1.5°C would result in the loss of 70% to 90% of coral reefs. While with a 2°C increase in temperature, the world’s coral communities would collapse by 99%.

- **Emerging issues and threats**, like *Sargassum* accumulation and Stony Coral Tissue Loss Disease (SCTLD), **jeopardise marine ecosystem and habitat health**. Research and investigation are needed to determine the nature and scope of the ecological changes occurring, to formulate and implement appropriate responses.

Drivers of change

- **Low levels of economic growth, poverty and inequality**. Although there have been outlier economies, the wider Caribbean has, as a whole, experienced low economic growth due to structural factors and a challenging external context over the past five years. This has led to stagnation in socio-economic improvements and some reversals of gains (OECD *et al.* 2019). High rates of poverty and inequality also remain a pressing development challenge (Caribbean Development Bank 2016; Economic Commission for Latin America and the Caribbean [ECLAC] 2019). This is an underlying driver of current over-exploitation as well as interest in the ocean’s potential to support new economic development.
- **Coastal zone development as part of the development agenda**. Economic growth stimuli in the region continue to include major development in the coastal zone. Coastal development,

when not carefully planned and executed, can lead to substantial further fragmentation and degradation of coastal ecosystems, which in turn reduces the flow of goods and services from those degraded ecosystems. Conversely, carefully planned and executed 'wise' coastal development, well balanced with other uses of the marine and coastal space and utilising an ecosystem-based approach, not only maintains the integrity and value of the coastal ecosystems, the development can benefit from the goods and services (including storm surge protection, beach erosion control and ecotourism options) provided by the adjacent intact, healthy coastal and marine habitats.

- **Increasing urbanisation, including of coastal communities.** Urbanisation of coastal settlements has been one of the major factors underlying the direct pressures on the Caribbean Sea ecosystem (CARSEA 2007). Latin America and the Caribbean is the most urbanised region in the developing world. Within the wider Caribbean, particularly in the small island states and territories, population distribution is concentrated on the coast. More than 134 million people live on or near the coast in the wider Caribbean⁹. Urban populations have grown faster than sanitation services; untreated sewage and solid waste generate a pollution threat to people and nearshore habitats (UNEP-CEP 2019). An estimated 85% of wastewater entering the Caribbean Sea is untreated, and 51.5% of households lack sewer connections (Cashman 2014). Wastewater discharge has been a large contributor to the loss of over 80% of living coral in the Caribbean (Villasol & Beltrán 2004).
- **Growing vulnerability in the coastal zone.** The concentration of people on the coast not only increases consumption-related pollution that affects the marine environment, but also increases the exposure of the population and infrastructure to the impacts of natural hazards, such as hurricanes and storm surge.
- **Increasing costs of natural disasters.** Extreme storms (Categories 4 – 5) with higher wind speeds and more precipitation, such as those of the 2017 Atlantic hurricane season and Hurricane Dorian in 2019, are projected to increase as a result of global warming. A 2017 UN Economic Commission for Latin America and the Caribbean (ECLAC) assessment of losses and damages from Hurricanes Irma and Maria in Anguilla, The Bahamas, British Virgin Islands, Sint Maarten, and Turks and Caicos Islands in 2017 put costs at approximately US\$5.4 billion, with the tourism and housing sectors most affected (ECLAC 2018). A preliminary multi-agency assessment of the impacts and effects of Hurricane Dorian on The Bahamas put costs at more than US\$3 billion. Wave action, storm surge and high winds have resulted in partial to severe destruction to mangroves, coral reefs, seagrass beds and forests on the islands of Abaco and Grand Bahama amounting to around US\$7 million, based on a global average of the cost of restoration projects (ECLAC *et al.* 2019).

Potential Opportunities

- **Focusing blue economy approaches to protect and enhance marine habitats.** Blue economy approaches being promoted and pursued in the region must have a solid focus on valuing and protecting marine ecological systems and biodiversity (seen as natural capital). National and regional development will need to recognise that natural capital is not substitutable and therefore apply the precautionary principle. Investment in ecosystem protection and restoration will therefore enhance this natural capital. Action to use and mainstream natural capital approaches should encompass, for example, conducting ecosystem valuations, using natural capital accounts, recognising environmental limits and ensuring sustainable use of resources (including fisheries). However, determinations of the economic value of ecosystems must include appreciation of the cultural, spiritual and other non-monetary contributions of ecosystems to human well-being.

⁹ <http://www.lmehub.net/>

- **Nature- or ecosystem-based solutions to climate change.** There is an increasing emphasis on the opportunity to use marine and coastal ecosystem services for adaptation and mitigation mechanisms in response to global climate change. This can drive enhanced commitment, funding and action for protection and restoration of these ecosystems.
- **Strengthening development of sustainable livelihoods.** Supporting local community small and micro-enterprises is a key strategy for poverty alleviation. In the wider Caribbean, natural ecosystems are the foundation of many nature-based enterprises (e.g. fishing, agriculture, tourism) which provide economic opportunities particularly for rural coastal communities. Nature-based enterprises can deliver triple bottom-line economic, environmental and social benefits. Opportunities exist to strengthen support for entrepreneurship, adoption of sustainable practices of resource use, promoting markets and value-added opportunities. Research and partnership initiatives with small, medium and large marine resource users are necessary to determine ecosystem capacities and extraction limits on economically viable species.
- **Using marine genetic biodiversity.** The potential of marine genetic biodiversity in pharmaceuticals and other industries is recognised, but countries in the region have limited capacity to access and utilise this. Capacity building and technology transfer¹⁰, including via intra-regional partnerships, can open this opportunity.
- **Leveraging Marine Managed Areas.** There has been a widespread and concerted effort to establish and manage marine protected areas (MPAs), fish sanctuaries and other managed areas across the region to protect marine habitats and support sustainable use. Exploring and promoting use of these areas to enhance sociocultural and sustainable livelihoods is a continuing opportunity. Intra-regional sharing of best practices and lessons and collaboration across MPA networks can be enhanced.
- **Ecosystem-based management and standardised reef health index.** There is an opportunity for a regional ecosystem-based management plan for vulnerable ecosystems such as coral reefs. The reef health index should be systematised in the countries of the region, and specific criteria should be implemented for each sub-region of the Greater Caribbean Region.

2.3 Gaps in Responses

Although there are response systems and infrastructure in place to manage coastal and nearshore marine ecosystems, there are gaps and deficiencies that reduce the effectiveness of these responses.

- **Increased formal protection of ecosystems but targets are not being met and there are deficiencies across many management effectiveness indicators.** The number of protected areas designated under national laws and international programmes, including the SPAW Protocol, has increased in the past decade. Many states are also designating marine managed areas and adopting a variety of governance mechanisms. The Caribbean Challenge Initiative¹¹ to effectively conserve and manage at least 20% of the marine and coastal environment by 2020 is an example of enhanced ambition being seen in the region. However, in general the coverage achieved by these various area-based conservation measures is still below the Aichi biodiversity targets, and the effectiveness of the measures is generally unknown (Knowles *et al.* 2015; Caribbean Community [CARICOM] 2018). An appropriately designed and effectively managed system of marine managed areas can increase habitat resilience, making them less susceptible

¹⁰ Note that capacity building and technology transfer is a major work package under the international legally binding instrument under the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (the BBNJ Agreement).

¹¹ <https://www.caribbeanchallengeinitiative.org/>

to environmental and climate stressors while maintaining the flow of goods and services critical to national development. With more than 90% of the marine and coastal ecosystems occurring outside of protected areas, establishment of area-based conservation measures cannot be the primary strategy for management of coastal ecosystems. National systems of protected areas should be designed as part of a national conservation strategy. Even where areas are being designated on paper, implementation gaps mean that they are not resulting in effective protection of marine habitats.

- **Incomplete data and information for management.** Use and application of existing standardised marine ecosystem monitoring methods for biophysical, socio-ecological, and management effectiveness indicators are often highly variable, leading to gaps in data and understanding and consequently deficits in management responses. Although arguably the area with most data, coral reef system data across the region generally are still incomplete, inconsistent, incompatible and insufficient to support adaptive management. While standardised data collection protocols are increasingly being used throughout the region, there is still a lack of capacity and resources to repeat assessments thereby generating longer-term monitoring and trend data necessary to support effective management and policy. Effective management of coral reefs is also constrained by the lack of quantitative scientific data to provide support and understanding of the cumulative impacts of the various threats (Hughes *et al.* 2010, Jackson *et al.* 2014). There is no clear picture of the status of mangrove and seagrass ecosystems at the regional scale, except for the continued loss of mangrove forests and seagrass beds (Cavender-Bares *et al.* 2018; van Tussenbroek *et al.* 2014). Country studies indicate that the structure and functional characteristics of mangrove communities are dependent on location, and thus display a significant degree of variation. In the absence of standard methods for decision-making and monitoring, it has been difficult to determine the cause of the low survival rate in mangrove replanting initiatives. Seagrass monitoring initiatives have tended to be short-term and sporadic. Compared to coral reef and mangrove ecosystems, seagrasses receive comparatively little national or regional level attention in marine resource monitoring and research programmes. There is, similarly, no consistent use of a standardised socio-economic assessment methodology, such as, Socio-economic Monitoring for Coastal Management (SocMon), across the region.
- **Weak coherence of management strategies.** Natural resource management programmes are generally not based on comprehensive national strategies, and tend to lack sufficient linkages between threats, programmes, and specific interventions. This is due in part to a preference for projects that produce immediate outputs versus long-term outcomes. There is also often a lack of coordination and integration, synergies and complementarity among individual projects and MEAs. All these factors lead to a low return on investment.



Photo CANARI

Although there are response systems and infrastructure in place to manage coastal and nearshore marine ecosystems, there are gaps and deficiencies that reduce the effectiveness of these responses.

- **Collaborative management limited by resource and capacity constraints.** Although there have been advances in collaborative approaches to MPA and coastal resource management, there remain challenges, particularly when working with community groups. Resource and capacity constraints adversely affect the sustainability of some stewardship programmes, particularly succession planning for leadership and resource allocation to stakeholder groups.
- **Inadequate institutional capacity for effective management.** There are insufficient human and financial resources at the national level, and regional cooperation is insufficient to close the resource and capacity gaps. For example, management capacity assessments for MPAs have identified a range of capacity needs in management institutions in the Caribbean (Gombos *et al.* 2011; Gill *et al.* 2017). Most recently, sustainable financing, law enforcement, bio-physical monitoring, fisheries management, management planning and outreach/education were identified by managers in the MPACONnect network as their highest priority capacity building needs (Doyle *et al.* 2017). Enhancing inter-sectoral coordination for integrated ecosystem-based management of the coastal zone also continues to be a priority for the region.
- **Knowledge, awareness, and perception of value of marine and coastal resources is weighted towards consumption.** There is insufficient knowledge and awareness of ecological processes, the status of habitats and species, the impacts resulting from their use of the resources, and the continued ability to use the resources at all levels of society and across sectors. That awareness deficit results in a perception of value weighted towards consumption of biodiversity resources to the detriment of conservation, sustainable use and preventing pollution and other activities that damage natural ecosystems. The adverse outcomes directly related to the awareness deficit are exacerbated by the prevailing economic paradigm, which is geared towards short-term gains.
- **Inadequate stable, recurring financial resources to support effective resource conservation and management.** Financial resources are inadequate to support current management efforts. In order to plan for improved strategies that are increasingly effective at addressing threats to coastal habitats, and to support future upscaling of these efforts, additional and novel financing streams will need to be identified and secured. Mobilising increased financing streams will be required to support a major upscaling and coordination of actions: from pilot and demonstration projects to region-wide replication and upscaling (larger-scale investments). Non-traditional stakeholders and new partnerships will need to be developed.

2.4 Progress Towards Meeting the Aichi Biodiversity Targets

Progress towards meeting internationally agreed targets is an indication of how the region is doing, collectively, in its coastal and marine conservation efforts.

Recent reports and assessment of progress towards meeting the globally agreed Aichi Biodiversity Targets have concluded that while there have been advances, the region is lagging in its efforts. The 2016 review for Latin America and the Caribbean (UNEP-WCMC 2016) found progress is being made towards achieving most of the targets, but this was insufficient to reach a single target by 2020. For Targets 10 and 14, reducing pressures on vulnerable ecosystems (specifically coral reefs) and safeguarding ecosystem and essential services, the situation had gotten worse. For Target 15, ecosystems restored, and resilience enhanced, the data was insufficient for progress to be assessed. The 2018 review of the CARICOM region similarly found progress but was unable to determine whether the targets would be met by 2020 due to lack of appropriate indicators or insufficient quantitative data (CARICOM 2018).

The two progress reports summarise the difficulty in assessing the outcomes and impacts of responses and actions that are intended to reverse biodiversity loss and improve ecosystem stability and recovery. They highlight gaps in:

- *capability* (knowledge and attitudes in application of scientific rigor, sense of stewardship, and desire to learn);
- *capacity* (for design, programme and process management, data collection and management, and evaluation);
- *robustness of the enabling environment* (policies, laws, regulations, procedures); and
- *leadership*.

