UNITED NATIONS **EP**

UN environment programme

Distr. LIMITED

UNEP(DEPI)/CAR WG.43/INF.9
5 January 2023

Original: ENGLISH

Tenth Meeting of the Scientific and Technical Advisory Committee (STAC) of the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region

Virtual, 30 January – 1 February 2023

EXPLORING THE FEASIBILITY OF IMPLEMENTING RECOMMENDATIONS IDENTIFIED IN THE EVALUATION OF THE CONNECTIVITY AMONG MPAs OF THE WIDER CARIBBEAN

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Exploring the feasibility of implementing recommendations identified in the evaluation of the connectivity among MPAs of the Wider Caribbean

A deliverable of the United Nations contract No. 2500300466

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November 2022

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ACRONYMS

AGRRA: Atlantic and Gulf Rapid Reef Assessments

ACP MEAS: Organization of African, Caribbean, Pacific States, Multilateral Environmental Agreements

CANARI: Caribbean Natural Resource Institute

CaMPAM: Caribbean Marine Protected Areas Network and Forum

CBD: Convention on Biological Diversity

CCMI: Central Caribbean Marine Institute

CEP: Caribbean Environmental Programme

CGIAR: Consultative Group on International Agricultural Research

CEPF: Critical Ecosystem Partnership Fund

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

CLME: Caribbean Large Marine Ecosystem

CETA: Communication, Education, Training and Awareness

CWC/IWC: Caribbean Waterbirds Census / International Waterbird Census

DOPA: Digital Observatory for Protected Areas

DCNS: The Dutch Caribbean Nature Alliance

EBSA: Ecologically or Biologically Significant Marine Areas

GCRMN: Global Coral Reef Monitoring Network

FAO: United Nations Food and Agriculture Organization

FRIMS: Fisheries and Resource Monitoring System

ICRI: International Coral Reef Initiative

IMO: International Maritime Organization

IUCN: International Union for Conservation of Nature

JRC: Joint Research Centre

KBA: Key Biodiversity Areas

LBS: Land-based Sources of Marine Pollution

MEOW: Marine Ecoregions of the World

MERMAID: Marine Ecological Research Management AID

MMA: Marine Managed Area

MPA Marine Protected Area

NAHWC: North Atlantic Humpback Whale Catalog

NAMPAM: North American Marine Protected Areas Network

NCRMP: National Coral Reef Monitoring Program

NMS: National Marine Sanctuary

PA WG: Protected Areas Working Group

PSSA: Particularly Sensitive Sea Areas

OECS: Organization of Caribbean States

OLACEFS: Organización Latinoamericana y del Caribe de Entidades Fiscalizadoras Superiores

ORE: Ocean Research Education Foundation

OSPESCA: Organización del Sector Pesquero y Acuícola del Istmo Centroamericano

RAC: Regional Activity Centre

RCV: Red Caribeña de Varamientos

RRS-MAR: Red de Restauración del Sistema Arrecifal Mesoamericano

SDG: Sustainable Development Goal

SID: Small Island Developing States

SIAM: Sistema de Información Ambiental Marina

SPAW: Specially Protected Areas and Wildlife

SOCAR: State of the Convention Area Report

STAC: Scientific and Technical Advisory Committee

TDA: Transboundary Diagnostic Analysis

TNC: The Nature Conservancy

WCR: Wider Caribbean Region

WECAFC: Western Atlantic Fishery Commission

WIDECAST: Wider Caribbean Sea Turtle Conservation Network

WWF: World Wildlife Fund

Exploring the feasibility of implementing recommendations identified in evaluation of the connectivity among MPAs of the Wider Caribbean

1. Overall context

The Wider Caribbean Region (WCR) is one of the most complex regions of the world, with 26 independent states and 19 dependent territories (USA, United Kingdom, France, and the Kingdom of the Netherlands). Its jurisdictional territories and waters range from very large to very small boundaries, and encompasses a range of economic development, with well-developed and least-developed countries. With over 24 Small Island Developing States (SIDs), this is the region with the largest number SIDs in any of the world's Large Marine Ecosystems (CLME+ TDA Group 2011).

The WCR is also recognized by its great cultural diversity emerged from the mixture of cultures with European influences, native communities who lived there before colonization, negro ethnicities and waves of immigration (CARSEA 2007). More than 134 million people who live on or near the coast are supported by the Caribbean Sea's Ocean economy (CANARI 2020). In addition, the region welcomed approximately 31.5 million stay-over visitors in 2019, who may have spent more than 40 billion dollars in 2019[1]; and it is a world's premier cruise tourism destination, commanding over 60% of the world cruise market.

Adding to this complexity, the region possesses productive, diverse, and well-developed coral reefs, seagrasses, mangroves, beaches, pelagic and deep-sea ecosystems that have resulted from complex interactions happening inside a semi-enclosed, tropical, and very active oceanographic environments. This reach biodiversity is supporting several fisheries considered to be a significant provider of food, livelihoods, income and subsistence in the Western Atlantic-WECAFC region (a similar area compared to the WCR) area, where approximately 500,000 people are employed directly in the primary sector (capture fishery), with another three million jobs in ancillary activities (WECAFC 2022). The WCR is a net importer of fisheries products. In terms of volume the region imported almost 2 billion tonnes with a value of around USD 8.1 billion, while exports represented around 974 thousand tonnes with a value of USD 4.8 billion (WECAFC 2022).

Unfortunately, and despite this scenario of productive and well-connected coastal and marine ecosystems and communities, the region is at the same time suffering by increasing environmental and human threats at local, regional, global levels, including unsustainable resource use such as declining marine fisheries production, impacts from marine pollution, and impacts from climate change. The need for coordinate and consistent management actions, triggering prompt and effective actions result vital for the survival of the ecosystems and the communities that depend on them.

As such the Cartagena Convention and its three Protocols (Oil Spill, Specially Protected Areas and Wildlife (SPAW), and Land-based Sources of Marine Pollution (LBS) being one of the few biding regional agreements are generating processes in the right direction, including functional networking and

[1] *2020 statistics from the Caribbean Tourism Association available here*

promotion of connectivity as the focus for improving marine conservation success of the SPAW Protocol. The SPAW Protocol is aimed to assist its Parties in developing cooperative programs to establish and manage protected areas and create "a protected area network" in the Wider Caribbean (Article 7(2)).

As such, during the 10th Conference of Parties of the SPAW Protocol, it was recommended that the Secretariat undertake a comprehensive review to determine the impact of CaMPAM activities[2]. The review was intended to evaluate the network effectiveness and to guide future network development ensuring that activities are linked to the overall goals of the SPAW Protocol. This work was also endorsed by Recommendation V (6) of the 9th SPAW STAC[3].

Following this advice, an evaluation of the connectivity between SPAW-listed protected areas was undertaken to guide the development of a functional ecological network of protected areas in the Wider Caribbean Region (Kiene 2021) was conducted under the ACP MEAs III project. This evaluation highlighted the need to better understand what connects different parts of the Caribbean by integrating biogeographic information, ecosystem processes and defining and collecting information on ecosystem sentinels to effectively assess and communicate its current condition and promote rapid and coordinate responses. Species, habitats, and ecological connections among SPAW listed sites can be used as a basis for expanding cooperation with other Marine Protected Areas (MPAs) / Marine Managed Areas (MMAs) to enhance their roles in protecting ecosystem functions and strengthen management relationships between protected areas across the Wider Caribbean. He also highlighted that an ecological network of the SPAW protected areas is not only a network of ecosystem protections, but also a network of ecosystem sentinels that can report and coordinate responses to existing and new threats as they emerge.

The need for preserving protected areas connectivity has been also recognized in recent studies. For instance, Brenan (2021) concluded that reducing human footprint could be as effective as adding new areas and recognised that both strategies contribute to improve connectivity particularly in aggregating and migrating places. Having functional corridors and restoring degraded habitats in the unprotected portions of ecoregions is likely to benefit biodiversity conservation and safeguard the connectivity of currently established Protected Areas, thus calling for greater networking in the conservation strategies.

In support for a broad networking, the Convention on Biological Diversity, Working Group on the Post2020 Global Biodiversity Framework (2022) have prepared specific guidelines to counteract biodiversity loss and achieve conservation goals by 2050. Among the transformative actions considered, this group recommended not only the reduction of the direct threats to biodiversity from land and sea use change, direct exploitation of organisms, climate change, pollution, invasive alien species and their interactions,

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[2] Recommend that the Secretariat undertake a comprehensive review to determine impact of CAMPAM activities thus far, envisaged to evaluate effectiveness and guide future work with a view towards ensuring activities linked to overall SPAW Protocol activities/goals. (Available here).