Two other recent regional assessments (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [IPBES] 2018; Sheppard 2018) convey a similar message, while bringing the human dimension more into focus. Though the Post-2020 Global Biodiversity Framework is still being formulated, it is clear that significant increases in financing, management capacity, data management, and monitoring and evaluation mechanisms is needed to achieve the existing targets and ensure progress towards the 2050 milestones established in the Post-2020 Framework.

2.5 Opportunities

Addressing the transboundary threats and shared challenges of the wider Caribbean's three LMEs presents a shared opportunity to develop cross-boundary and multi-stakeholder solutions and approaches to ecosystem-based management and information and technology transfer. The RSAP offers an opportunity for participating inter-governmental organisations, governments and stakeholders from academia, civil society, the private sector, and regional and global agencies to work together to enhance management and conservation in support of sustainable socio-economic development, through actions specifically targeting coral reefs, mangroves and seagrass beds. The CLME+ ICM, and the proposed Permanent Coordination Mechanism (PCM) and wider Partnership, provide a mechanism to support this. These aim to enhance regional coordination and collaboration, support integrated and interactive ocean governance, and promote the upscaling of actions by all sectors of society.

Current interest in and initiatives towards developing the blue economy as an engine of growth in the region are also opportunities to promote the importance of coral reefs, mangroves and seagrass beds to economic development. Economic development must be environmentally sustainable in the blue economy model and the importance of protection, restoration and sustainable use to ensure delivery of ecosystem services and support for local livelihoods can be highlighted. Tools being promoted as part of a blue economy – such as marine spatial planning, ecosystem valuation and natural capital accounting – can be useful in efforts to manage these coastal ecosystems.

There is also interest in strengthening the resilience of the region to climate change, which recognises the contribution of coastal and marine ecosystems. For example, the Caribbean's Climate Smart Accelerator¹² has members from 26 governments in the region, financial institutions, global companies and foundations, and includes a pillar on working towards healthy ecosystems in the sea and on land.

There is also increasing interest in developing innovative financing mechanisms to support conservation of coastal and marine ecosystems (e.g. blue bonds) and some pilot examples have been developed that may be drawn upon. Development of satellite accounts, for example, piloted by the Caribbean Development Bank in Jamaica for coastal and marine sectors (Ram *et al.* 2019) can also be used to demonstrate the economic importance of coastal and marine ecosystems.

12 <https://www.caribbeanaccelerator.org/>



Raising awareness and engaging stakeholders in experiencing the wonders of marine habitats fosters support for their conservation and sustainable use.



Photo by H. Tonnemacher

3 Guiding Principles

Core operating and guiding principles have been defined for the RSAP as follows:

- **Integration of ecological, social, and economic imperatives** in decision-making for sustainable use of natural resources and maintenance of the integrity of ecosystems;
- **Precautionary principle** ensures protection and restoration of ecosystems and ecosystem services where financial gain and investments may result in deterioration of this biodiversity;
- Use of strategies and management **interventions** at multiple scales – including site, national and **landscape scales** – to ensure the continued flow of ecosystem goods and services for social and economic development;
- Engagement of, shared ownership and coordination among, the members of the **multi-level institutional regional framework for ocean governance**;
- **Stakeholder participation** in coastal and marine governance, including in programme design, implementation, and assessment in order to optimise the knowledge, capabilities, and capacities of the public sector, private sector, civil society and academia;
- **Alignment with regional and global compacts** to support Member States in their efforts to deliver on existing MEA commitments; and
- **Knowledge management, communication and information sharing** with stakeholders to strengthen multisectoral participation and foster support for the conservation and sustainable use of coral reefs, mangroves and seagrasses.

Protecting mangroves
will contribute to climate
adaptation and mitigation
and biodiversity conservation.



Photo by P. Rothenberger

4 Strategic Pillars, Goals, Outcomes and Objectives

The **overarching goal** of the RSAP is to strengthen national and collective action by Member States to manage coastal ecosystems, particularly coral reefs, mangroves and seagrasses, in order to maintain the integrity of the habitats and ensure the continued flow of ecosystem goods and services necessary for national development.

The RSAP is structured around four interdependent strategic pillars with corresponding goals as follows:

Pillar 1. Ecosystem health and resilience	Goal 1. Improve ecosystem health, biodiversity and resilience
Pillar 2. Sustainable use	Goal 2. Sustainably use coastal and nearshore marine resources for national and regional development
Pillar 3. Governance and partnerships	Goal 3. Strengthen regional governance systems and partnerships for the management of the marine/coastal resources of the wider Caribbean
Pillar 4. Enabling systems and capacity	Goal 4. Strengthen legal and institutional frameworks to effectively manage the marine/coastal resources of the wider Caribbean

The goals are supported by ten objectives that guide action between 2021 and 2030 (Table 1).

Lines of action under each objective set out regional-level action in response to the threats and challenges of: declining habitat quality and extent; unsustainable use of marine/coastal resources and development decision-making that fails to integrate the value of coastal and marine resources into account; the need for robust regional-level systems to help address transboundary issues; and data and information deficiencies and management weaknesses (Table 2).

These goals, objectives and lines of action directly contribute to implementation of the SPAW work programme and relevant initiatives under SPAW for conservation, sustainable use and restoration of marine habitats and addressing threats, including regulation of land-based sources of pollution under the State of the Cartagena Convention Area Report: An Assessment of Marine Pollution from Land-based Sources and Activities in the Wider Caribbean Region (SOCAR). The RSAP also contributes to other strategies, plans and initiatives to implement the CLME+ SAP, including the Regional Programme of Action on Illegal, Unreported and Unregulated (IUU) Fishing, as well as other regional and global frameworks (see Section 6).

Table 1: RSAP Pillars, Goals, Outcomes and Objectives 2021 – 2030

Pillar 1. Ecosystem health and resilience	
Goal 1. Improve ecosystem health, biodiversity and resilience	Outcome: By 2030, enhanced extent, status and ecological functions of the coral reefs, mangroves, and seagrass beds of the wider Caribbean can contribute to ecological, social and economic benefits to Member States/coastal communities
<p>Objective 1. Enhance ecological integrity and function of coral reefs, mangroves and seagrass beds</p> <p>Objective 2. Decrease and reverse habitat loss</p> <p>Objective 3. Support species diversity and species populations within the three habitats</p>	
Pillar 2. Sustainable use	
Goal 2. Sustainably use coastal and nearshore marine resources for national and regional development	Outcome: Importance of coral reefs, mangroves and seagrasses, including economic and non-use values, is recognised and integrated into development decision-making
<p>Objective 4. Mainstream coral reefs, mangroves, seagrasses, and associated sub-ecosystems and essential species in sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems</p> <p>Objective 5. Reduce threats to the habitats from coastal/marine-based sectors and development activities that impact coral reefs, mangroves and seagrasses</p>	
Pillar 3. Governance and partnerships	
Goal 3. Strengthen regional governance systems and partnerships for the management of the marine/coastal resources of the wider Caribbean	Outcome: Mechanisms for participatory/interactive governance and strategic partnerships are institutionalised at the local, national, sub-regional and regional levels
<p>Objective 6. Enhance coordination and reduce conflicts and gaps to improve programme synergies</p> <p>Objective 7. Improve governance of marine and coastal resources at national, sub-regional and regional levels</p>	
Pillar 4. Enabling systems and capacity	
Goal 4. Strengthen legal and institutional frameworks to effectively manage the marine/coastal resources of the wider Caribbean	Outcomes: Nearshore marine and coastal zone management decisions are made based on the best available scientific ecological and socio-economic evidence and local knowledge relating to coral reefs, mangroves and seagrass beds Coastal resource managers and decision-makers have the competencies, capacity, data, tools and financial resources to make and implement sound decisions about issues affecting coral reefs,

Table 1 (continued): RSAP Pillars, Goals, Outcomes and Objectives 2021 – 2030

	mangroves and seagrass beds in coherence with the principles of equity and prevention, with common but differentiated responsibilities for each country
<p>Objective 8. Improve science-based decision-making and use of local/traditional knowledge in policy, planning, and management of coastal ecosystems</p> <p>Objective 9. Improve the effectiveness of resource and protected area management institutions and the impact of management interventions</p> <p>Objective 10. Enhance the sustainability of financing mechanisms for protected areas and other site-based conservation efforts</p>	

Table 2: RSAP Pillars, Goals, Objectives and Lines of Action 2021 – 2030

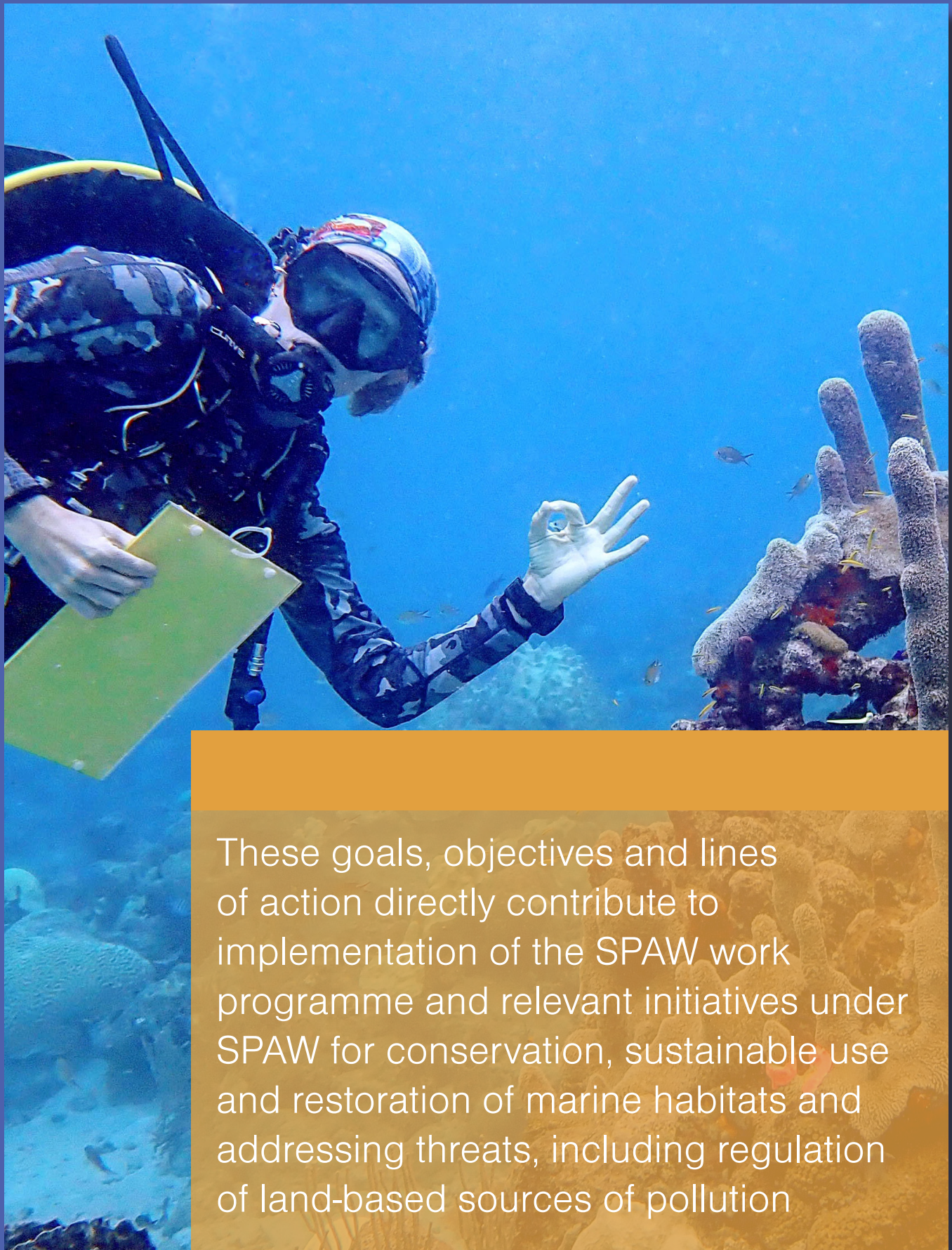
Pillar 1. Ecosystem health and resilience		
Goal	Objective	Lines of Action
<p>Goal 1. Improve ecosystem health, biodiversity and resilience</p>	<p>Objective 1. Enhance ecological integrity and function of coral reefs, mangroves and seagrass beds</p>	<ul style="list-style-type: none"> • Protect habitat areas of high ecological importance and biodiversity value in the wider Caribbean LMEs • Support improved MPA management • Reduce fragmentation of habitats and improve connectivity between intact and fragmented areas in support of ecosystem goods and services provision • Manage and control invasive species • Manage coral diseases • Conduct research on emerging threats and responses • Regulate essential species population (biomass) for vulnerable ecosystems • Support actions for pollution control (including sewage)
	<p>Objective 2. Decrease and reverse habitat loss</p>	<ul style="list-style-type: none"> • Scale up and strengthen restoration activities • Promote and use green infrastructure and blue carbon for climate adaptation and mitigation and biodiversity conservation
	<p>Objective 3. Support species diversity and species populations within the three habitats</p>	<ul style="list-style-type: none"> • Implement species conservation strategies that reflect life stage development and general movement between habitats and within the larger Caribbean marine ecosystems

Table 2 (continued): RSAP Pillars, Goals, Objectives and Lines of Action 2021 – 2030

Pillar 2. Sustainable use		
Goal	Objective	Lines of Action
Goal 2. Sustainably use coastal and nearshore marine resources for national and regional development	Objective 4. Mainstream coral reefs, mangroves, seagrasses, and associated sub-ecosystems and essential species in sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems	<ul style="list-style-type: none"> • Strengthen information and capacity for economic valuation (including assessment of intrinsic values) of ecosystem services • Use blue satellite national accounts and natural capital accounting to capture the contribution of coastal ecosystems to key economic sectors • Improve access by decision-makers, planners and the public to data and reports about processes that impact nearshore marine/ coastal ecosystems and ecosystem services • Develop technical guides for the design of ecological restoration projects in coastal marine ecosystems • Update mapping sources for mangroves and seagrass beds at least every 5 years
	Objective 5. Reduce threats to the habitats from coastal/ marine-based sectors and development activities that impact coral reefs, mangroves and seagrasses	<ul style="list-style-type: none"> • Strengthen rules and procedures for assessment of environmental and social impact • Support implementation of actions under regional plans and initiatives addressing key threats (invasive species, pollution, overfishing, etc.) • Strengthen the implementation of regulations for the sustainable use and protection of herbivorous fish species (e.g. banning spearguns and traps, using fishing seasons)
Pillar 3. Governance and partnerships		
Goal 3. Strengthen regional governance systems and partnerships for the management of the marine/ coastal resources of the wider Caribbean	Objective 6. Enhance coordination and reduce conflicts and gaps to improve programme synergies	<ul style="list-style-type: none"> • Enhance functional cooperation between regional intergovernmental institutions
	Objective 7. Improve governance of marine and coastal resources at national, sub-regional and regional levels	<ul style="list-style-type: none"> • Institutionalise mechanisms for regional and sub-regional environmental governance • Enhance legal framework for participatory decision-making and decentralised management arrangements for national environmental governance • Support and facilitate participation of civil society, academia and the private sector in governance and programme and project design, implementation, and evaluation

Table 2 (continued): RSAP Pillars, Goals, Objectives and Lines of Action 2021 – 2030

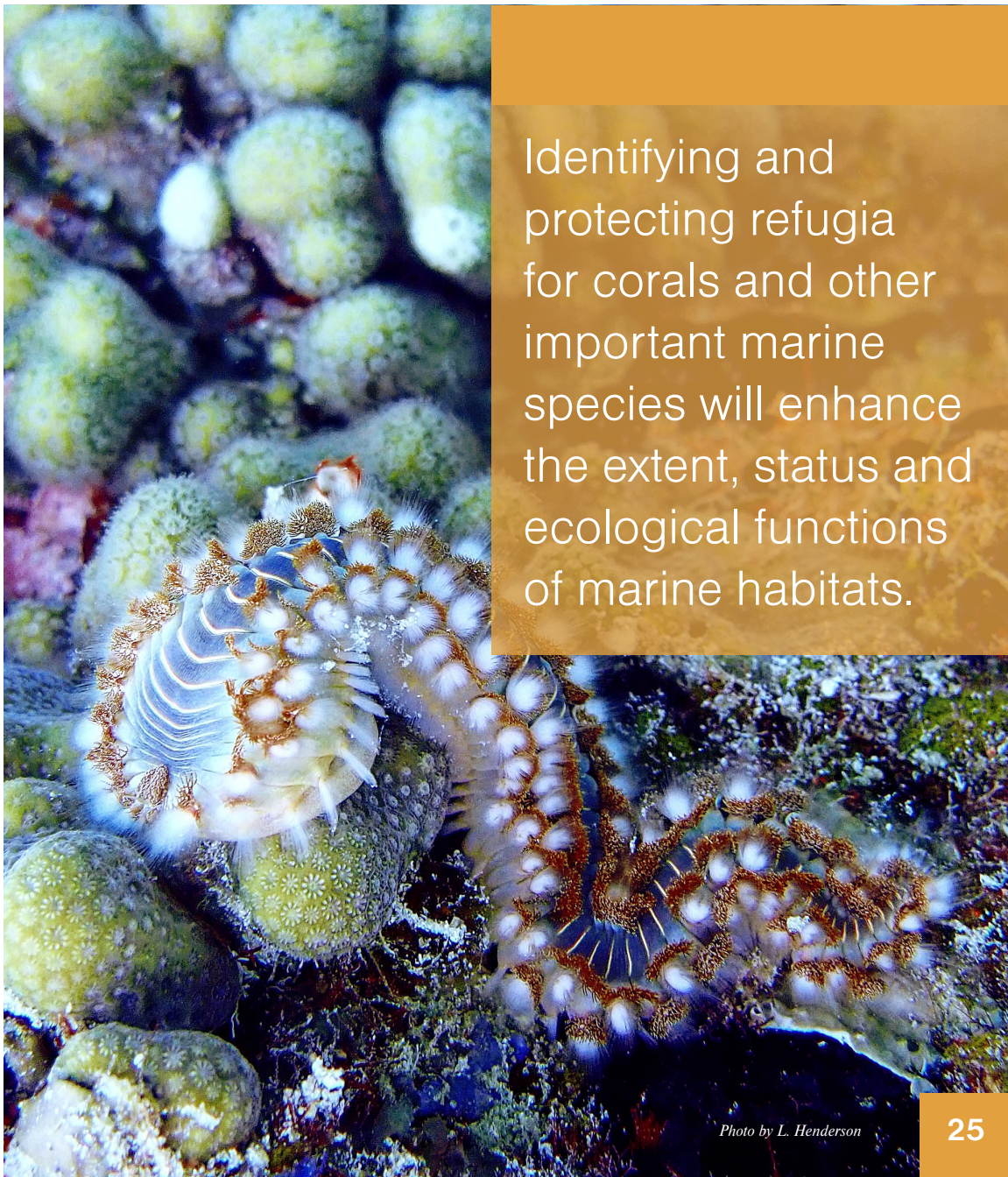
Pillar 4. Enabling systems and capacity		
Goal	Objective	Lines of Action
<p>Goal 4. Strengthen legal and institutional frameworks to effectively manage the marine/coastal resources of the wider Caribbean</p>	<p>Objective 8. Improve science-based decision-making and use of local/traditional knowledge in policy, planning, and management of coastal ecosystems</p>	<ul style="list-style-type: none"> • Enhance knowledge of, and reporting on, the state of ecosystems • Establish and strengthen knowledge management systems for translating data and scientific research for uptake by policy makers, the private sector, and the general public • Strengthen targeted communication for awareness raising, behaviour change and policy change to support management of coastal ecosystems • Conduct management effectiveness, programme effectiveness, and site performance evaluations and reporting
	<p>Objective 9. Improve the effectiveness of resource and protected area management institutions and the impact of management interventions</p>	<ul style="list-style-type: none"> • Increase capabilities for long-term system-wide planning for coastal ecosystems and protected areas • Strengthen MPA planning and management processes to address the needs of local communities, indigenous peoples, women, youth, and other vulnerable groups • Implement a workforce development programme for MPA management • Maintain and enhance effective networks of professionals and institutions
	<p>Objective 10. Enhance the sustainability of financing mechanisms for protected areas and other site-based conservation efforts</p>	<ul style="list-style-type: none"> • Increase financing for natural resources management from resource-dependent sectors • Establish regional financing and fund management mechanisms



These goals, objectives and lines of action directly contribute to implementation of the SPAW work programme and relevant initiatives under SPAW for conservation, sustainable use and restoration of marine habitats and addressing threats, including regulation of land-based sources of pollution

5 Framework for Action

The RSAP proposes a framework for implementation of the four goals and 10 objectives through indicative lines of action, indicators and targets. These may be further refined as part of a monitoring and evaluation framework address emerging global and regional agreements (including the Post-2020 Global Biodiversity Framework) and as needs and opportunities change (see Section 7.2).



Identifying and protecting refugia for corals and other important marine species will enhance the extent, status and ecological functions of marine habitats.

Pillar 1. Ecosystem health and resilience

Goal 1. Improve ecosystem health, biodiversity and resilience

Outcome: By 2030, enhanced extent, status and ecological functions of the coral reefs, mangroves, and seagrass beds of the wider Caribbean can contribute to ecological, social and economic benefits to Member States/coastal communities

Lines of action	Proposed activities	Indicators	Targets
Objective 1. Enhance ecological integrity and function of coral reefs, mangroves and seagrass beds			
<p>Protect habitat areas of high ecological importance and biodiversity value in the wider Caribbean LMEs</p>	<p>Develop selection criteria and register of priority locations of coral reefs, mangroves and seagrasses with habitats of outstanding ecological value (drawing on existing international designations (e.g. Key Biodiversity Areas [KBAs], Important Bird and Biodiversity Areas [IBAs], Ecologically or Biologically Significant Areas [EBSAs], etc.) and conduct assessment of protection/conservation/management needs</p> <p>Scale-up formal protection, conservation and management (as needed) of sites based on assessment</p> <p>Designate MPAs with habitats of outstanding value for listing under the SPAW Protocol, Article 7</p> <p>Designate MPAs or fishery recovery zones with an Ecosystem-based management approach for protection of herbivores fish, as parrot fish species, and spawning aggregations</p>	<p>Coverage by zoning schemes or other formal conservation/ protection mechanisms for important coral reef, mangrove and seagrass sites</p> <p>Number of new sites with habitats of outstanding ecological value listed under the SPAW Protocol, Article 7</p>	<p>Habitats of outstanding ecological value identified and listed by 2022</p> <p>All SPAW Member States submitted tentative lists of eligible MPAs to Secretariat by 2022</p> <p>All SPAW Member States get XX% of the eligible MPAs listed by 2026</p> <p>All Member States of the Cartagena Convention ratify SPAW Protocol by 2025</p> <p>XX area of habitats targeted with formal protection, conservation and management demonstrate enhanced ecological value and function</p> <p>XX area of habitats and zones with herbivores fish and parrot fish species, and spawning aggregations</p> <p>XX of countries use regulations to protect herbivorous fish</p>

Lines of action	Proposed activities	Indicators	Targets
Support improved MPA management	<p>Establish or enhance MPA effectiveness strengthening programme:</p> <p>Conduct MPA management effectiveness inventory: Establish and operationalise protocols to evaluate management effectiveness, programme impacts and performance of site-based interventions</p> <p>Produce baseline assessments and reports, and develop action plans on the basis of assessment findings to improve management, including updating MPA management plans, and Marine Spatial Plans, where needed</p> <p>Respond to, and implement actions identified within, existing MPA management capacity assessments</p> <p>Establish integrated management regimes for efficient and effective management of MPAs and PA networks</p>	<p>Number of SPAW-listed sites approved prior to 2019 with completed management effectiveness evaluations</p> <p>Improved management effectiveness scores over baseline achieved, demonstrating improved ecological, social, economic and administrative benefits and impacts</p>	<p>All SPAW-listed sites approved prior to 2019 have completed management effectiveness evaluations by 2025</p> <p>XX% improvement in management effectiveness scores of all SPAW-listed MPAs by 2030</p>
Reduce fragmentation of habitats and improve connectivity between intact and fragmented areas in support of ecosystem goods and services provision	<p>Prepare guidelines, tools and training opportunities for integrating marine habitats/biodiversity conservation strategies into spatial and sectoral plans such as land use plans, agriculture sector development, urban and regional development plans</p> <p>Develop and disseminate procedures for assessing the connectivity potential of MPAs in support of biological corridors as mechanisms for connecting natural areas, in risk reduction strategies, and other sustainable land management strategies</p>	<p>Guidelines, tools and training programme</p> <p>Number of regional or local plans modified/updated</p> <p>Number of operationalised marine biological corridors</p>	<p>Guidelines, tools and training programme available by 2024</p> <p>At least 12 regional or local plans modified/updated on the basis of the guidelines for integrating marine biodiversity conservation strategies into spatial and sectoral plans by 2030</p> <p>Marine spatial plans prepared by SPAW Member States after 2026 include biological corridors</p>