[3] Contracting Parties request that the Protected Areas Working Group, in collaboration with the Secretariat and SPAW RAC, as appropriate, review the recommendations presented in the "Assessment of the Impact and Effectiveness of CaMPAM" (UNEP(DEPI)/CAR WG.42/INF.41 Add.1) and the "Evaluation of Connectivity Between the SPAW-Listed Protected Areas to Guide the Development of a Functional Ecological Network of Protected Areas in the Wider Caribbean" (UNEP(DEPI)/CAR WG.42/INF.10).

but also the better understanding of the degree of biodiversity change, and relative importance of drivers, which vary greatly across scales and from place to place.

As such, it was considered that the degree of MPA success is linked to the understanding of ecosystem complexity obtained from regular assessments, using relevant indicators from science and monitoring coordinated across local, national, and international levels. That requires both a bottom-up and top-down approach allowing for integration of information from field-based observations made by different groups different communities and technologies (Navarro et al. 2017; Eicken et al. 2021).

Hence, the goal of this consultancy is to present options for implementing the recommendations identified in the evaluation of the MPA connectivity (Kiene 2021) triggering actions at various scales to invigorate MPA management effectiveness and networking across the Wider Caribbean Region. As such, this work complements simultaneous efforts being conducted by CEP Secretariat and SPAW-RAC towards CaMPAM Network reactivation and the identification of options for implementing recommendations stated in previous assessment's (Collado-Vides 2016, Brown and Fardin 2021). Further analysis and decisions about the feasibility of these options are expected to take place at the 10th Scientific and Technical Committee (STAC) Meeting of the SPAW Protocol.

In conjunction, these are considered products of the ACP MEAs III Project aimed to enhance the mainstreaming and implementation of MEAs related to biodiversity, marine and chemicals and waste, with a focus on the mainstreaming of biodiversity in agriculture, the management of chemicals and waste (including hazardous pesticides), the reinforcement of compliance and enforcement measures and strengthening of the implementation of regional seas conventions in ACP countries.

2. Methodology for a participative approach

At the onset of the assignment, and by means of a kick-off virtual meeting with the SPAW Secretariat and the SPAW-RAC personnel, it was emphasised the need to generate a concise document constructed collectively. As such, the participative approach would need to secure inputs from the SPAW Ad Hoc Protected Areas Working Group (PA WG) since early in the process (Annex 1). In preparation for getting the necessary comments and suggestions, a preliminary document containing the methodological approach and an initial description of potential options for implementing recommendations was prepared and shared among members of the PA WG. This early draft was quickly assembled based on concepts, analysis and recommendations gathered from relevant documents and on the consultant own concepts and experience. In this analysis several maps have been assemblage using freely accessible information and the QGIS vs 2.12.1.

Approximately 50% of the PA WG members kindly contributed with the bottom-up construction of this document by making written comments on the shared Google Word Document, through email communications, and through verbal recommendations gathered at virtual meetings.

Additional consultations were obtained from knowable people including former SPAW Programme Officers (Alessandra Vanzella-Khouri, Monica Borobia, and Ileana Lopez), and the former CaMPAM coordinator (Georgina Bustamante). They kindly provided inputs through email exchanges, phone calls, or written comments to the early draft and by providing additional relevant documents.

All received inputs along with a collection of supporting documentation of CaMPAM activities, achievements, and evaluations contributed to the structuring of a streamlined option paper, considered to be the first draft. This draft was again shared with the PAWG members for a second round of comments and inputs. In conjunction, received inputs contributed to significantly improvements of the final version of the so called CaMPAM option paper.

Towards the end of this four months consultancy, PA WG at the virtual meeting held on 2 September 2022 recognized that: a) several difficulties limited their active involvement; b) there is a need to focus on the most relevant aspects given the limiting funding; and c) there is a need to secure the bottom-up approach when taken decisions. Hence, it was considered that for a stronger consultative process, it shall be necessary to open new opportunities for in-depth participation of most of the PA WG members and perhaps to consider the inclusion of additional key partners. Until now, the PA WG involvement has proved challenging since it happened during the summer months, and it was aggravated with the beginning of the Hurricane season across the WCR. Hence, the Cartagena Convention Secretariat is looking for alternatives to respond to this advice, allowing the successful completion of this task.

As a first approximation, the Cartagena's Convention Secretariat recommended this option paper to look at the high-level decisions, by initially presenting a simplified and re-structured version of the assessment's recommendations and then by introducing several desired outcomes aimed to facilitate and measure the degree of implementation of the adjusted recommendations. For each desired outcome three options have been presented, along with short statements describing advantages and limitations. Complementarily, lower-level decisions contemplating possibilities for the short (2 years), medium (5 years) and long (10 years) terms activities shall be included for later consideration.

In general, proposed options moves gradually from in-house possible solutions to less dependent / external strategies and highlighted that most of the proposed actions are tied to significant improvement on coordination processes, in which the reactivation of the CaMPAM network could play a relevant role.

To have a common understanding on the terminology utilised in this report the following five concepts are defined based on IUCN criteria (Day et al 2019):

Marine Protected Area (MPA): is an area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all the natural and cultural resources therein. An MPA can be managed as a multiple-use area, or as a No take area.

Marine Managed Areas (MMA): is a broader concept that refers to discrete geographic areas along the coast that protect, conserve, or otherwise manage a variety of resources and uses.

Additional concepts utilised in this document are also defined to avoid confusion:

Sustainable Resource Use Network: refers to those multi-stakeholder networks committed to integrated planning, and effective management, and governance across natural resources and spatial scales to achieve sustainable consumption and production patterns.

Network: A group of people with a common interest who interact and cooperate with each other for mutual assistance or support in relation to that common interest.

Partnership: A relationship between organisations or groups that is characterised by mutual co-operation and responsibility to achieve a common goal, with the involvement of all parties to the partnership (the partners). It can be formal, semi-formal, or informal.

3. Wider Caribbean subregional context for improving connectivity among marine managed areas

In conjunction, the more than 7,000 islands, islets, reefs, and cays with an emerged area of approximately 0.2 million km^2 (CANARI 2019) and the surrounding Caribbean Sea with an approximate area of 6.7 million of km^2 that comprise the WCR has been recognized as one of the highest biodiversity in the Atlantic Ocean and at global scale (Roberts et al. 2002, Miloslavich et al. 2010, CLME+ TDA Group 2011, Robertson and Cramer 2014).

In fact, the tropical marine environments in the WCR dominated by well-developed coral reef, mangrove, and seagrass ecosystems are interconnected in complex ways and responsible not only for significant species diversity, including endemic and threatened species (CARSEA 2007), but also for commercially valuable species that support industrial and small-scale fisheries along the region which target mollusks, crustaceans and fishes inhabiting from shallow coastal areas to deep abyssal slopes (WECAFC 2022).

However, the ecosystem productivity of the WCR could be quite heterogeneous; with productive regions either related to riverine input and upwelling systems (Gulf of Mexico and along the North-eastern shelf of South America), or related to coral reefs, coastal lagoons, mangrove forests and seagrass beds which are also highly productive (Greater Antilles, Southwestern, Eastern Caribbean), which are usually found in the top 100-200 m of depth. Thus, highlighting the need for keeping functional connectivity to overcome the management challenges emerged by having a range of subregional provinces.

There have been several initiatives to delimited large areas of the oceans resulting from a combination of a complex bathymetry and complex circulation patterns, as the basis for identification of benthic, pelagic biotas, representing areas in which most marine biodiversity is confined, where human interest and attention are greatest, and where there is often a complex synergy of threats (Figure 1).

One of them is the Marine Ecoregions of the World (MEOW) a biogeographic classification of the world's coasts and shelves that created a hierarchical system based on taxonomic configurations, influenced by evolutionary history, patterns of dispersal, and isolation was developed Spalding et al (2007). Accordingly with this classification, there are a total of 10 provinces (subregions) within the WCR (Figure 2.a)

Another delimitation is the Large Marine Ecosystems (LMEs) regions conceived as wide areas of ocean space along the Earth's continental margins, extending from estuaries and river basins seaward to the outer margins of major currents or the edge of continental shelves. From the 66 LMEs of the world, the WCR encompasses three: Gulf of Mexico, Caribbean, and North Brazil Shelf (Figure 2.b).

In 2010, UNEP/CEP following a recommendation of its Contracting Parties to the Land Based Sources (LBS) Protocol decided to produce the first State of the Convention Area (SOCAR) report on land-based pollution. In that analysis (UNEP/CEP 2019), the WCR was divided into five sub-regions in response to general patterns in Water quality (Figure 2.c).

The extension of those subregions is detailed in Table 1.

Table 1. Area coverage (km^2) of the Wider Caribbean subregions estimated from maps presented in Figure 2.

Large Marine Ecosystem	Area (km2)	%	Marine Ecoregion of the World (Bioregion)	Area (km2)	%	SOCAR Subregion	Area (km2)	%
Caribbean	3,715,267	55	Greater Antilles	1,387,714	20	Subregion I	1,845,394	27
Gulf	1,814,997	27	Southwestern Caribbean	816,810	12	Subregion II	470,550	7
Brazil	1,169,216	17	Southeastern Caribbean	571,376	8	Subregion III	2,234,740	32
			Western Caribbean	256,171	4	Subregion IV	452,299	7
			Florida	172,169	3	Subregion V	1,930,239	28
			Northern Gulf	609,150	9			
			Southern Gulf	970,592	14			
			Eastern Caribbean	308,420	5			
			Bahamian	520,565	8			
			Guianan	1,173,632	17			
Approximate total area	6,699,480	100		6,786,599	100		6,933,222	100

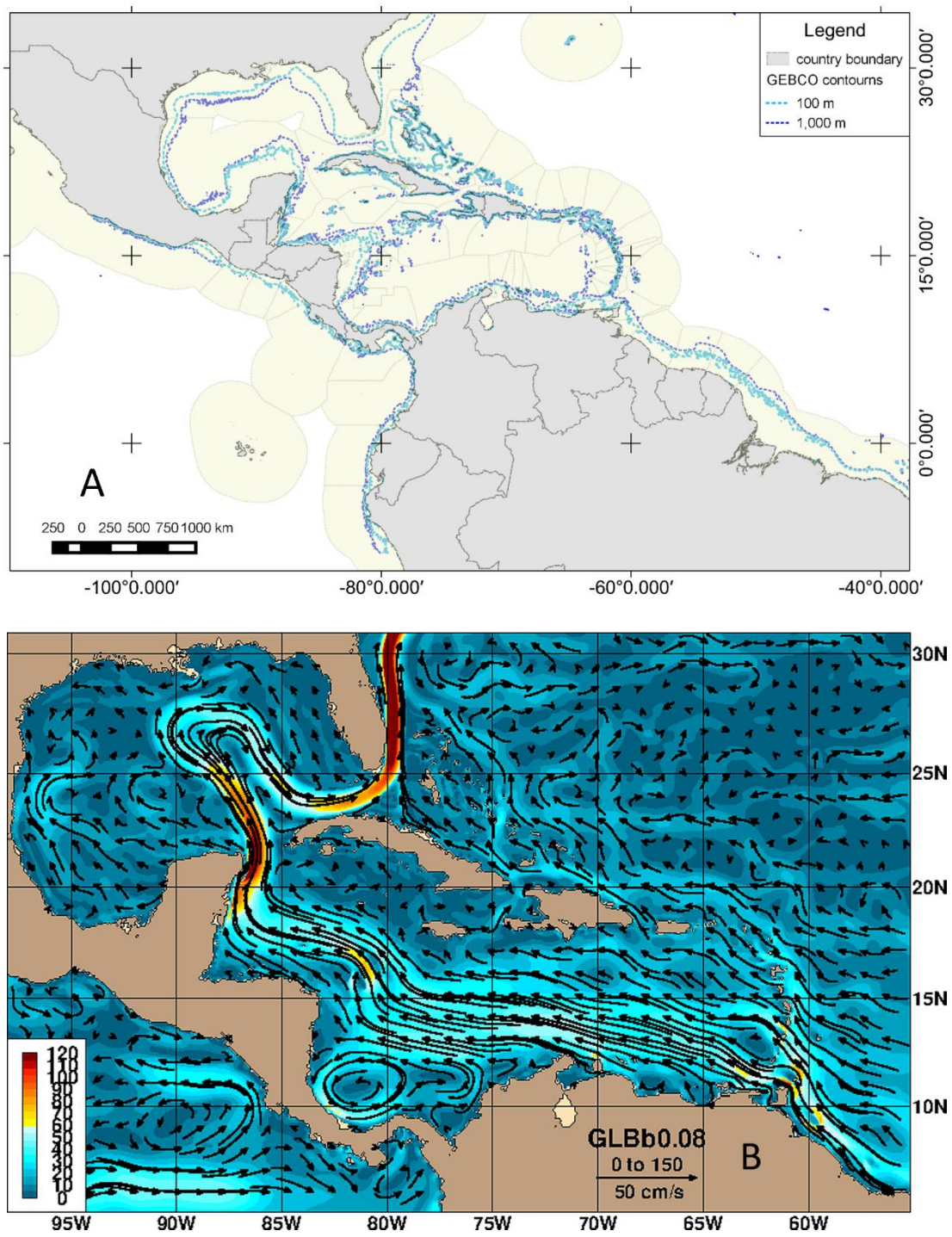

Figure 1. Main oceanographic characteristics of the Wider Caribbean Region.

A. Continental/Islands 100 and 100m depth contours (data from GEBCO 2021) and 2014 EEZ boundaries (data from Marine Regions); B. 2021 mean superficial current velocity 1/12° in m/seg (Taken from Global HYCOM+CICE).

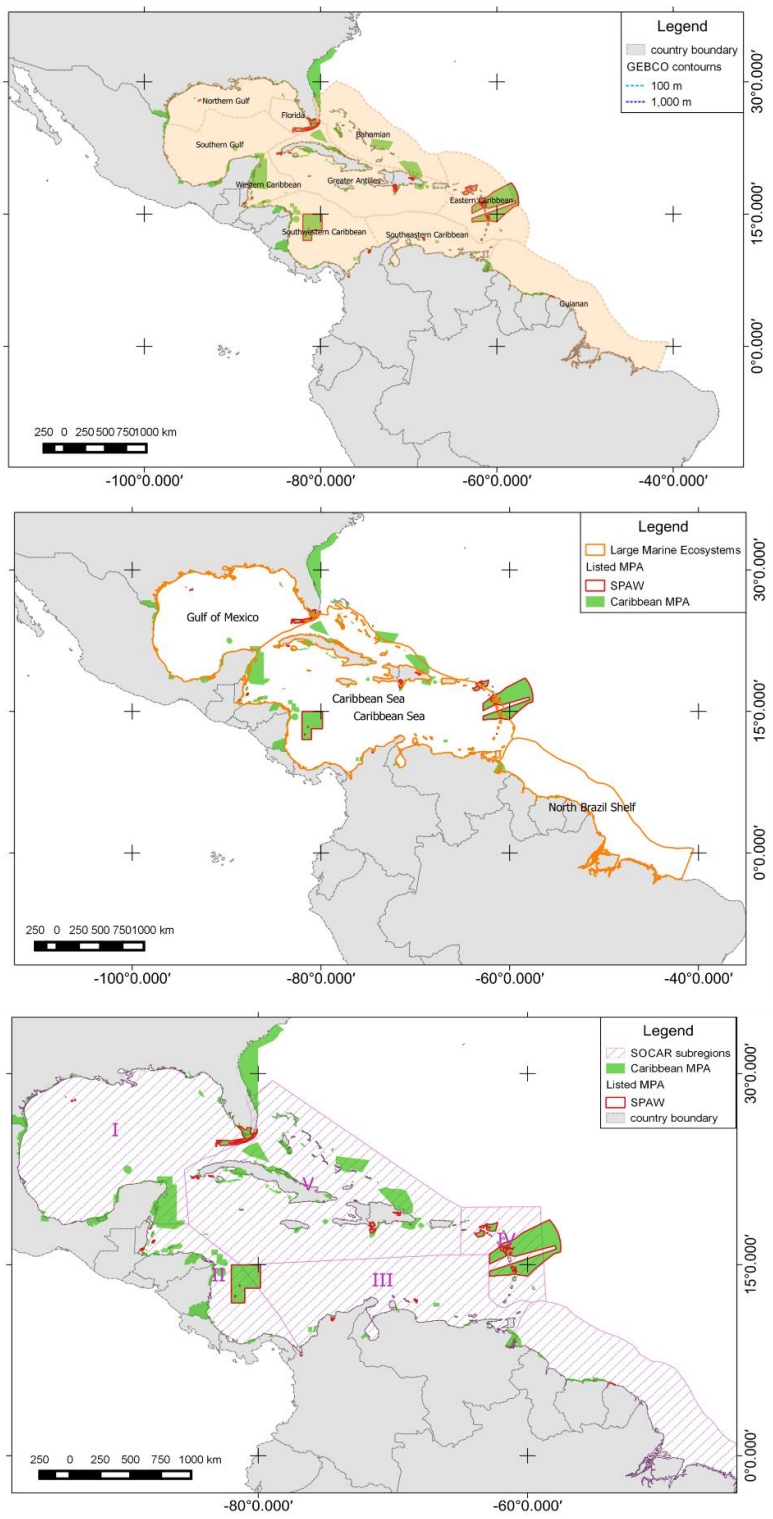

Figure 2. Delimitation of Wider Caribbean subregions and spatial location of 2019 MPAs (red boundaries denoted SPAW listed sites) ***(data taken from 2019 CaMPAM MPA database):***

A. Marine Ecoregions of the World (data taken from TNC - WWF); B. Large Marine Ecosystems (data taken from LME Hub); SOCAR regions (data taken from UNEP-CEP)

Accordingly to the 2019 CaMPAM MPA database, in the WCR there are 1,087 Marine Protected Areas (MPAs), from which currently 36 have been listed as SPAW Sites (Figure 2, Table 2). Overall, these marine managed areas are located across the various subregions, contain relevant ecosystem resources in representation of the region's coastal and marine biodiversity and account for approximately 500,119 km^2, with around 322,678 km^2 from SPAW listed sites. That means that at present, MPAs represent around 8.5% of WCR and the SPAW listed sites are 5.5% of the WCR or 65% of the total MPA extension. However, only five of the SPAW listed sites have an area greater than 1,000 km^2 (Table 2).