Lines of action	Proposed activities	Indicators	Targets
Manage and control invasive species	<p>Region-wide coordinated research, monitoring, planning and action to address invasive species (e.g. <i>Halophila stipulacea</i> and <i>Peyssonnelid</i> algal crusts)</p> <p>Strengthen cooperation between the SPAW Protocol Sub-Programme and the International Maritime Organization (IMO) to promote cooperation to address maritime issues affecting marine biodiversity, including among others, the transfer of invasive species and diseases as a result of the discharge of ballast water</p>	<p>Monitoring and management protocols available to MPA managers</p> <p>Uptake of invasive species monitoring and management protocols by MPAs</p> <p>MOU/Statement of Cooperation between CAR/RCU SPAW Sub-programme and IMO</p> <p>Member State ratification of the International Convention for the Control and Management of Ships' Ballast Water and Sediments</p>	<p>Invasive species (e.g. <i>Halophila stipulacea</i> and <i>Peyssonnelid</i> algal crusts) monitoring and management protocols used in all SPAW-listed MPAs by 2030</p> <p>MOU/Statement of Cooperation between CAR/RCU SPAW Sub-programme and IMO signed by 2022</p> <p>All SPAW Protocol Member States have ratified the International Convention for the Control and Management of Ships' Ballast Water and Sediments by 2026</p> <p>Significant, measurable decrease in the regional or national incidence of at least XX invasive species</p>
Manage coral diseases	<p>Region-wide coordinated research, monitoring, planning and action to address Stony Coral Tissue Loss Disease (SCTLD) and other coral diseases</p> <p>Strengthen cooperation between the SPAW Protocol Sub-Programme and the IMO to promote cooperation to address maritime issues affecting marine biodiversity, including among others, the transfer of invasive species and diseases as a result of the discharge of ballast water</p>	<p>Monitoring and management protocols available to MPA managers</p> <p>Uptake of disease monitoring and management protocols by MPAs</p> <p>MOU/Statement of Cooperation between CAR/RCU SPAW Sub-programme and IMO</p> <p>Member State ratification of the International Convention for the Control and Management of Ships' Ballast Water and Sediments</p>	<p>Coral disease monitoring and management protocols used in all SPAW-listed MPAs by 2030</p> <p>MOU/Statement of Cooperation between CAR/RCU SPAW Sub-programme and IMO signed by 2022</p> <p>All SPAW Protocol Member States have ratified the International Convention for the Control and Management of Ships' Ballast Water and Sediments by 2026</p> <p>Incidence of coral disease reduced at XX sites / over XX area of coral reef</p>

Lines of action	Proposed activities	Indicators	Targets
Conduct research on emerging threats and responses	<p>Region-wide coordinated research and identification of good practice models to address <i>Sargassum</i></p> <p>Research and modelling of biological effects of ocean acidification on habitats/habitat-dependent species</p> <p>Research on emerging threats from pharmaceuticals and other endocrine disruptors</p>	<p>National <i>Sargassum</i> responses integrate good-practice models from across the region</p> <p>Fine-scale/wider Caribbean-specific models inform MPA management</p>	<p><i>Sargassum</i> response guidelines completed by 2024</p> <p>Ocean acidification research and modelling programme established by 2026</p>
Regulate essential species population (biomass) for vulnerable ecosystems	Strengthen legal frameworks for protection of key species of herbivorous fish associated with coral reefs	Scientific and Technical Advisory Committee (STAC) species working group established focused on herbivores fish and parrot fish	Evaluation of herbivores fish and parrot fish species by the Species Working Group of the STAC
Support actions for pollution control (including sewage)	Support actions taken under the Land-based Sources of Marine Pollution (LBS) Protocol of the Cartagena Convention, including the Regional Strategy and Action Plan on Nutrients [in development]	Number of initiatives to address nutrient pollution impacting coastal and marine habitats and species	Joint actions taken under SPAW and LBS Protocols

Lines of action	Proposed activities	Indicators	Targets
Objective 2. Decrease and reverse habitat loss			
Scale-up and strengthen restoration activities	<p>Prepare or adapt guidelines and manuals for site selection and restoration of seagrasses and mangroves, including good practice protocols and models</p> <p>Adapt guidelines and support training on coral restoration techniques</p> <p>Expand seagrass, mangrove and coral reef restoration and experimentation initiatives, including pilot projects or upscaling of current, successful activities</p>	<p>Published manuals and procedures available to MPA managers</p> <p>Regional and national capacity building programmes implemented</p> <p>Restoration activities undertaken at priority sites for coral reefs, mangroves, and seagrasses</p> <p>Area of seagrass, mangrove and coral reef with enhanced ecological integrity and function</p> <p>Trends in proportion of degraded/threatened habitats</p>	<p>Guidelines and manuals completed by 2022</p> <p>Training programmes designed by 2022</p> <p>Activities commenced at XX% of proposed restoration sites, including within SPAW-listed MPAs, by 2026</p> <p>XX area of seagrass, mangrove and coral reef with enhanced ecological integrity and function</p> <p>XX% reduction in the area of degraded habitats</p>
Promote and use green infrastructure and blue carbon for climate adaptation and mitigation and biodiversity conservation	<p>Conduct blue carbon stock inventories/ inventory methodology and capability strengthening for vulnerability assessment of livelihoods and land-use dynamics</p> <p>Establish pilot/demonstration blue carbon financing schemes, including in sites of outstanding ecological value</p> <p>Document and share best-practice approaches to implementing green and blue infrastructure, as well as standards for quantifying its ecological (ecosystem services, biodiversity, climate mitigation) and economic benefits</p>	<p>Number of sites with blue carbon certification</p> <p>Number of new pilot/ demonstration blue carbon financing schemes</p> <p>Member States explicitly include blue carbon in their United Nations Framework Convention on Climate Change (UNFCCC) Nationally Determined Contributions (NDCs)</p> <p>Area of coastal ecosystems used in green infrastructure and/or blue carbon schemes</p>	<p>At least XX new blue carbon financing schemes in sites of outstanding ecological value by 2026</p> <p>At least XX% of Member States explicitly include blue carbon in their UNFCCC NDCs by 2028</p> <p>XX area of coastal ecosystems used in green infrastructure and/or blue carbon schemes</p>

Lines of action	Proposed activities	Indicators	Targets
Objective 3. Support species diversity and species populations within the three habitats			
<p>Implement species conservation strategies that reflect life stage development and general movement between habitats and within the larger Caribbean marine ecosystems</p>	<p>Review and revise boundaries of protected and other conservation/management areas to ensure protection is provided across all the associated habitats used by target species (threatened or endangered species, species listed under SPAW annexes, commercially important species)</p> <p>Evaluate the MPAs listed under SPAW to determine the extent to which they protect migratory species listed under SPAW (or other MEAs)</p> <p>Identify refugia for corals and other important marine species, and develop a regional strategy for designation and protection of such refugia</p> <p>Strengthen legal protection for herbivorous fish species (e.g. parrotfish) that support ecosystem services of coral reefs</p> <p>For other fish species, prioritize and align surveillance and enforcement, synchronize size limits regulations, and homogenize closed seasons for key species based on the best available science.</p>	<p>Approval of methods for assessing species conservation effectiveness of SPAW-listed MPAs</p> <p>Reports by SPAW Member States on the status of protected and SPAW-listed species, in accordance with Article 19.3 of the SPAW Protocol</p> <p>National, sub-regional and regional strategies for protection of refugia for corals and other threatened and important marine species</p> <p>Population measures for key species in each habitat (e.g. size, distribution)</p>	<p>Method for assessment of species protection effectiveness by MPAs approved by 2026</p> <p>XX% reporting by SPAW Member States on the status of protected species by 2026</p> <p>Submission of tentative lists for coral refugia by 2026</p> <p>XX national, sub-regional and regional strategies for protection of coral refugia developed by 2030</p> <p>Population trends of key species in each habitat enhanced (e.g. size, distribution)</p> <p>XX of national or regional legal measures to protect herbivorous fish species by sustainable use, regulation and prohibition from all kind of exploitation</p>

Pillar 2. Sustainable use

Goal 2. Sustainably use coastal and nearshore marine resources for national and regional development

Outcome: Importance of coral reefs, mangroves and seagrasses, including economic and non-use values, is recognised and integrated into development decision-making

Lines of action	Proposed activities	Indicators	Targets
Objective 4. Mainstream coral reefs, mangroves, seagrasses, and associated sub-ecosystems and essential species in sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems			
Strengthen information and capacity for economic valuation (including assessment of intrinsic values) of ecosystem services	<p>Conduct research and apply tools for economic valuation of coastal and marine resources</p> <p>Conduct inventory and share data of ecosystem services valuation studies applicable to the wider Caribbean</p> <p>Increase participation in Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) regional and thematic assessments</p>	<p>Published guidelines and procedures</p> <p>Uptake and use of database by planners/ decision makers</p>	<p>Adoption of guidelines by all Member States by 2025</p> <p>Pool of experts from XX countries to participate in IPBES assessments identified by 2025</p> <p>Searchable ecosystems services valuation database available and being accessed by decision-makers in XX countries by 2026</p>
Use blue satellite national accounts and natural capital accounting to capture the contribution of coastal ecosystems to key economic sectors	<p>Develop methodology, drawing on work piloted by the Caribbean Development Bank</p> <p>Develop system to collect national data</p> <p>Build capacity of countries to collect relevant data</p> <p>Pilot national blue satellite accounts and promote with decision-makers</p> <p>Pilot natural capital accounting</p>	<p>Published guidelines and procedures</p> <p>Number of countries with enhanced system to collect data on natural capital use by sectors</p> <p>Number of countries with blue satellite accounts developed</p> <p>Number of countries conducting natural capital accounting</p>	<p>Blue satellite accounts and natural capital accounting methodologies published by 2025</p> <p>XX countries with enhanced system to collect data for blue satellite accounts by 2030</p> <p>XX countries with blue satellite accounts developed by 2030</p> <p>XX countries conducting natural capital accounting by 2030</p>

Lines of action	Proposed activities	Indicators	Targets
Improve access by decision-makers, planners and the public to data and reports about processes that impact nearshore marine/coastal ecosystems and ecosystem services	Establish digital collections and knowledge management centres	Member States establish national digital collection of publications, case studies, and other reports, or make provision for inclusion in regional collection	All Member States have materials for collection compiled by 2024 Knowledge management centres and/or digital collections established in XX% of Member States by 2026
Develop technical guides for the design of ecological restoration projects in coastal marine ecosystems	Review initiatives and facilitate knowledge sharing to determine best practices Document best practices in technical guides	Published guides	XX countries using technical guides to design and implement restoration projects
Update mapping sources for mangroves and seagrass beds at least every 5 years	Strengthen cooperation between the SPAW Protocol Sub-Programme and regional agencies and others conducting to promote regular mapping, in coordination with efforts under the CLME+ State of the Marine Environment and associated Economies (SOME) reporting mechanism	Number of countries with updated mapping of mangroves and seagrass beds	XX countries with mapping of mangroves and seagrass beds at least every 5 years
Objective 5. Reduce threats to the habitats from coastal/marine-based sectors and development activities that impact coral reefs, mangroves and seagrasses			
Strengthen rules and procedures for assessment of environmental and social impact	Review and update legislation, regulations and procedures Apply strategic environmental assessment practices to policies, sector development strategies, and spatial planning processes Conduct post-audits of impact assessments for evaluation and learning	SPAW Secretariat review of national rules and practices for environmental and social impact assessment Promulgation of strategic environmental assessment policies and rules by Member States Development of guidelines for environmental post-audits of development projects in coastal areas	SPAW Secretariat report on the review of national rules and practices for environmental and social impact assessment by 2025 Strategic environmental assessment rules adopted by all Member States by 2030 Environmental post-audits of projects that impact SPAW-listed MPAs submitted to SPAW Secretariat by XX Member States by 2030

Lines of action	Proposed activities	Indicators	Targets
Support implementation of actions under regional plans and initiatives addressing key threats (invasive species, pollution, overfishing, etc.)	Strengthen cooperation between the SPAW Protocol Sub-programme and regional agencies coordinating implementation of relevant regional plans and initiatives addressing key threats	<p>MOUs/Statements of Cooperation between CAR/RCU SPAW Sub-programme and key agencies</p> <p>Multilateral recovery plan for spawning aggregations</p> <p>Area of coral reefs, mangroves and seagrasses benefitting from threat-reduction initiatives</p>	<p>MOUs/Statements of Cooperation between CAR/RCU SPAW Sub-programme and key agencies signed by 2023</p> <p>A multilateral recovery plan for spawning aggregations by 2030</p> <p>XX area of coral reefs, mangroves and seagrasses benefitting from threat-reduction initiatives by 2030</p>
Strengthen the implementation of regulations for the sustainable use and protection of herbivorous fish species (e.g. banning spearguns and traps, using fishing seasons)	<p>Conduct research and facilitate knowledge sharing to document best practices on regulations for the sustainable use and protection of herbivorous fish species</p> <p>Promote strengthening of regulations in line with best practices</p>	Number of countries with strengthened implementation of regulations for the sustainable use and protection of herbivorous fish species	XX countries with strengthened implementation of regulations for the sustainable use and protection of herbivorous fish species

A group of about ten divers in black wetsuits and scuba gear are floating in clear blue water. They are arranged in a loose line, some looking towards the camera. In the background, a coastal town with white buildings and palm trees is visible under a clear sky. A semi-transparent orange box is overlaid on the right side of the image, containing white text.