Identification of subregions in the WCR has been also conducted through an inclusive and science-driven process involving experts from all over the world and an enormous amount of scientific data, and based on main seven criteria, areas of the oceans that are the most crucial to the healthy functioning of the global marine ecosystem were described by the Convention of Biological Diversity (CBD).

In a dedicated workshop held in Brazil in 2010, they were able to identify 15 areas (Figure 3) considered to be Ecologically or Biologically Significant Marine Areas (EBSAs) (Secretariat of the Convention on Biological Diversity 2014). This work was aimed to get deeper understanding of the complexity and the unique features of the marine environment and their important role in a healthy functioning planet.

As a result of the Critical Ecosystem Partnership Fund's (CEPF's) ecosystem profile for the Caribbean Islands and following a rapid evaluation of the biodiversity, in terrestrial, freshwater and marine ecosystems approximately 330 areas have been preliminary considered as Key Biodiversity Areas (KBAs). This is a significant number of sites that would need to be verified using the updated IUCN criteria for KBAs, minimising dispersal of efforts through small / fragmented sites.

Table 2. Comparative analysis of SPAW listed sites extension (km^2). See spatial distribution of these MPAs in Figure 2.

Country	No. MPAs in the country	No. SPAW listed sites	SPAW sites extension (km^2)			
			Marine coverage	Wetland coverage	Terrestrial coverage	Total MPA extension
Belize	29	3	801	9	0	810
Cuba	6	2	358	60	200	618
Dominican Republic	34	5	1,202	304	2,711	4,217
Colombia	10	3	64,950	168	211	65,329
United States of America	226	4	101,891	3	4,090	105,984
France	15	10	139,515	812	2,297	142,624
Kingdom of the Netherlands	16	7	2,946	2	79	3,026
Grenada	5	1	4	0	0	4
Saint Vincent and the Grenadines	3	1	61	0	5	66
Total	344	36	311,726	1,359	9,594	322,678
%		10.5	96.6	0.4	3.0	

Note: MPA coverage came from 2019 CaMPAM MPA database, which in turn was obtained from the WDPA database and corroborated with MPA managers at national level or MPA management plan information.

Following criteria identified by the International Maritime Organization (IMO), the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships, Particularly Sensitive Sea Areas (PSSA) have been established around the globe. Special protection for a PSSA is awarded in recognition of ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities. When a PSSA is approved, specific measures to control the maritime activities, such as routeing measures, strict application of MARPOL discharge and equipment requirements for ships (including oil tankers) and installation of Vessel Traffic Services (VTS) are required. At present, only three PSSA have been declared across the WCR (Figure 4), the Sabana-Camagüey Archipelago in Cuba (1997), the sea around the Florida Keys, United States (2002), and the Saba Bank, in the Kingdom of the Netherlands (2012).

Independently of the subregion described above or the kind of marine area management regime in place, better integration, and networking among the several programmes and initiatives at national, regional, and global levels is needed for effective marine conservation across the WCR. The weak management coordination and connectivity is unfortunately perceived as one of the reasons for not being able to experience the reversal of the degradation of coastal and marine ecosystems, confronting increasing threats from anthropogenic and natural stresses, and for ensuring the provision of ecosystem goods and ecosystem services in a sustainable way. Ignoring connectivity and the broader seascape considerations impacting coral reef-mangrove-seagrass complex is a short-sight that would not result in the desired health of the marine ecosystems in the WCR (CANARI, 2020).

As Kiene (2021) pointed in his evaluation, MPA managers having incomplete, inconsistent or incompatible data find themselves in difficult position to determine the ecosystem status and real trends, which in turn have limited their abilities to provide technical guidance in a comprehensive and effective way. As such, ensuring coordination and coherence through proper monitoring and research, strengthening public engagement and collaborative governance, and improving communication across the Caribbean residents and visitors are of critical importance.

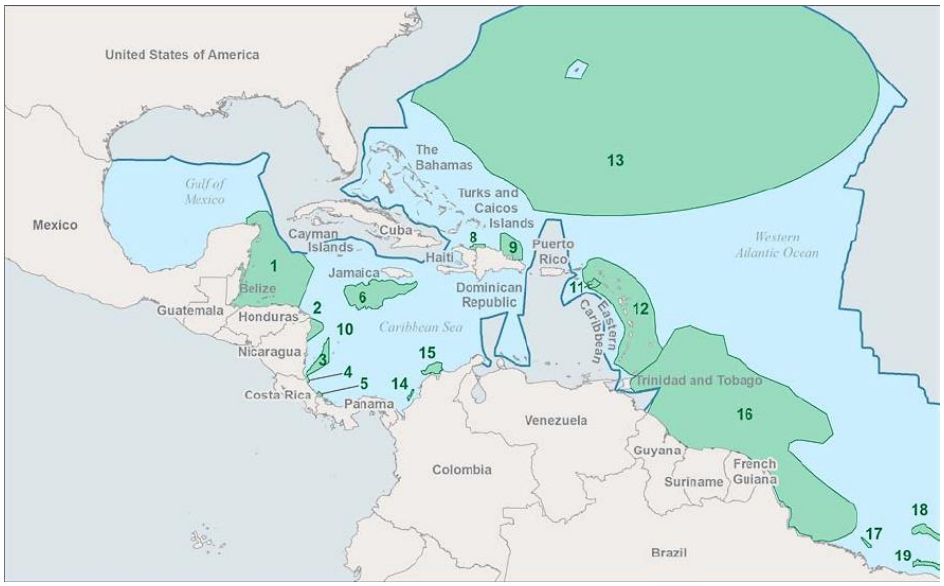

Figure 3. Spatial distribution of the Wider Caribbean and Western Mid-Atlantic Region Ecologically or Biologically Significant Marine Areas. Taken from CBD -EBSA booklet.

1. Mesoamerican Barrier reef, 2. Miskito cays, 3. Corn Island, 4. Tortuguero-Barra del Colorado, 5. Cahuita-Gandoca, 6. Pedro Bank, Southern Channel and Morant, 8. Northern Hispaniola Binational Area, 9. Marine Mammal Sanctuary Banco de la Plata y de la Navidad, 10. Seaflower, 11. Saba Bank, 12. Eastern Caribbean, 14. Talud continental Superior del Sinu, 15. Talud continental Superior del Magdalena, 16. Amazonas-Orinoco Influence Zone.

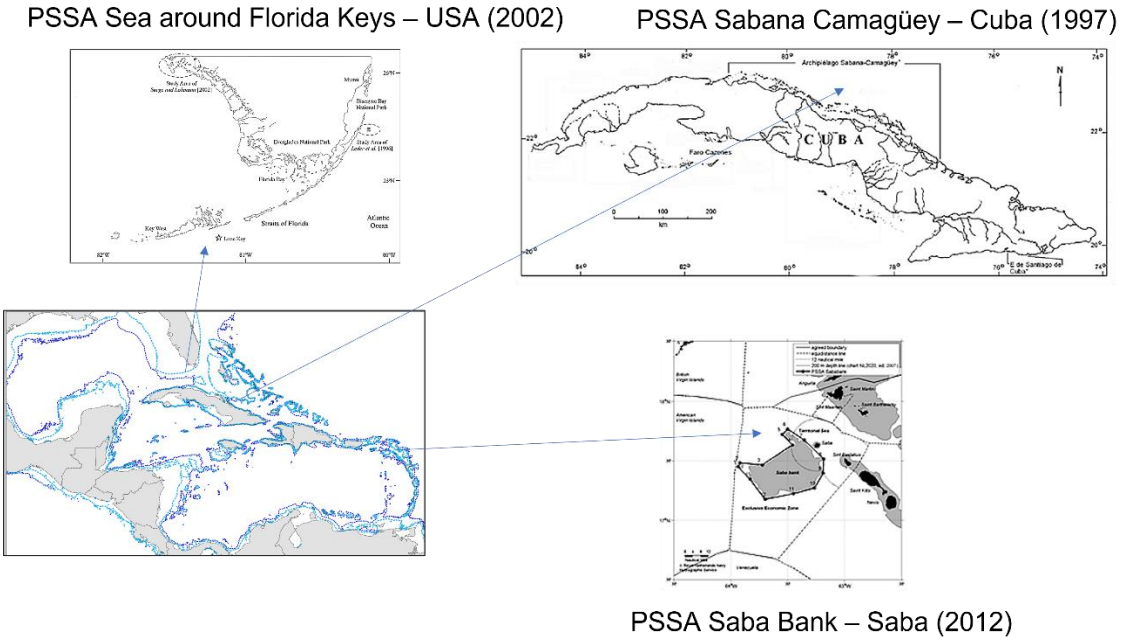

Figure 4. Spatial distribution of the three PSSA areas within the Wider Caribbean Region.