Using blue satellite national accounts and natural capital accounting will capture the contribution of coastal ecosystems to key economic sectors.

Pillar 3. Governance and partnerships

Goal 3. Strengthen regional governance systems and partnerships for the management of the marine/coastal resources of the wider Caribbean

Outcome: Mechanisms for participatory/interactive governance and strategic partnerships are institutionalised at the local, national, sub-regional and regional levels

Lines of action	Proposed activities	Indicators	Targets
Objective 6. Enhance coordination and reduce conflicts and gaps to improve programme synergies			
Enhance functional cooperation between regional intergovernmental institutions	<p>Continue and enhance participation in the CLME+ Interim Coordination Mechanism</p> <p>Align regional programmes on marine and coastal resources</p>	Level of functioning of regional interagency coordination mechanism on marine and coastal resources	<p>Biennial meetings of agencies held from 2022 onwards</p> <p>Enhanced synergies and collaborative action between key stakeholders</p> <p>Coordinated investments in the coral reef, mangroves and seagrasses sub-ecosystems from 2022 onwards</p>
Objective 7. Improve governance of marine and coastal resources at national, sub-regional and regional levels			
Institutionalise mechanisms for regional and sub-regional environmental governance	<p>Contribute to establishment of the proposed regional governance architecture under the CLME+ SAP</p> <p>Strengthen cooperation between the SPAW Protocol Sub-Programme, the International Oceanographic Data and Information Exchange (IODE) of the Intergovernmental Oceanographic Commission (IOC) of UNESCO, and other key stakeholders</p>	<p>MOUs/Statements of Cooperation</p> <p>Reports of collaborative action and decision-making</p>	<p>MOUs/Statements of Cooperation to establish the CLME+ PCM and Partnership signed by 2023</p> <p>CLME+ PCM and Partnership utilised to strengthen governance of coral reefs, mangroves and seagrasses</p>
Enhance legal framework for participatory decision-making and decentralised management arrangements for national environmental governance	Strengthen cooperation between the SPAW Protocol Sub-Programme and ECLAC to advance national action to ratify the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement)	<p>Member State ratification of the Escazú Agreement</p> <p>Number of countries with strengthened national laws, policies and regulations for national environmental governance</p>	<p>All SPAW Protocol Member States have ratified the Escazú Agreement by 2024</p> <p>XX countries with strengthened national laws, policies and regulations for national environmental governance by 2030</p>

Lines of action	Proposed activities	Indicators	Targets
<p>Support and facilitate participation of civil society, academia and the private sector in governance and programme and project design, implementation, and evaluation</p>	<p>Establish guidelines and transparent procedures for civil society and private sector participation in regional programmes</p> <p>Facilitate participation of regional civil society organisations in major regional inter-governmental meetings related to the Cartagena Convention</p> <p>Support implementation of the CLME+ People Managing Oceans: Civil Society Action Programme, particularly Strategy 1 on ecosystem-based management of reef and associated ecosystems (e.g. seagrass beds, mangroves, reef slopes and coastal lagoons)</p>	<p>Published guidelines and procedures</p> <p>Number of civil society participants in SPAW STAC and COP meetings</p> <p>Number of private sector participants at COP meetings</p> <p>Number of civil society organisations engaged in implementation of the CLME+ People Managing Oceans: Civil Society Action Programme</p> <p>Number of initiatives with civil society and/or private sector organisations as implementing partners</p>	<p>Expanded civil society participation in meetings of SPAW COP and STAC, starting in 2022</p> <p>Increased participation of private sector at COP meetings, starting in 2022</p> <p>XX civil society organisations across all SPAW member states engaged in implementation of Strategy 1 of the CLME+ People Managing Oceans: Civil Society Action Programme by 2030</p> <p>XX national and regional initiatives have civil society and/or private sector organisations as implementing partners by 2030</p>

Pillar 4. Enabling systems and capacity

Goal 4. Strengthen legal and institutional frameworks to effectively manage the marine/coastal resources of the wider Caribbean

Outcomes: Nearshore marine and coastal zone management decisions are made based on the best available scientific ecological and socio-economic evidence and local knowledge relating to coral reefs, mangroves and seagrass beds

Coastal resource managers and decision-makers have the competencies, capacity, data, tools and financial resources to make and implement sound decisions about issues affecting coral reefs, mangroves and seagrass beds in coherence with the principles of equity and prevention, with common but differentiated responsibilities for each country

Lines of action	Proposed activities	Indicators	Targets
Objective 8. Improve science-based decision-making and use of local/traditional knowledge in policy, planning, and management of coastal ecosystems			
Enhance knowledge of, and reporting on, the state of ecosystems	Conduct region-wide mapping of coral reefs, mangroves, and seagrass beds to establish a baseline of the distribution and status of the habitats and associated species, including in SPAW-listed sites and sites designated under regional programmes and MEAs, using both scientific and local/traditional knowledge and citizen science	RSAP baseline data and endline assessment conducted on extent and location of coral reefs, mangroves and seagrasses National SoMH reports developed	Baseline data available by 2024 End line data available by 2030 National SoMH reports produced by XX Member States by 2027 Regional SoMH report produced by 2030
Establish and strengthen knowledge management systems for translating data and scientific research for uptake by policy makers, the private sector, and the general public	Strengthen centralised data management systems (e.g. Caribbean Marine Atlas) and develop protocols for inclusion of local knowledge Establish publicly accessible comprehensive online regional data and knowledge management platform/portal with linkages to national and regional knowledge systems to support SPAW Protocol and MEA implementation, tracking and reporting, including independent review and citizen science	Regional knowledge management system established Use of platform/portal by Member States to support MEA reporting	Data and knowledge management portal established by 2024 All Member States use portal to support their MEA tracking and reporting by 2026

Lines of action	Proposed activities	Indicators	Targets
	<p>Develop platform for resource managers and decision makers to include scientific and local/traditional data, information/knowledge products on:</p> <ul style="list-style-type: none"> - Habitat extent - Development and application of innovative policies, legislation, technologies and practices in support of coastal zone management programmes, as well as social, economic and environmental benefits of coral reefs, mangroves and seagrasses - Economic valuation - Livelihood uses - MPAs and special groups (indigenous peoples, gender, youth, etc.) 		
<p>Strengthen targeted communication for awareness raising, behaviour change and policy change to support management of coastal ecosystems</p>	<p>Conduct communication initiatives targeted at engagement of civil society, academia and the private sector</p> <p>Conduct communication initiatives targeted at engagement of technocrats and decision-makers</p>	<p>Findings of Knowledge, Attitudes and Practice (KAP) studies</p>	<p>Measurable increase in awareness of, commitment to, and action for conservation and sustainable use of coral reefs, mangroves and seagrasses by target audiences in XX Member States by 2030</p>
<p>Conduct management effectiveness, programme effectiveness, and site performance evaluations and reporting</p>	<p>Develop or adapt standard research and monitoring protocols</p> <p>Adopt protocols and manuals for the different types of evaluations</p> <p>Train and mobilise a pool of experts for undertaking, during the strategy period, evaluations for all sites listed under SPAW and other MEAs, and their management institutions</p>	<p>Protocols developed</p> <p>Database of protocols, manuals and experts</p> <p>Capacity building programmes conducted</p> <p>Number of evaluation reports produced</p>	<p>Research and monitoring protocols and database established by 2024</p> <p>Increased conduct and use of management, programme and site effectiveness evaluations to guide decision-making by XX Member States by 2030</p>

Lines of action	Proposed activities	Indicators	Targets
Objective 9. Improve the effectiveness of resource and protected area management institutions and the impact of management interventions			
Increase capabilities for long-term system-wide planning for coastal ecosystems and protected areas	Include resources for system planning in capacity development plans for protected areas and other conservation projects	Number of Member States engaged Amount of resources allocated for system planning	Long-term and system-wide management plans developed in at least XX Member States by 2030
Strengthen MPA planning and management processes to address the needs of local communities, indigenous peoples, women, youth, and other vulnerable groups	Develop guidelines and conduct training to support participation of local communities, indigenous peoples, women, youth, and other vulnerable groups in MPA planning and management to address their needs and contributions	Published guidelines and procedures available to MPA managers Capacity building programme implemented Number of MPA plans and initiatives reflecting enhanced consideration of indigenous peoples, women, youth, and other vulnerable groups	Guidelines and capacity building programme available by 2024 XX% of Member States implement capacity building programme by 2027 XX% of Member States have MPA plans and initiatives reflecting enhanced consideration of indigenous peoples, women, youth, and other vulnerable groups by 2030
Implement a workforce development programme for MPA management	Engage or develop a network of institutions to provide workforce development programming for MPA managers, including from government, civil society, local communities and the private sector	Number of participating institutions submitting programme offering and capability profiles to the SPAW RAC Measurable increase in skills and knowledge of persons trained	XX% of participating institutions submit statements of intent to the SPAW Secretariat by 2023 A regional programme for workforce development in MPA management commences by 2025 XX% of workforce from XX Member States participate in workforce development programme by 2030

Lines of action	Proposed activities	Indicators	Targets
Maintain and enhance effective networks of professionals and institutions	<p>Strengthen and expand network of practitioners in relevant fields (e.g. economic valuation and natural capital accounting, research, information management, communication and awareness, environmental policy and law, gender, etc.)</p> <p>Revitalise and strengthen CaMPAM, collaborate with other regional MPA networks</p>	<p>Database of practitioners in relevant fields</p> <p>Network structure, governance systems, and operational modalities, reporting mechanisms, and evaluation protocols approved by SPAW STAC and implemented</p> <p>Change in scope of programming and activity by CaMPAM</p>	<p>CaMPAM 10-year programme and strategy in place by 2022</p> <p>Network performance evaluation protocol approved and operational by 2023</p> <p>Re-configured networks with participation of professionals from XX Member States operational by 2025</p>
Objective 10. Enhance the sustainability of financing mechanisms for protected areas and other site-based conservation efforts			
Increase financing for natural resources management from resource-dependent sectors	<p>Conduct Blue Carbon Inventory to identify opportunities and constraints for public financing, market-based or other incentive schemes to support effective habitat management</p> <p>Develop and implement protocols and mechanisms for cost recovery for damage to coastal ecosystems from shipping, pollution, and other development activities</p>	<p>Number of hectares with Blue Carbon certification</p> <p>Number (and %) of damage incidents where protocols and mechanisms applied for cost recovery</p> <p>Amount of funds recovered from damage</p>	<p>XX hectares with Blue Carbon certification</p> <p>Protocols and mechanisms applied for cost recovery in XX% of Member States by 2027</p> <p>XX% increase in recovery of funds from damage to coastal ecosystems from shipping, pollution, and other development activities by 2030</p>
Establish regional financing and fund management mechanisms	Prepare investment plans proposed under the CLME+ SAP, SPAW work programmes, and other initiatives	<p>Investment plans developed</p> <p>Establishment of regional/national environmental funds and/or strengthen mechanisms to more effectively utilise existing funds</p>	<p>Three investment plans prepared by 2023</p> <p>XX% increase in funds channeled via regional/national environmental funds to support protected areas and other site-based conservation efforts in XX% of Member States by 2030</p>



Region-wide coordinated research, monitoring, planning and action will address Stony Coral Tissue Loss Disease (SCTLD) and other coral diseases.

Photo by L. Henderson

6 The RSAP and Global and Regional Frameworks

The RSAP will help to deliver Sustainable Development Goal 14 by sustainably manage and protecting marine and coastal ecosystems.



Pillar	Objective	Relevant mea targets, commitments and initiatives
<p>Pillar 1. Ecosystem health and resilience</p> <p>Goal 1. Improve ecosystem health, biodiversity and resilience</p> <p>Outcome: By 2030, enhanced extent, status and ecological functions of the coral reefs, mangroves, and seagrass beds of the wider Caribbean can contribute to ecological, social and economic benefits to Member States/ coastal communities</p>	<p>Objective 1. Enhance ecological integrity and function of coral reefs, mangroves and seagrass beds</p> <p>Objective 2. Decrease and reverse habitat loss</p> <p>Objective 3. Support species diversity and species populations within the three habitats</p>	<p>Global</p> <p>UN Sustainable Development Goals</p> <ul style="list-style-type: none"> - Target 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration, in order to achieve healthy and productive oceans - Target 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information <p>Convention on Biological Diversity - Aichi Biodiversity Targets</p> <ul style="list-style-type: none"> - Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced. - Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits. - Target 9: By 2020, invasive alien species and pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment. - Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning. - Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. - Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained. - Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable. - Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Pillar	Objective	Relevant mea targets, commitments and initiatives
		<p>Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway Paragraph 58:</p> <p>e) To undertake urgent action to protect coral reefs and other vulnerable marine ecosystems through the development and implementation of comprehensive and integrated approaches for the management and the enhancement of their resilience to withstand pressures, including from ocean acidification and invasive species, and by drawing on measures such as those identified in the Framework for Action 2013 of the International Coral Reef Initiative.</p> <p>o) To conserve by 2020 at least 10% of coastal and marine areas in small island developing States, especially areas of particular importance for biodiversity and for ecosystem services, through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures in order to reduce the rate of biodiversity loss in the marine environment.</p> <p>United Nations Framework Convention on Climate Change - Paris Agreement Article 4, paragraph 2 requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. There is an opportunity to strengthen NDCs by considering and reporting on the contribution of mangroves in achieving mitigation and adaptation ambitions.</p> <p>Convention on Wetlands of International Importance (The Ramsar Convention) /Fourth Ramsar Strategic Plan 2016–2024</p> <ul style="list-style-type: none"> - Target 5: The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management. - Target 12: Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation. <p>Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Aim is to ensure that international trade in endangered species (including corals) does not threaten their survival in the wild. Seventeen species of coral (<i>Anthozoa</i>) and nine species of fire corals (<i>Hydrozoa</i>) in the WCR appear in CITES Appendix II.</p> <p>International Convention for the Regulation of Whaling Intends to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.</p>

Pillar	Objective	Relevant mea targets, commitments and initiatives
		<p>Convention on Migratory Species (CMS) Article III 4 notes that Parties shall aim:</p> <ul style="list-style-type: none"> a) to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction; b) to prevent, remove, compensate for or minimize, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species; and c) to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species, including strictly controlling the introduction of, or controlling or eliminating, already introduced exotic species. <p>Inter-American Convention for the Protection and Conservation of Sea Turtles The objective of Article II is to promote the protection, conservation, and recovery of the populations of sea turtles and those habitats on which they depend, on the basis of the best available data and taking into consideration the environmental, socioeconomic and cultural characteristics of the Parties.</p> <p>Convention Concerning the Protection of the World Cultural and Natural Heritage Encourages the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding universal value. There are six World Heritage Natural Sites in the wider Caribbean that include coral reef, mangrove or seagrass ecosystems.</p> <p>Regional</p> <p>CLME+ Strategic Action Programme (SAP) Strategy 4: Enhance the governance arrangements for ecosystem-based management of reefs and associated ecosystems (e.g. seagrass beds, mangroves, reef slopes and coastal lagoons).</p> <ul style="list-style-type: none"> - 4.4. [Short, Medium] Coordinate and enhance (sub-)regional and national efforts for the conservation of the biodiversity of reef and associated habitats, including through the strengthening of networks of MPAs and initiatives for sustainable reef fisheries such as programmes for dealing with alien invasive species. <p>Caribbean Biodiversity Strategy Objective 1: To maintain and bolster genetic diversity, agricultural diversity, species conservation and the conservation of endemic species throughout the region.</p> <ul style="list-style-type: none"> - 2030 Target: At least three endemic species highlighted in the SPAW Protocol and IUCN Red List have a reduced threat level. - 2030 Target: Population size and/or range enhanced for at least five vulnerable migratory or transboundary species.

Pillar	Objective	Relevant mea targets, commitments and initiatives
		<p>Objective 2: To secure ecosystem goods and services, protecting, maintaining or restoring key ecosystems, within national or across transboundary landscapes and seascapes, including using spatial planning approaches.</p> <ul style="list-style-type: none"> - 2030 Target: At least 20% of the marine exclusive economic zones of Members of CARICOM is protected with accompanying management plans. - 2030 Target: At least 40% of the land and marine exclusive economic zones of Members of CARICOM is managed using ecosystem-based approaches. - 2030 Target: There is 10% reduction in the area of degraded terrestrial, coastal and marine ecosystems in Members of CARICOM. - 2030 Target: 15% of the area of degraded terrestrial, coastal and marine ecosystems in Members of CARICOM is under active restoration for enhanced biodiversity and ecological functioning. - 2030 Target: The effectiveness of management of protected areas for biodiversity conservation has been measurably enhanced in at least five Members of CARICOM. - 2030 Target: Biodiversity conservation initiatives are being implemented across at least three transboundary landscapes/ seascapes in the region. - 2030 Target: National legislation and regulations strengthened in at least two Members of CARICOM to protect ecosystem diversity. - 2030 Target: Initiatives for restoration of critical ecosystems in at least five Members of CARICOM have delivered measurable improvements in delivery of ecosystem services (for example, shoreline protection, slope stabilisation, watershed functioning, carbon capture). - 2030 Target: A minimum of a 5% increase in the land area covered by mangroves in at least five Members of CARICOM is achieved. <p>Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)</p> <p>Article 4 states that Parties shall take measures individually and jointly to prevent, reduce and control pollution of the Convention area and to ensure sound environmental management. The Convention covers several aspects of marine pollution for which the Contracting Parties must adopt specific measures. These measures include to prevent, reduce and control: pollution from ships, pollution caused by dumping, pollution from sea-bed activities, airborne pollution and pollution from land-based sources and activities. Countries who are Contracting Parties to the Convention are also required to: protect and preserve rare or fragile ecosystems and habitats of depleted, threatened or endangered species; and develop technical and other guidelines for the planning and environmental impact assessments of important development projects.</p>

Pillar	Objective	Relevant mea targets, commitments and initiatives
		<p>In accordance with Articles 3, 4 and 13 of the Cartagena Convention and Articles 11(c) and 19(3) of the SPAW Protocol, it is possible for States Parties to take a preventive and precautionary decision to encourage national measures and regional cooperation for the protection of these species that are essential to the endangered habitat. The essential factors relate to ecological functions provided by the species for the benefit of vulnerable ecosystems.</p> <p>Cartagena Convention - SPAW Protocol</p> <ul style="list-style-type: none"> - Article 3: General Obligations [to protect, preserve and manage in a sustainable way ...areas that require protection to safeguard their special value]. - Article 5: Protection Measures [to achieve the objectives of protected areas]. - Article 6: Planning and Management Regime for Protected Areas. <p>St. George's Declaration of Principles for Environmental Sustainability in the OECS</p> <ul style="list-style-type: none"> - Goal 3: Achieve the Long-term Protection and Sustained Productivity of the Region's Natural Resource Base and the Ecosystem Services it Provides and following associated Principles.
<p>Pillar 2. Sustainable Use</p> <p>Goal 2. Sustainably use coastal and nearshore marine resources for national and regional development</p> <p>Outcome: Importance of coral reefs, mangroves and seagrasses,</p>	<p>Objective 4. Mainstream coral reefs, mangroves, seagrasses, and associated sub-ecosystems and essential species in sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems</p>	<p>Global</p> <p>UN Sustainable Development Goals</p> <ul style="list-style-type: none"> - Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. - Target 14.3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels. <p>Convention on Biological Diversity - Aichi Biodiversity Targets</p> <ul style="list-style-type: none"> - Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably - Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity. - Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning. - Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Pillar	Objective	Relevant mea targets, commitments and initiatives
<p>including economic and non-use values, is recognised and integrated into development decision-making</p>	<p>Objective 5. Reduce threats to the habitats from coastal/marine-based sectors and development activities that impact coral reefs, mangroves and seagrasses</p>	<p>Convention on Wetlands of International Importance (The Ramsar Convention) /Fourth Ramsar Strategic Plan 2016–2024</p> <ul style="list-style-type: none"> - Target 4: Invasive alien species and pathways of introduction and expansion are identified and prioritised, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment. - Target 7: Sites that are at risk of change of ecological character have threats addressed. - Target 11: Wetland functions, services and benefits are widely demonstrated, documented and disseminated. <p>Regional</p> <p>Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) Article 4 states that Parties shall take measures individually and jointly to prevent, reduce and control pollution of the Convention area and to ensure sound environmental management. The Convention covers several aspects of marine pollution for which the Contracting Parties must adopt specific measures. These measures include to prevent, reduce and control: pollution from ships, pollution caused by dumping, pollution from sea-bed activities, airborne pollution and pollution from land-based sources and activities.</p> <p>Cartagena Convention - SPAW Protocol Articles 11(c) regulation of the sustainable use and prohibition of exploitation of essential species for vulnerable ecosystems, Ecosystem Based Management (ban zones, recovery zones, fish seasons, fishery arts regulation, sustainable ways to maintain populations), as well as revised criteria to list species in appendix of SPAW Protocol.</p> <p>Cartagena Convention - Land-based Sources of Marine Pollution (LBS) Protocol</p> <ul style="list-style-type: none"> - Objective 1: Reduces Priority Pollutants- Establishes effluent and emissions limitations and/or best management practices for priority pollutants. <p>Cartagena Convention - Oil Spills Protocol Objective 2: Facilitate co-operation and mutual assistance in cases of emergency to prevent and control major oil spill incidents</p> <p>Caribbean Biodiversity Strategy Objective 3: To support sustainable biodiversity-based sectors, livelihoods and enterprises focusing on the management of shared regional resources.</p> <ul style="list-style-type: none"> - 2030 Target: Catch per unit effort indicate significant improvements in the sustainable use of at least five key species in at least five Members of CARICOM.

Pillar	Objective	Relevant mea targets, commitments and initiatives
		<ul style="list-style-type: none"> - 2030 Target: Regional initiatives are implemented on green/blue economy, particularly focused on greening key sectors and supporting sustainable livelihoods and local green enterprises. - 2030 Target: Biodiversity values and ecological footprints incorporated into environmental assessment impacts (positive and negative) of industries and businesses in key sectors in at least five Members of CARICOM. <p>Objective 5: To build the resilience of the region's biodiversity to climate change and natural hazards.</p> <ul style="list-style-type: none"> - 2030 Target: National strategies developed for biodiversity restoration and recovery after the occurrence of natural hazards in at least two Members of CARICOM. <p>Objective 6: To protect the region against invasive alien species as well as biosafety and biosecurity threats.</p> <ul style="list-style-type: none"> - 2030 Target: There is significant, measurable decrease in the regional or national incidence of at least five IAS. <p>St. George's Declaration of Principles for Environmental Sustainability in the OECS</p> <ul style="list-style-type: none"> - Goal 3: Achieve the Long-term Protection and Sustained Productivity of the Region's Natural Resource Base and the Ecosystem Services it Provides and following associated Principles. <p>Tulum Declaration</p> <p>Objective to promote the conservation of the Mesoamerican Reef System through its sustainable use, the establishment of links of joint work between authorities and the development of cooperation programs and projects.</p>
<p>Pillar 3. Governance and Partnerships</p> <p>Goal 3. Strengthen regional governance systems and partnerships for the management of the marine /coastal resources of the wider Caribbean</p>	<p>Objective 6. Enhance coordination and reduce conflicts and gaps to improve programme synergies</p>	<p>Global</p> <p>UN Sustainable Development Goals</p> <ul style="list-style-type: none"> - Target 14.3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels. <p>Convention on Wetlands of International Importance (The Ramsar Convention) /Fourth Ramsar Strategic Plan 2016–2024</p> <ul style="list-style-type: none"> - Target 1: Wetland benefits are featured in national/ local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level. - Target 9: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, <i>inter alia</i>, within a river basin or along a coastal zone.

Pillar	Objective	Relevant mea targets, commitments and initiatives
<p>Outcome: Mechanisms for participatory / interactive governance and strategic partnerships are institutionalised at the local, national, sub-regional and regional levels</p>	<p>Objective 7. Improve governance of marine and coastal resources at national, sub-regional and regional levels</p>	<p>Regional</p> <p>Cartagena Convention - SPAW Protocol Articles 13 fractions 1, 2 & 3. Scientific and technical co-operation.</p> <p>CARICOM Biodiversity Strategy Objective 8: To develop and implement a coordinated regional approach to the implementation of the CBS through partnerships among governments, academia, civil society, private sector, regional and global agencies. - 2030 Target: The regional coordination mechanism for biodiversity conservation in the Caribbean is operationalised, with participation of relevant CARICOM agencies and other key stakeholders.</p> <p>Objective 9: To equip Caribbean stakeholders with the capacity, entry points and mechanisms for participatory management of biodiversity while protecting their rights and benefits. - 2030 Target: Mechanisms for access to access to biodiversity information and stakeholder participation in biodiversity conservation strengthened in at least five Members of CARICOM.</p> <p>- 2030 Target: Measurable increase in staffing and training within core marine biodiversity management agencies e.g. fisheries departments in at least five Members of CARICOM.</p> <p>Tulum Declaration Objective to promote the conservation of the Mesoamerican Reef System through its sustainable use, the establishment of links of joint work between authorities and the development of cooperation programs and projects.</p> <p>Caribbean Challenge Initiative '20-BY-20' GOAL To effectively conserve and manage at least 20 percent of the marine and coastal environment by 2020.</p>

Pillar	Objective	Relevant mea targets, commitments and initiatives
<p>Pillar 4. Enabling systems and capacity</p> <p>Goal 4. Strengthen legal and institutional frameworks to effectively manage the marine/coastal resources of the wider Caribbean</p> <p>Outcomes: Nearshore marine and coastal zone management decisions are made based on the best available scientific ecological and socio-economic evidence and local knowledge relating to coral reefs, mangroves and</p>	<p>Objective 8. Improve science-based decision-making and use of local/traditional knowledge in policy, planning, and management of coastal ecosystems</p> <p>Objective 9. Improve the effectiveness of resource and protected areas management institutions and the impact of management interventions</p>	<p>Global</p> <p>UN Sustainable Development Goals</p> <ul style="list-style-type: none"> - 14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries. <p>Convention on Biological Diversity - Aichi Biodiversity Targets</p> <ul style="list-style-type: none"> - Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably. <p>Convention on Wetlands of International Importance (The Ramsar Convention) /Fourth Ramsar Strategic Plan 2016–2024</p> <ul style="list-style-type: none"> - Target 11: Wetland functions, services and benefits are widely demonstrated, documented and disseminated. - Target 16: Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness. <p>Regional</p> <p>CARICOM Biodiversity Strategy</p> <p>Objective 4: To mainstream biodiversity within sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems.</p> <ul style="list-style-type: none"> - 2030 Target: Biodiversity valuation studies conducted in at least five countries. <p>Objective 7: To ensure the generation, storage and use of current, multi-source biodiversity information by Caribbean biodiversity managers, using accessible mechanisms in suitable formats for decision-making.</p> <ul style="list-style-type: none"> - 2030 Target: A functioning and comprehensive regional biodiversity database is in place or a coordination and information sharing mechanism for updated biodiversity databases in place and being used by decision makers from at least 75% of the Members of CARICOM. - 2030 Target: State of Biodiversity reports produced for the region every five years.