4. Monitoring protocols and data portals for better networking and assessments

The SPAW Protocol is actively working towards strengthening management effectiveness of the MPAs / MMAs by establishing special protection to listed protected areas / flora and fauna species, thus enhancing networking , collaboration and communication within the WCR.

Their ANNEXES I and II include endangered and threatened species, subspecies, and their populations as well as rare species in need of total protection or recovery. Annex III may include species that are endangered or threatened, or species that have endangered or threatened populations, or species that are essential to the maintenance of fragile and vulnerable communities and require some protection to ensure the survival and/or function of the community as a significant part of the ecosystem. As of 2019, a total of 97 flora species (57 in Annex I and 40 in Annex III), and a total of 139 fauna species (109 in Annex II and 30 in Annex III). The complete list of species could be accessed here.

As mentioned by Kiene (2021), MPAs networks can be built on different kinds of relationships to achieve different goals, so that they operate cooperatively and synergistically, at various spatial scales, and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve. He provided a quick overview of the physical and ecological connectivity between the SPAW (36 SPAW protected areas) and other MPAs including aspects of habitat representation, sea turtle nesting beaches and migrations, potential for coral and fish larval dispersal, marine mammals' connections and birds' corridors. This analysis recognized the importance of collecting field data to be able to compare the status and trends of resource and environmental conditions across the network.

Enhanced MPA networking could benefit from liaising with any of the several regional / global monitoring protocols, and data portals:

- ✓ Global Coral Reef Monitoring Network (GCRMN) established by the International Coral Reef Initiative (ICRI) in 1995, initially with the primary task of reporting on the condition of the world's coral reefs. They prepare regional periodic assessments drawing on monitoring, research and other data and establishment of regional GCRMN committees, where possible drawing on existing nodes and linked to existing Regional Seas mechanisms. Socioeconomic monitoring through the SocMon Initiative is being conducted in the Caribbean, Central America, Southeast Asia, Western Indian Ocean, Pacific Islands, and South Asia. Their Caribbean branch is an open network of coral reef scientists, managers, and government expert representatives, led by a Steering Committee with the support of CEP Secretariat and the SPAW-RAC as regional coordinator. Since its revitalisation in 2014, the GCRMN-Caribbean focused on developing biophysical and socio-economic guidelines to ensure the collection of useful, comparable, and accessible data that can effectively reveal the status and trends of the Caribbean's coral reefs in the near future.

- ✓ Reefbase is a project by WorldFish, an international, non-profit research organization dedicated to reducing poverty and hunger by improving fisheries and aquaculture. WorldFish is a member of the Consultative Group on International Agricultural Research (CGIAR), a strategic alliance of members, partners and international agricultural centres that mobilizes science to benefit the poor. This online portal contains information on the location, status, threats, monitoring, and management of coral reefs in over 120 countries and territories. It also allows for generation of thematic maps, online library on coral related publications, a photo gallery, a portfolio of coral reef projects, working with many organizations to improve coral reef data storage, analysis, and sharing. ReefBase is the official database of the GCRMN.

- ✓ Atlantic and Gulf Rapid Reef Assessments (AGRRA) is an international collaboration of scientists, managers, and supporters aimed at improving the regional condition of reefs in the Western Atlantic and Gulf of Mexico. For 20 years, AGRRA has used an innovative regional approach to examine the condition of reef-building corals, algae and fishes and support the conservation of coral reef ecosystems. They have developed a comprehensive set of visual training tools to help partners learn identification of key reef organisms, their role in reef health, and how to scientifically monitor, track and understand these systems. That includes Report Cards in collaboration with The Healthy Reefs Initiative, The Nature Conservancy for 6 countries in the Eastern Caribbean, Bahamas National Trust, and the Blue Project for the Bahamas. AGRRA's Data Explorer houses the largest database on Caribbean coral reef health indicators, with data available from more than 3,000 site surveys in 29 countries or territories throughout the Caribbean.

- ✓ The Healthy Reefs for Healthy People Initiative was launched in 2003 with the goals of promoting the adoption and application of Healthy Reefs indicators of the Mesoamerican Reef Ecosystem; standardizing analysis of reliable scientific data to improve reef ecosystem management; and to serve as an open forum for information sharing and networking among science and conservation partners. The initiative encourages dialogue and collaboration to strengthen efforts to protect the Mesoamerican Reef, a region that extends from the Yucatan Peninsula in Mexico to the southward to Belize, Guatemala, and the Bay Islands off the northern Honduran coast. This initiative secured partnership with over 70 partner organizations through science-based management recommendations.

- ✓ NOAA's National Coral Reef Monitoring Program (NCRMP) is a strategic framework for conducting sustained observations of biological, climatic, and socioeconomic indicators in U.S. states and territories. The resulting data provide a robust picture of the condition of U.S. coral reef ecosystems and the communities connected to them. It developed partnerships with another six NOAA's Programmes. The program has 14 regional data portals.

- ✓ US Condition Report from Marine sanctuaries is a program from NOAA National Marine Sanctuary office which provides summaries of resources in each sanctuary, including information on the status and trends of water quality, habitat, living resources and maritime archaeological resources and the human activities along with management responses to the pressures that threaten the integrity of the marine environment of those resources.

- ✓ Sistema de Información Ambiental Marina (SIAM) integrates conceptual elements, policies, regulations, processes, and human resources about coastal and marine environments in Colombia. In general, this portal compiles and analyses environmental information in support of increasing knowledge for decision making in a participative framework.

- ✓ Ocean Research Education Foundation (ORE) began in 1997 and continues through the support of the more than 25 partners across the region. They have developed a comprehensive set of visual training tools to help partners learn identification of key reef organisms, to monitor reef health, and how to track and understand these systems. This programme has developed a learning platform, exchanges, and education materials and to catalyse conservation impact through creative, effective communication to wider audiences.

- ✓ The Coral Reef Dashboards by the World Resources Institute provide an overview of the world's coral reefs including consolidated (including the WCR), map-based information and indicators on the value of coral reefs, the threats they are facing, the factors which promote coral resilience, progress on protecting reefs, and what actions are needed to save them.

- ✓ Ocean Health index Is a framework for assessing ocean health based on the sustainable provisioning of benefits and services people expect from healthy oceans, such as food, cultural and social value, and jobs. This independent assessment uses the same framework as the global assessment but can explore the variables influencing ocean health at the smaller scales where policy and management decisions are made. Goal models and targets are created using higher resolution data, indicators, and priorities, which produce scores better reflecting local realities. It requires conceptually identifying important characteristics and priorities in the area and gathering information to represent the framework. Goal Scores (0-100%) are based on several components: current status, likely future status, trend, pressures, and resilience.

- ✓ The Marine Ecological Research Management AID (MERMAID) is a collaboration between the Wildlife Conservation Society (WCS), WWF and Sparkgeo. Data MERMAID is an open-source application aimed to facilitate coral reef field data entry in support of informed decision making.

- ✓ The Allen Coral Atlas is the result of the close collaboration between the Carnegie Institution for Science, University of Queensland, Planet, and Paul G. Allen Philanthropies and the National Geographic Society. It was designed with the aim of mapping the world's reefs.

- ✓ The Reef Resilience Network is a partnership led by The Nature Conservancy, that is comprised of over 1,500 members. It aims to connect marine resource managers with information, experts, resources, and skill-building opportunities to accelerate and leverage solutions for improved conservation and restoration of coral reefs and reef fisheries around the world. One way it does this is by hosting regular interactive webinars on new management techniques, current events, and publications for coral reef managers and practitioners.

- ✓ Caribbean Protected Areas Gateway is managed by IUCN-Biopama-Caribbean with the support of CERMES to facilitate effective conservation and management of biodiversity within Protected Areas, to provide the best available protected area data for decision making, small technical grants. The Digital Observatory for Protected Areas (DOPA) is the main technical platform. This GeoNode is part of the RRIS and functions as a data repository (maps, reports, data, and other information) for biodiversity and protected areas. The core development is done by the Joint Research Centre (JRC) of the European Commission. The use Yammer, the social networking service which allows communications within and among the BIOPAMA community. Yammer facilitates the creation of user groups, bringing persons together virtually, to facilitate quicker sharing of ideas, updates and documents and allows for greater engagement of persons.

- ✓ Fisheries and Resource Monitoring System (FIRMS) is the FAO platform to provide access to a wide range of high-quality information on the global monitoring and management of fishery marine resources. They have developed a Stocks and fisheries map viewer, with the Wider Caribbean Region being identified as the region 31.

- ✓ Caribbean Regional Fisheries Mechanism (CRFM data portal) contains data, information and knowledge products generated by major CRFM projects and activities that would be of interest to all Caribbean fisheries and ocean stakeholders, including: Climate-Smart Fisheries and Flyingfish Management among others.