Pillar	Objective	Relevant mea targets, commitments and initiatives
<p>seagrass beds</p> <p>Coastal resource managers and decision-makers have the competencies, capacity, data, tools and financial resources to make and implement sound decisions about issues affecting coral reefs, mangroves and seagrass beds in coherence with the principles of equity and prevention, with common but differentiated responsibilities for each country</p>	<p>Objective 10.</p> <p>Enhance the sustainability of financing mechanisms for protected areas and other site-based conservation efforts</p>	<p>Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)</p> <p>Article 4 states that Parties shall take measures individually and jointly to prevent, reduce and control pollution of the Convention area and to ensure sound environmental management. Countries who are Contracting Parties to the Convention are required to develop technical and other guidelines for the planning and environmental impact assessments of important development projects.</p> <p>Cartagena Convention - SPAW Protocol</p> <ul style="list-style-type: none"> - Article 16: Publicity, Information, Public Awareness and Education. - Article 17: Scientific Technical and Management Research. - Article 18: Mutual Assistance. <p>CLME+ Strategic Action Programme (SAP)</p> <ul style="list-style-type: none"> - Strategy 4.6. [Short, Medium] Establish and/or enhance the institutional structure and capacity of (sub-) regional and national arrangements for implementing management and conservation measures for reef ecosystem. <p>Strategy 4.8. [Medium] Operationalise and strengthen interlinked Decision Support Systems (DSSs) for the protection of reefs and associated ecosystems and for the sustainable management of associated living marine resources.</p>

Successful implementation of the RSAP requires joint effort by national, sub-regional, regional and intergovernmental stakeholders and broad-based participation by government agencies, civil society, the private sector and the research/academic community.



Photo by H. Tonnemacher

7 Implementation and Monitoring Mechanisms

7.1 Institutional Arrangements

Successful implementation of the RSAP requires joint effort by national, sub-regional, regional and intergovernmental stakeholders and broad-based participation by government agencies, civil society, the private sector and the research/academic community.

The SPAW Sub-programme will coordinate delivery of the RSAP and its regional activities. It will be supported by the Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region (SPAW-RAC), under the technical direction of the UNEP Caribbean Regional Coordinating Unit (CAR-RCU)/ Caribbean Environment Programme (CEP).

Key regional agencies will be engaged in delivery of the RSAP at the regional and sub-regional levels.

Member States will be responsible for delivery of proposed actions at the national and local levels, including by creating enabling conditions to achieve the objectives of the RSAP, along with policy coherence and fostering collaboration among national and local stakeholders.

Partnerships with technical and programmatic stakeholders from civil society, the private sector and academia will further support roll out of the strategy and will be a critical element of its implementation, particularly in efforts to share and scale-up good-practice and test new tools and approaches.

The CLME+ ICM, and the proposed PCM and wider Partnership, provide mechanisms for enhanced regional coordination and participatory governance that can be leveraged in implementation of the RSAP.

7.2 Assessment and Learning

The RSAP will be implemented through a series of biennial programmes in keeping with the programming cycle of the SPAW Sub-programme.

With support from a stakeholder committee, the SPAW Sub-programme will review and assess, in biennial programming cycles, implementation of the RSAP as a functional framework for regional cooperation, particularly against its intended purpose of supporting common actions that advance implementation of regional and international conventions, agreements and initiatives. As a living document with scope for modification based on emerging needs and conditions (such as the Post-2020 Global Biodiversity Framework), continuous review will allow for implementation to be informed by ongoing learning and adaptation as needed. Such reviews will be supported by mid-term (2025 – 2026 biennium) and final assessments. Proposed updates to revise the RSAP will be made at the Meetings of the Parties upon recommendations of the STAC pursuant to Article 20 of the SPAW Protocol.



Photo by L. Henderson

Continuous review will allow for implementation of the RSAP to be informed by ongoing learning and adaptation as needed. Targets and indicators will be aligned to other regional monitoring and evaluation frameworks to harmonise reporting.

Development of a monitoring and evaluation framework for the RSAP is recommended to refine and further elaborate indicators and targets. In aiming to harmonise an approach to implement several relevant global and regional frameworks (see Section 6), further refinement and alignment of indicators and associated targets may also be conducted. For example, specific alignment with targets and indicators under the Post-2020 Global Biodiversity Framework may need to be considered. Indicators should enable assessment of changes in process, stress reduction and status. Lack of data (for example on coverage and status of ecosystems) is a key challenge and baselines will also need to be determined. States and regional agencies should undertake to determine baselines as part of programmes and initiatives to implement the RSAP (see Objective 8).

Targets and indicators in the RSAP should similarly be considered in development of other regional monitoring and evaluation frameworks, including for the CLME+ SAP. The process will draw on, and findings will be fed into, the long-term reporting and decision-support mechanism State of the Marine Environment and associated Economies (SOME) to support implementation of the CLME+ SAP.

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Appendix A Parties to Regional and Global Agreements

State	Treaty										
	Cartagena Convention			Basel Convention	Cartagena Protocol to the Convention on Biological Diversity	Convention on Biological Diversity	CITES	Convention on Migratory Species	Ramsar Convention	United Nations Framework Convention on Climate Change	International Convention for the Control and Management of Ships' Ballast Water and Sediments
	Cartagena Convention & Oil Spills Protocol	SPAW Protocol	LBS Protocol								
Antigua and Barbuda	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
The Bahamas	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Barbados	✓	✓		✓	✓	✓	✓		✓	✓	✓
Belize	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Brazil				✓	✓	✓	✓	✓	✓	✓	✓
Colombia	✓	✓		✓	✓	✓	✓		✓	✓	
Costa Rica	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Cuba	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Dominica	✓			✓	✓	✓	✓			✓	
Dominican Republic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
France	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Grenada	✓	✓	✓		✓	✓	✓		✓	✓	✓
Guatemala	✓			✓	✓	✓	✓		✓	✓	
Guyana	✓	✓	✓	✓	✓	✓	✓			✓	✓
Haiti						✓				✓	
Honduras	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Jamaica	✓		✓	✓	✓	✓	✓		✓	✓	✓
Mexico	✓			✓	✓	✓	✓		✓	✓	✓
Netherlands	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Nicaragua	✓			✓	✓	✓	✓		✓	✓	
Panama	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

State	Treaty										
	Cartagena Convention			Basel Convention	Cartagena Protocol to the Convention on Biological Diversity	Convention on Biological Diversity	CITES	Convention on Migratory Species	Ramsar Convention	United Nations Framework Convention on Climate Change	International Convention for the Control and Management of Ships' Ballast Water and Sediments
	Cartagena Convention & Oil Spills Protocol	SPAW Protocol	LBS Protocol								
St. Kitts and Nevis	✓			✓	✓	✓	✓			✓	✓
Saint Lucia	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
St. Vincent and the Grenadines	✓	✓		✓	✓	✓	✓			✓	
Suriname				✓	✓	✓	✓		✓	✓	
Trinidad and Tobago	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
United Kingdom	✓			✓	✓	✓	✓	✓	✓	✓	
United States of America	✓	✓	✓				✓		✓	✓	
Bolivarian Republic of Venezuela	✓	✓		✓	✓	✓	✓		✓	✓	

Appendix B UN Environment, Regional and Global Frameworks for Nearshore Marine Habitat Protection and Management

UN Environment Frameworks

Convention for the Protection and Development of the Marine Environment in the Wider Caribbean (Cartagena Convention)

The Cartagena Convention provides the overarching framework for the RSAP along with the SPAW Protocol described below. The Cartagena Convention is the only regionally binding legal instrument for managing the use of the coastal and marine resources of the Caribbean Sea. The geographic scope of the Convention or Convention Area comprises the insular and coastal States and Territories with coasts on the Caribbean Sea and Gulf of Mexico, as well as waters of the Atlantic Ocean adjacent to these States and Territories. The Cartagena Convention covers 28 member states and 14 territories.

The obligations of the Convention reflect the region's environmental priorities including:

- pollution from ships;
- dumping of wastes at sea;
- land-based sources of pollution;
- sea-bed activities;
- airborne pollution;
- protection of rare or fragile ecosystems;
- protection of the habitats of depleted, threatened or endangered species, as well as essential species population (biomass) for vulnerable ecosystems;
- regional cooperation.

The Cartagena Convention also provides a mechanism for the implementation of several MEAs and other global and regional commitments such as the Sustainable Development Goals, and in particular, Goal 14 on Oceans. This coordination ensures that programmes, projects and activities are implemented in an integrated manner and respond directly to the region's needs and priorities.

Protocol Concerning Specially Protected Areas and Wildlife (SPAW Protocol)

This specialised mechanism of the Cartagena Convention sets broad goals, guidelines and principles for Parties and encourages them to further pursue more specific protocols and agreements. The Protocol contains detailed provisions addressing the establishment of protected areas and buffer zones for *in situ* conservation of wildlife, both national and regional co-operative measures for the protection of wild flora and fauna, the introduction of non-native or genetically altered species, environmental impact assessment, research, education, and other topics.

The specific objectives of the SPAW Protocol are:

- to establish protected areas in the marine environment and associated ecosystems in order to sustain the natural resources of the Wider Caribbean Region and to protect rare and fragile ecosystems and the habitats of endangered and threatened species;
- to protect endangered and threatened species, their habitat and associated ecosystems; and
- to promote sustainable management (and use) of fauna and flora to prevent their endangerment (Vanzella-Khoury, 2015), as well as prevent a sustainable population (biomass).

The RSAP specifically supports the following obligations under the SPAW Protocol:

- Article 3 General Obligations [to protect, preserve and manage in a sustainable way ...areas that require protection to safeguard their special value]
- Article 5 Protection Measures [to achieve the objectives of protected areas]
- Article 6 Planning and Management Regime for Protected Areas
- Article 11 Protection of essential species biomass for their ecological function to vulnerable ecosystems
- Article 16 Publicity, Information, Public Awareness and Education
- Article 17 Scientific Technical and Management Research
- Article 18 Mutual Assistance

Two other Protocols under the Cartagena Convention are relevant to the RSAP. **The Land-based Sources of Marine Pollution (LBS) Protocol** has Objective 1 to reduce priority pollutants and establish effluent and emissions limitations and/or best management practices for priority pollutants. The Oil Spills Protocol has as Objective 2 to facilitate co-operation and mutual assistance in cases of emergency to prevent and control major oil spill incidents.

Resolutions Adopted by the Second Session UN Environment Assembly (UNEA 2)

Two of the 25 resolutions adopted at the second session of the UNEA in 2016 are particularly relevant to coral reefs and associated ecosystems and are supported by this strategy.

Resolution 2/10 on oceans and seas (EA/2/10): Resolution 2/10 recognises the role of regional seas programmes, such as the Caribbean Environment Programme (CEP), in the ocean-related Sustainable Development Goal (SDG 14: Life below water). It calls for cooperation among relevant fora in implementation of and reporting on SDG14; designation and active management of marine protected areas and other effective spatial management measures; and application of the ecosystem approach in marine management. It calls for the expansion of the regional seas programme and enhanced coordination, information sharing and communication across regions, in line with the Regional Seas Strategic Directions 2017-2020 and provides the framework context for UN Environment's Marine and Coastal Strategy to 2030 (see below).

Resolution 2/10 reinforces and supports:

- Aichi Biodiversity Target 11 - marine protected areas
- Sustainable Development Goals Target 14.5 - conservation, by 2020, of at least 10 per cent of coastal and marine areas

Resolution 2/12 on sustainable coral reefs management (EA/2/12): Resolution 2/12 on sustainable coral reefs management provides direction for coral reef policy and management in the context of the 2030 development agenda and has implications for UN Environment's coral reef work. It encourages governments to formulate, adopt and implement integrated, ecosystem-based and comprehensive approaches for the sustainable management of coral reefs, including cold-water coral ecosystems and mangroves. It recognizes that education, capacity building and knowledge transfer are crucial; and encourages integrated, ecosystem-based and comprehensive approaches including partnerships with industry, as well as the establishment of MPAs and other spatial and relevant sectoral approaches to enhance climate change resilience, consistent with national and international law.

Resolution 2/12 reaffirms:

- Aichi Biodiversity Target 10 - minimise multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems

Regional Commitments and Initiatives

Caribbean Biodiversity Strategy

The Caribbean Biodiversity Strategy (CBS) is the framework for regional level assistance to Members of CARICOM in their implementation of the Convention on Biological Diversity (CBD) Global Strategic Plan for Biodiversity (2011-2020) and the entire biodiversity cluster of multilateral environmental agreements, including the SPAW Protocol. The CBS is compatible with the RSAP in the areas of biodiversity conservation, protected area management, ecosystem restoration/resilience building and economic valuation. The text of each target appears in Table B1.

Table B1. Caribbean Biodiversity Strategy

Goal	Objective	Selected Long-Term (2030) Targets
Goal 1: To conserve biodiversity to protect natural heritage and assets	Objective 1: To maintain and bolster genetic diversity, agricultural diversity, species conservation and the conservation of endemic species throughout the region.	<ul style="list-style-type: none"> • At least three endemic species highlighted in the SPAW Protocol and IUCN Red List have a reduced threat level. • Population size and/or range enhanced for at least five vulnerable migratory or transboundary species.
	Objective 2: To secure ecosystem goods and services, protecting, maintaining or restoring key ecosystems, within national or across transboundary landscapes and seascapes, including using spatial planning approaches	<ul style="list-style-type: none"> • By 2029 at least 20% of the marine exclusive economic zones of Members of CARICOM is protected with accompanying management plans. • Fifteen percent (15%) of the area of degraded terrestrial, coastal and marine ecosystems in Members of CARICOM is under active restoration for enhanced biodiversity and ecological functioning. • By 2029 at least 40% of the land and marine exclusive economic zones of Members of CARICOM is managed using ecosystem-based approaches. • By 2029 there is 10% reduction in the area of degraded terrestrial, coastal and marine ecosystems in Members of CARICOM. • By 2029 15% of the area of degraded terrestrial, coastal and marine ecosystems in Members of CARICOM is under active restoration for enhanced biodiversity and ecological functioning • The effectiveness of management of protected areas for biodiversity conservation has been measurably enhanced in at least five Members of CARICOM. • Biodiversity conservation initiatives are being implemented across at least three transboundary landscapes/ seascapes in the region. • National legislation and regulations strengthened in at least two Members of CARICOM to protect ecosystem diversity. • Initiatives for restoration of critical ecosystems in at least five Members of CARICOM have delivered measurable improvements in delivery of ecosystem services (for example, shoreline protection, slope stabilisation, watershed functioning, carbon capture). • A minimum of a 5% increase in the land area covered by mangroves in at least five Members of CARICOM is achieved.

Goal	Objective	Selected Long-Term (2030) Targets
Goal 2: To sustainably use biodiversity for national and regional development	Objective 3: To support sustainable biodiversity-based sectors, livelihoods and enterprises focusing on the management of shared regional resources.	<ul style="list-style-type: none"> Catch per unit effort indicate significant improvements in the sustainable use of at least five key species in at least five Members of CARICOM. Regional initiatives are implemented on green/blue economy, particularly focused on greening key sectors and supporting sustainable livelihoods and local green enterprises. Biodiversity values and ecological footprints incorporated into environmental assessment impacts (positive and negative) of industries and businesses in key sectors in at least five Members of CARICOM.
	Objective 4: To mainstream biodiversity within sectoral, national and regional policies and plans as well as national budgets, accounting and reporting systems.	<ul style="list-style-type: none"> Biodiversity valuation studies conducted in at least five countries.
Goal 3: To address biodiversity threats from intra-Caribbean transboundary issues and external sources	Objective 5: To build the resilience of the region's biodiversity to climate change and natural hazards.	<ul style="list-style-type: none"> National strategies developed for biodiversity restoration and recovery after the occurrence of natural hazards in at least two Members of CARICOM.
	Objective 6: To protect the region against invasive alien species as well as biosafety and biosecurity threats.	<ul style="list-style-type: none"> There is significant, measurable decrease in the regional or national incidence of at least five IAS.
Goal 4: To build an enabling regional environment to manage biodiversity	Objective 7: To ensure the generation, storage and use of current, multi-source biodiversity information by Caribbean biodiversity managers, using accessible mechanisms in suitable formats for decision making.	<ul style="list-style-type: none"> A functioning and comprehensive regional biodiversity database is in place or a coordination and information sharing mechanism for updated biodiversity databases in place and being used by decision-makers from at least 75% of the Members of CARICOM. State of Biodiversity reports produced for the region every five years.
	Objective 8: To develop and implement a coordinated regional approach to the implementation of the CBS through partnerships among governments, academia, civil society, private sector, regional and global agencies.	<ul style="list-style-type: none"> The regional coordination mechanism for biodiversity conservation in the Caribbean is operationalised, with participation of relevant CARICOM agencies and other key stakeholders.
	Objective 9: To equip Caribbean stakeholders with the capacity, entry points and mechanisms for participatory management of biodiversity while protecting their rights and benefits.	<ul style="list-style-type: none"> Mechanisms for access to biodiversity information and stakeholder participation in biodiversity conservation strengthened in at least five Members of CARICOM. Measurable increase in staffing and training within core marine biodiversity management agencies e.g. fisheries departments in at least five Members of CARICOM.

Caribbean Challenge Initiative (CCI)

The CCI is a coalition of Caribbean governments, businesses and partners committed to protecting 20% of marine and coastal resources by 2020 ('20 by 20' goal).

St. George's Declaration of Principles for Environmental Sustainability in the OECS

The St George's Declaration of Principles for Environmental Sustainability in the OECS sets of the broad framework for environmental management in the OECS. The RSAP supports Goal 3: Achieve the Long-term Protection and Sustained Productivity of the Region's Natural Resource Base and the Ecosystem Services it Provides and following associated Principles

- Principle 11 - Ensure the Sustainable Use of Natural Resources
- Principle 12 - Protect Cultural and Natural Heritage
- Principle 13 - Protect and Conserve Biological Diversity

Tulum Declaration

The RSAP is compatible with the Tulum Declaration's objective to promote the conservation of the Mesoamerican Reef System through its sustainable use, the establishment of links of joint work between authorities and the development of cooperation programmes and projects.

International Coral Reef Initiative (ICRI, 2019)

Recommendation on addressing the decline of herbivorous fish populations for improved coral community health throughout the Tropical Eastern Pacific, the Eastern and Western Atlantic, and the Greater Caribbean Region.

Global Commitments

The RSAP will support the following global and regional commitments related to the protection and enhancement of nearshore marine and coastal ecosystems and their services. Where the commitment includes specifically articulated targets, these have been highlighted.

United Nations Convention on Biological Diversity and the Aichi Biodiversity Targets

The RSAP specifically supports commitments to Aichi Targets related to awareness (Target 1); habitat loss (Target 5); sustainable fisheries (Target 6); pollution (Target 8); invasive alien species (Target 9); minimise climate change impacts on coral reefs and associated ecosystems (Target 10); protected areas (Target 11); ecosystem services (Target 14); and habitat restoration (Target 15). The text of each target and its corresponding strategic goal appears in Table B2.

Sustainable Development Goals

Sustainable Development Goal 14 focuses on coastal and ocean ecosystems and biodiversity (life below water), with targets related to marine pollution (Target 14.1); marine and coastal ecosystem protection and management (Target 14.2); ocean acidification (Target 14.3), and protected areas (Target 14.5) having particular relevance to the regional habitat strategy. The text of each target appears in Table B3.

SIDS Accelerated Modalities of Action (SAMOA) Pathway

Twenty-four countries and territories in the wider Caribbean are classified as small island developing states (SIDS). The SAMOA Pathway recognises that the growth prospects of the SIDS have been hindered *inter alia* by the degradation of coastal and marine ecosystems as well as other factors affecting the nearshore marine environment such as climate change, the impact of natural disasters, and sea-level rise. The SAMOA Pathway calls for comprehensive and integrated approaches to coral reef and associated ecosystems and articulates a coastal and marine area conservation target (Paragraph 58). The text of the supported action and target appears in Table B4.

Table B2. The Aichi Biodiversity Targets

Strategic Goal	Target
Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.
	Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
	Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
	Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.
	Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.
Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	Target 11: By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services	Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.
	Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Table B3. Sustainable Development Goal 14 Targets

Goal	Target
Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
	14.3 Minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all level
	14.4 By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information

Table B4. SIDS Accelerated Modalities of Action (SAMOA) Pathway Coral Reef Action/Target

Paragraph	Supported Action/Target
Paragraph 58	<p>e) To undertake urgent action to protect coral reefs and other vulnerable marine ecosystems through the development and implementation of comprehensive and integrated approaches for the management and the enhancement of their resilience to withstand pressures, including from ocean acidification and invasive species, and by drawing on measures such as those identified in the Framework for Action 2013 of the International Coral Reef Initiative</p> <p>o) Conserve by 2020 at least 10 % of coastal and marine areas in small island developing States, especially areas of particular importance for biodiversity and for ecosystem services, through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures in order to reduce the rate of biodiversity loss in the marine environment</p>

Convention on Wetlands of International Importance (The Ramsar Convention)/Fourth Ramsar Strategic Plan 2016–2024

The Fourth Ramsar Strategic Plan 2016-2024 is congruent both with the SDGs and with the Aichi Biodiversity Targets and is intended to guide the action and decisions of Contracting Parties. A Fifth Ramsar Strategic Plan will cover the period 2025 – 2030. Relevant targets of the Fourth Ramsar Strategic Plan include those related to ecosystem services (Targets 1 and 11); invasive alien species (Target 4); restoration of ecosystem health/function (Targets 5 and 12); reduction of threats (Target 9); management effectiveness (Target 9) public awareness (Targets 11 and 16). The text of each target appears in Table B5.

Table B5. Fourth Ramsar Strategic Plan 2016-2024

Strategic Goal	Target
Strategic Goal 1 Addressing the Drivers of Wetland Loss and Degradation	1 Wetland benefits are featured in national/ local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level.
	4 Invasive alien species and pathways of introduction and expansion are identified and prioritised, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.
Strategic Goal 2 Effectively conserving and managing the Ramsar Site network	5 The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management.
	7 Sites that are at risk of change of ecological character have threats addressed.
Strategic Goal 3 Wisely using all wetlands	9 The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, <i>inter alia</i> , within a river basin or along a coastal zone.
	11 Wetland functions, services and benefits are widely demonstrated, documented and disseminated
	12 Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation
Strategic Goal 4 Enhancing Implementation	16 Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness

United Nations Framework Convention on Climate Change - Paris Agreement

The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Starting in 2020, when the implementation phase of the Paris Agreement begins and every five years onwards, countries will be asked to resubmit their NDCs, reflecting revised and more ambitious actions and targets. There is, therefore, an opportunity to strengthen NDCs by considering and reporting on the contribution of mangroves in achieving mitigation and adaptation ambitions.

Other Global Frameworks

Although the following global initiatives do not include specific targets, they are supported by the strategy and action plan through its focus on building resilience and reducing threats:

- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, which aims to ensure that international trade in endangered species (including corals) does not threaten their survival in the wild. Seventeen species of coral (Anthozoa) and nine species of fire corals (Hydrozoa) in the WCR appear in CITES Appendix II.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) **Convention Concerning the Protection of the World Cultural and Natural Heritage**, which encourages the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding universal value. There are six World Heritage Natural Sites in the wider Caribbean that include coral reef, mangrove or seagrass ecosystems.
- **International Convention for the Regulation of Whaling**, which intends to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.
- **Convention on Migratory Species (CMS)**, where Article III 4 notes that Parties shall aim: a) to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction; b) to prevent, remove, compensate for or minimise, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species; and c) to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species, including strictly controlling the introduction of, or controlling or eliminating, already introduced exotic species.
- **Inter-American Convention for the Protection and Conservation of Sea Turtles**, where under the objective of Article II is to promote the protection, conservation, and recovery of the populations of sea turtles and those habitats on which they depend, on the basis of the best available data and taking into consideration the environmental, socioeconomic and cultural characteristics of the Parties.
- The International Union for the Conservation of Nature (IUCN), during the 2004 World Conservation Congress, governments were urged to “*establish sustainable management programs for sustaining and protecting reef fish and their spawning aggregations (...)*”. The CFMC/WECAFC/OSPESCA/CRFM Working Group on Spawning Aggregations, that aims to integrate the urgent need and rationale for protecting spawning aggregations from overexploitation, particularly in the case of threatened fish stocks and fisheries, in national and regional fisheries management and conservation planning, in a practical and timely manner.

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