- ✓ Organización del Sector Pesquero y Acuícola del Istmo Centroamericano (OSPESCA) containing the Integrated System of Statistics across its eight member states.

Additional information on the kind of subregional coverage of monitoring programmes aimed at collecting data on ecosystem/habitat, and key species and other data portals is presented in Annex 2. That annex also includes information on MPA management networks and its subregional coverage, form which the following can be mentioned in greater detail:

- ✓ Protected Planet: is the World Database on Protected Areas (WDPA), World Database on OECMs, Global Database on Protected Area Management Effectiveness (GD-PAME), and a wealth of associated information. UNEP-WCMC releases the Protected Planet Report on the status of the world's protected areas and recommendations on how to meet international goals and targets. Information is updated monthly with submissions from governments, non-governmental organizations, landowners, and communities.

- ✓ Marine Protection Atlas : Marine Conservation Institute hosts this complimentary dataset that uses the WDPA as a starting point, and builds upon their data by conducting independent, third-party research and assessing MPAs and MPA zones using science-based assessments. These assessments allow to systematically categorize MPAs by stage of establishment and protection level, two metrics that help us estimate expected conservation outcomes.

- ✓ UN Biodiversity Lab: this portal generated by UNDP, UNEP and its specialist biodiversity centre UNEP-WCMC, and the CBD Secretariat provides access to global spatial data to generate insight and impact for conservation and sustainable development, aimed at: (1) to democratize access to spatial data and analytic tools as a global public good; (2) to support decision-makers to leverage spatial data for insight, priority-setting, and implementation; and (3) to empower stakeholders to use spatial data for monitoring and reporting.

- ✓ Caribbean Marine Atlas (CMA): is an online digital platform that stores and provides access to geospatial information (and related documents) on the Marine Environment and Human Societies in the Wider Caribbean Region. A tool to assist community building and collaboration in the region. resources will be identified.

- ✓ CaMPAM MPAs in the Caribbean: is the 2019 updated CaMPAM MPA database containing information for more than 1000 MPAs across the WCR.

- ✓ The Dutch Caribbean Nature Alliance (DCNA) is a regional partnership of conservation organisations, including the following non-profit organizations: The Aruba National Park Foundation (FPNA), Stichting Nationale Parken Bonaire (STINAPA Bonaire), Caribbean Research and Management of Biodiversity (CARMABI), Saba Conservation Foundation, St. Eustatius National Parks Foundation (STENAPA), The Nature Foundation St. Maarten. It was created to support and assist efforts of Park Management Organizations to secure sustainable sources of funding for nature conservation, promote and facilitate permanent dialogue, knowledge exchange, training and cooperation between the Park Management Organizations and to strengthen their nature management activities, and assist Park Management Organization with representation and advocacy, provide online access to information on biodiversity and conservation management and encourage information exchange and promote educational outreach and public awareness.

- ✓ MPA Connect is a partnership initiated in 2010 between the Gulf and Caribbean Fisheries Institute (GCFI) and the NOAA Coral Reef Conservation Program that connects MPA managers and professionals in the Caribbean to increase the effectiveness of MPA management by addressing specific capacity needs of individual MPAs through a variety of means, including regional peer to peer workshops, site-specific technical support, learning exchanges and direct grant funding. The network comprises 32 MPAs from 11 countries and territories in the Wider Caribbean region facilitating management priority needs identified by managers through the assessment process based on detailed assessments made in 2011 and revisited in 2017 and a series of regional workshops for peer-to-peer learning.

- ✓ Corredor Biologico del Caribe initiated in 2007 as an innovative way of promoting conservation and sustainable development allowing coral reef, mangroves, dry forest and xerophytic vegetation habitats and ecosystems connectivity in Cuba, Haiti, Republica Dominicana and extended to Puerto Rico (Jamaica is an observer). This participative conservation strategy integrates governments, communities, academia, civil society, and international cooperation agencies within the framework of a development model in harmony with nature. They are working on selected species with a strong gender component and community participation. In this way the sharing of knowledge and education and research and education coordination is achieved in the short term, and harmonized policies, monitoring and management expected in the longer term. They have a formal adopted strategic plan and are planning to establish working groups.

- ✓ Caribbean Natural Resource Institute (CANARI) is a partnership established in 2001 to promote and facilitate stakeholder participation and collaboration with focus on research, policy influence, advocacy and capacity building towards sustainable livelihoods and participatory decision making and management of the region's natural resources. CANARI actively works to facilitate regional networking and Caribbean-wide programs and projects. They have developed a knowledge hub to connect people and organizations with an interest in, and information on, various themes related to Caribbean sustainable development, natural resource governance and management.

- ✓ Global Island Partnerships are multi-stakeholder initiatives voluntarily undertaken by Governments, intergovernmental organizations, major groups and others stakeholders, which efforts are contributing to the implementation of inter-governmentally agreed development goals and commitments, as included in Agenda 21, the Johannesburg Plan of Implementation, the Millennium Declaration, the outcome document of the United Nations Conference on Sustainable Development (Rio+20) entitled "The Future We Want", the Third International Conference on Small island Developing States, and the 2030 Agenda for Sustainable Development.

- ✓ They maintain a SDG Online Platform with the purpose of monitoring progress of existing or new partnerships for the sustainable development of SIDS, including Small Island Developing States (SIDS) Partnership Framework. This initiative look for the development of partnership dialogues and provide opportunities to relevant stakeholders to: a) assess the status of partnerships for each SIDS region, identifying best practices and gaps around which new partnerships could be forged to further drive implementation of Samoa Pathway priority areas and SDGs in SIDS; b) raise the capacity of diverse stakeholders to develop genuine and durable partnerships for SIDS; and c) strengthen the review and monitoring process of SIDS partnerships.

- ✓ The CLME+ Hub is a regional, collaborative platform that provide access to information, knowledge, resources, and tools to support all people and organizations working towards a healthier marine environment in the Caribbean and North Brazil Shelf Large Marine Ecosystems. It includes tools for a documents library, projects database, experts database, training portal and a Strategic Action Plan tracking, among others.

The vast number of national / subregional / regional / global monitoring initiatives along with the increasing number in data portals interconnecting MPAs / MMAs illustrate the need for significantly improving coordination and collaboration towards achieving functional connectivity and management effectiveness in the WCR.

5. High-level decisions for implementing recommendations

The first high level decision is related to the approval of the main recommendations that would guide the overall associated planning processes and activities. In his report, Kiene (2021) analysed the ecological networking among SPAW MPAs listed sites in the Wider Caribbean Region and proposed a set of 5 different specific recommendations. With this work those recommendations were simplified and restructured (Figure 5), thus resulting in the following four recommendations:

- ✓ Recommendation 1**:** Improve regional marine conservation efficiency by developing /expanding **network relationships among marine protected areas** across the Wider Caribbean Region and beyond while enhancing linkages at sub-regional level.

- ✓ Recommendation 2: Facilitate the process of **filling gaps** for **improved habitats and species inventories** among SPAW listed sites and other marine managed areas across the WCR to better determine key ecosystems / key species status and trends.

- ✓ Recommendation 3: Promote the effective use of **scientific and monitoring information** to **better evaluate ecosystem / key species condition, trends, and connectivity patterns** among WCR Marine Managed Areas towards consistent regional management responses to counteract increasing threats and to build resilience to climate change.
- ✓ Recommendation 4: Reinforce **regional communication and community outreach mechanisms** in support for better connectivity and accomplishment of conservation targets and goals.

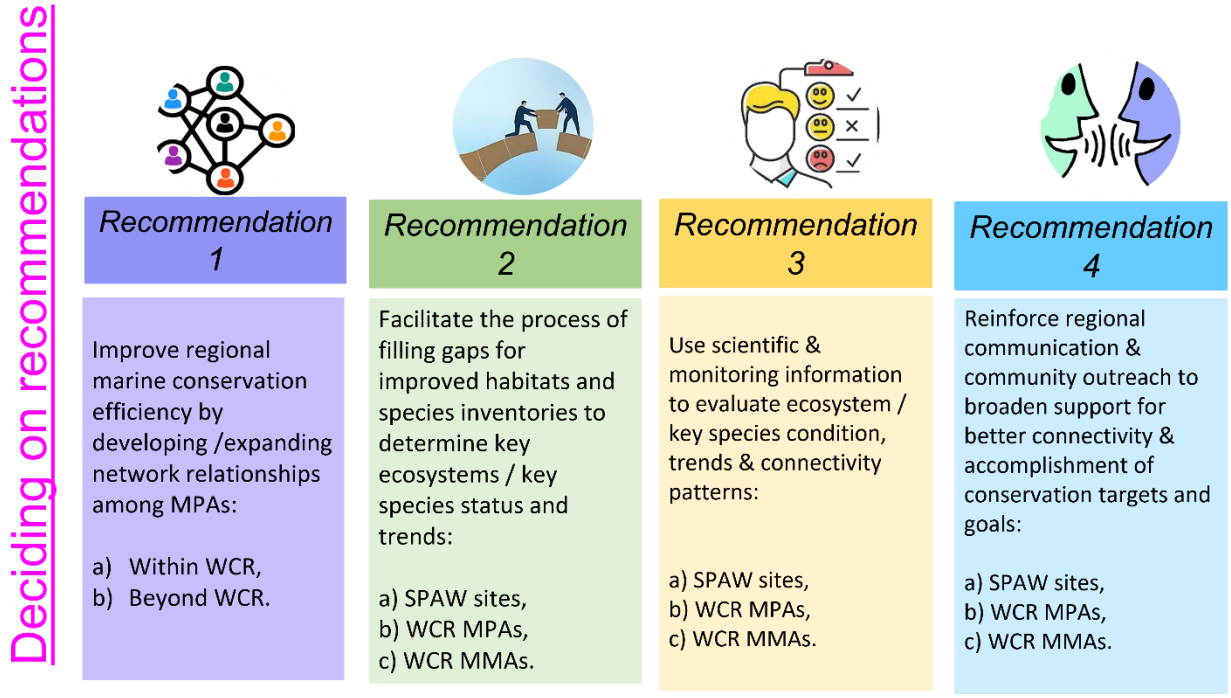

Figure 5. Restructured recommendations for high-level decisions aimed to increase MPA connectivity in the WCR

The second level decisions are associated with the Desired outcomes which are detailed in Tables 3-6. These decisions are expected to be taken once a decision on recommendations have been made.

In addition, a series of low-level implementation options have been drafted, which can be the basis for moving this planning process forward (Annex 5). The lower-level decisions would need that high-level decisions are taken and at this point in time may not be the priority.

Table 3. Options for implementing desired outcomes for Recommendation 1, about developing /expanding network relationships among MPAs.

Outcome	Options	Advantages	Limitations
1A. Improved MPA management by increasing **coordination and linkages** with existing partnerships working at **subregional level.**	**1**. SPAW-RAC / CEP Secretariat is leading the coordination process starting with activities within SPAW listed sites.	Enhance ownership, relies on existing structures, illustrates SPAW benefits.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.
	2. CaMPAM Coordination Unit is leading the coordination process starting with activities within SPAW listed sites.	CaMPAM could become the centre of coordination for marine conservation at multiscale and multicultural levels.	Demands good strategies to secure effectiveness, representativeness, and equitability.
	3. An alternative Partnership is selected among SPAW Parties to lead the coordination process starting with activities within SPAW listed sites.	Facilitate integration with existing partnerships and construction of common goals.	Potential reduction in regional coverage and possible loss of visibility and branding of CAMPAM which is well respected and understood.
1B. Strengthen MPA management by **expanding coordination** across WCR **Sustainable Resource Use partnerships** in response to complex ecosystem connectivity and across management strategies.	**1**. SPAW-RAC / CEP Secretariat is authorised to sign [formal] / [informal] agreements between MPA and Sustainable Resource Use networks.	Enhance ownership, relies on existing structures, illustrates SPAW benefits, while need to progressively integrate other than conservation initiatives.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.
	2. CaMPAM is authorised to sign [formal] / [informal] agreements between MPA and Sustainable Resource Use networks.	Generate ownership and facilitate coordination with areas under a variety set of management regimes.	It may require special legal framework.
	3. An alternative Partnership is selected among SPAW Parties and authorised to sign [formal] / [informal] agreements between MPA and Sustainable Resource Use networks.	Facilitate integration with existing partnerships and construction of common goals.	Potential reduction in regional coverage and possible loss of visibility and branding of CAMPAM which is well respected and understood. It may require special legal framework.

Outcome	Options	Advantages	Limitations
1C. Increased funding towards more effective regional MPA coordination and networking	**1**. SPAW-RAC / CEP Secretariat secured matching funds facilitating SPAW-listed sites executing MPA planning of activities	Enhance ownership, relies on existing structures, illustrates SPAW benefits.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.
	2. CaMPAM Coordination Unit secured matching funds facilitating SPAW-listed sites executing MPA planning of activities.	Will enable dedicated focus and facilitate consultation process on different scales.	Requires new governance structure and new resources including staffing to coordinate.
	3. An alternative Partnership secured matching funds facilitating SPAW-listed sites executing MPA planning of activities.	Speed-up collaborative work towards sharing responsibilities or finding funds to MPA management.	Depending on the source, funding may be limited to some countries / activities.

Table 4. Options for implementing desired outcomes for Recommendation 2, about Facilitating the process of filling gaps for improved habitats and species inventories.

Outcome	Options	Advantages	Limitations
2A. Build on existing ecosystems / species Marine Managed Areas **inventories / monitoring at national/ subregional level and generate protocols for sharing information**.	**1**. SPAW focal points generated revised / updated national /subregional databases on ecosystem / key species inventories from SPAW MPA listed sites and facilitate sharing data.	Support existing initiatives at national levels while promote subregional cooperation and coordination.	It may demand additional human, technological or financial resources.
	2. SPAW-RAC / CEP Secretariat are coordinating with SPAW Focal Points to update national / subregional databases from SPAW MPA listed sites and facilitate sharing data.	Promote data integration for stronger evaluations, can facilitate elucidation of connectivity patterns and trends.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.

Outcome	Options	Advantages	Limitations
	3. SPAW Focal Points agreed to collaborate with CaMPAM or other Partnership to improve their databases from SPAW MPA listed sites and facilitate sharing data.	Strong initiative to better understand complex subregional / regional dynamics.	It may require political commitments and special legal framework, and it may demand additional human, technological or financial resources.
2B. Beginning subregional / regional evaluation of key ecosystems / species to determine status and trends using data from monitoring in place and following a participative approach.	**1**. SPAW-RAC / CEP Secretariat are coordinating with SPAW Focal Points to conduct necessary analysis and evaluations.	Strong initiative to better understand complex subregional / regional dynamics towards consistent management responses.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.
	2. SPAW Focal Points agreed to collaborate with CaMPAM or other Partnership to conduct necessary analysis and evaluations.	Allows for in depth analysis and better recommendations towards consistent management responses.	Requires new governance structure and new resources including staffing to coordinate.
	3. A group of consultants / partnerships are hired to conduct necessary analysis and evaluations.	Do not represent a direct work overload to MPA managers.	It may demand additional human, technological or financial resources.
2C. Updated / assembled subregional / regional **monitoring programmes and data portals on MPAs ecosystem / key species** to facilitate evaluations.	**1**. SPAW focal points are responsible to assemblage monitoring protocols & data portals.	Support existing initiatives at national levels while promote subregional cooperation and coordination.	It may demand additional human, technological or financial resources.
	2. SPAW-RAC / CEP Secretariat are coordinating with SPAW Focal Points to assemblage monitoring protocols & data portals.	Promote data integration for stronger evaluations, can facilitate elucidation of connectivity patterns and trends.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.

Outcome	Options	Advantages	Limitations
Data Portals remain free of access.	**3**. SPAW Focal Points agreed to collaborate with CaMPAM or other Partnership to assemblage monitoring protocols & data portals.	Strong initiative to better understand complex subregional / regional dynamics.	It may require political commitments and special legal framework, and it may demand additional human, technological or financial resources.

Table 5. Options for implementing desired outcomes for Recommendation 3, about Effective use of scientific and monitoring information to better evaluate ecosystem / key species.

Outcome	Options	Advantages	Limitations
3A. Progressive implementation of a strategy to assess the **functionality of corridors / barriers** across the WCR **using revised / updated monitoring and scientific information. Technical** recommendations are provided to SPAW Focal Points.	**1**. SPAW-RAC and SPAW Working Groups are responsible for progressively implementing MPA assessments within SPAW listed sites as expected.	Strong initiative to better understand complex subregional / regional dynamics. It would increase MPA governance in general.	It may require political commitments and special legal framework, and it may demand additional human, technological or financial resources.
	2. CaMPAM Coordination Unit supported by SPAW Working Groups are responsible for progressively implementing MPA assessments within SPAW listed sites as expected.	Support existing initiatives at national levels while promote subregional cooperation and coordination.	It may demand additional human, technological or financial resources.
	3. CaMPAM Coordination Unit in association with selected MPA practitioners are responsible for progressively implementing MPA assessments within SPAW listed sites as expected.	It would facilitate understanding of complex process at different levels, and perhaps facilitate the implementation of technical recommendations.	It may demand additional human, technological or financial resources.

Outcome	Options	Advantages	Limitations
3B. Increased coordination and functionality with existing pluricultural and multidisciplinary group of experts in data analysis/ evaluation and verifying the use of proper language in technical reports to policy makers.	**1**. SPAW-RAC / WGs has strengthened its work among existing group of experts in data analysis/ evaluation.	Support existing initiatives at national levels while promote subregional cooperation and coordination with experts.	It may require political commitments and special legal framework, and it may demand additional human, technological or financial resources.
	2. CaMPAM Coordination Unit has strengthened its work among existing group of experts in data analysis/ evaluation.	Allow integration of ongoing initiatives and the planning of consistent MPA management responses. It promotes ownership.	It may demand additional human, technological or financial resources.
	3. A selected partnership has agreed to strengthen its work among existing group of experts in data analysis/ evaluation.	Allow integration of ongoing initiatives and the planning of consistent MPA management responses. It could speed-up collaborative work towards sharing responsibilities or finding funds to MPA management.	Depending on the source, funding may be limited to some countries / activities.

Table 6. Options for implementing desired outcomes for Recommendation 4, Reinforce regional communication & community outreach to broaden support for better connectivity & accomplishment of conservation targets and goals.

Outcome	Options	Advantages	Limitations
4A. Promoted **community support** in regional conservation initiatives by **diversifying**	**1**. SPAW-RAC / CEP Secretariat / CETA are coordinating with subregional / regional partnerships the implementation of community outreach as expected.	Can utilize available expertise and digital platforms; It could further utilize existing mechanisms for creating needed applications in several languages. It can facilitate the	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.

Outcome	Options	Advantages	Limitations
communication and outreach strategies and disseminating **inclusive, respectful, and clear messages** about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites**.**		linkages among the Cartagena Convention Protocols.	
	2. CaMPAM Coordination Unit is coordinating with subregional / regional partnerships the implementation of community outreach as expected.	Can prioritise communication strategies while at the same time make linkages with several networks in an effectiveness way. Overall public engagement in marine conservation at the regional level could be enhanced through coordination and cooperation.	It requires a dedicated budget allocation.
	3. An alternative Partnership is selected to coordinate with subregional / regional partnerships the implementation of community outreach as expected.	Can integrate existing communication strategies in place.	Depending on the source, funding may be limited to some countries / activities.
4B. Promoted community groups **subregional / regional capacity building programmes aimed to understand natural dynamics and network connectivity.**	**1**. SPAW-RAC/ CEP Secretariat / CETA are coordinating with subregional / regional partnerships to facilitate SPAW listed Sites community groups participation in capacity building programmes.	Can utilize strong educational tools and training platforms developed though the UN system in different languages. It would enhance cooperation among SPAW Parties.	It may place additional workload on Secretariat, SPAW RAC and WGs and likely require adjustments of work plan, priorities, and budgets.
	2. CaMPAM Coordination Unit are coordinating with subregional / regional partnerships to facilitate SPAW listed Sites community groups	Can develop special educational tools and training platforms aimed to train MPA practitioners. It can give continuity to expand	It could be difficult to secure equal participation across SPAW sites. Depending on the selected countries additional efforts may be needed to

Outcome	Options	Advantages	Limitations
	participation in capacity building programmes.	national initiatives and could serve as a liaison at subregional level.	deal with different languages or cultures.
	3. A selected Partnership is coordinating to facilitate MPA community groups in capacity building programmes at subregional / regional level.	It could speed-up collaborative work towards regional / subregional capacity building programmes.	There are possible limitations to secure equal participation across MPA sites.

6. Final considerations

Given the variety of aspects to be considered, the region's complex characteristics and dynamics and the increasing impacts on the ecosystem health, the maintenance / recovery of coastal and marine resources under conservation regimes should be an urgent matter to MPA managers. To facilitate this process, again significant improvement in coordination and cooperation is highlighted, and a renovated CaMPAM Network can also have a role to play, leading efforts towards better MPA connectivity. To accomplish expected goals, CaMPAM definitively will require the active support and involvement from different Partnerships and Networks extending its work on MPA management to MMA management, conducing to the effective implementation of the EBM concepts. Consistent responses need to be based on technical recommendations obtained from both bottom-up and top-down approaches, allowing proper data for integration.

The consultant preferred options can be summarized as follow:

a. CaMPAM Coordination Unit is leading the coordination process starting with activities within SPAW listed sites (Option1A-2), thus it is authorized to sign [formal] / [informal] agreements with MPA and Sustainable Resource Use networks (Option (1B-2); and can secure matching funds initially in support to effective management of SPAW-listed sites (Option 1C-2).
b. SPAW Focal Points agreed to collaborate with CaMPAM to initially improve databases from SPAW MPA listed sites and facilitate sharing data (Option 2A-3); to conduct monitoring analysis and evaluations (Option 2B-2); and to assemblage consistent monitoring protocols & data portals (Option 2C-3).
c. CaMPAM Coordination Unit supported by SPAW Working Groups are responsible for progressively implementing MPA assessments within SPAW listed sites as expected (Option 3A-2); and together can strengthen data analysis/ evaluation to guide MPA effective management (Option 3B-2).
d. Under CaMPAM leadership and improved connectivity among subregional / regional partnerships the public engagement and support for MPA implementation is increased because of successful communication and outreach programmes (Option 4A-2); and increased participation in capacity building activities (Option 4B-2).

The need for securing a bottom-up approach implies a series of consultations at subregional and regional levels, as well bilateral ones with key partners and stakeholders (users' groups, resource managers, and scientists among others), thus the associated budget remains equal for both basic and ideal level of operation.

Next steps would need to secure PA WG final endorsement through stronger consultation that would first focus first on high level decisions following adaptive planning process.

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8. Acknowledgements

I like to express my sincere appreciation for the great support received during the development of this consultancy, specially to:

- ✓ Members of the SPAW Protected Areas Working Group,
- ✓ Sarah Wollring, Tamoy Singh and Christopher Corbin from the Cartagena Convention Secretariat,
- ✓ Christophe Blazy, Géraldine Conruyt and Sandrine Pivard from SPAW-RAC,
- ✓ Alessandra Vanzella-Khouri, Monica Borobia, and Ileana Lopez, former UNEP-CEP SPAW Program Officers,
- ✓ Georgina Bustamante, former CaMPAM coordinator,
- ✓ William Kiene, consultant

Funding was provided through the ACP MEA3 Project

ANNEX 1. List of PAWG members consulted through the development of the assignment

Name	Organisation
Adriel Castaneda	Belize Ministry of Forestry
Alicia Nunez	Belize Ministry of Forestry
Ana Maria Gonzalez	Ministry of environment, Colombia
Nacor Bolaños-Cubillos	Coralina, Colombia
Aylem Hernández Ávila	Cuba
Augusto Martínez	Cuba
Juan Luis Gonzalez	Government of Dominica
Ricardo Rodriguez	Ministry of environment, Dominican Republic
Cyrille Barnerias	French biodiversity agency, France
Sophie Bedel	Parc National Guadeloupe, France
Tadzio Bervoets	Dutch Caribbean Nature Alliance (DCNA)
Sietske van der Wal	Fundacion Parke Nacional Aruba (FPNA)
Lcda. Digna Barsallo	Ministry of environment, Panama
Marino Eugenio Abrego	Ministry of environment, Panama
Gonzalo Cid	NOAA MPA Center, US
Samantha Dowdell	NOAA Office of International Affairs, US
Emma Doyle	MPA Connect - GCFI
Lloyd Gardner	Foundation for Development Planning, Inc.

ANNEX 2. Examples of ecosystem / species monitoring partnerships by subregions in the Wider Caribbean Region

No.	***Ecosystem***	***Single / group species***	***Partnership***	***Greater Antilles***	***Southern Caribbean (West, south, east)***	***Eastern Caribbean (East, Bahamian)***	***Gulf & Florida North, south)***	***Guianan***
1	Mangroves Beaches estuarine	Mangroves (4 SPAW listed species)	SIAM		xxxx			
			MAP		xxxx			xxxx
			SI Marine Conservation		xxxx			
			WWF-Guianas					xxxx
2	Wetlands Beaches Pelagic	Sea birds (3 SPAW listed species)	CWC/IWC	xxxx	xxxx	xxxx	xxxx	
			Audubon	xxxx	xxxx	xxxx		
			Bird Life International	xxxx	xxxx	xxxx	xxxx	
3	Wetlands Beaches Pelagic	Sea turtles (4 SPAW listed species)	WIDECAST	xxxx	xxxx	xxxx		xxxx
			IAC	xxxx	xxxx	xxxx	xxxx	xxxx
			Healthy Reefs		xxxx			
4	Coral reefs	Corals (4 SPAW listed species)	AGRRA	xxxx	xxxx	xxxx	xxxx	
			Healthy Reefs		xxxx			
			GCRMN / ICRI		xxxx	xxxx	xxxx	
			NCRMP	xxxx		xxxx	xxxx	
			NMS	xxxx		xxxx	xxxx	
			SIAM		xxxx			
			TNC-Caribbean Science Atlas	xxxx		xxxx	xxxx	
			Allen Coral Atlas	xxxx	xxxx	xxxx	xxxx	
			Caribbean Marine Atlas	xxxx	xxxx	xxxx	xxxx	
			MAR-RRN		xxxx			
			CCMI		xxxx			
			Global Coral Reef Alliance	xxxx	xxxx	xxxx		
			Coral Restoration Consortium	xxxx	xxxx	xxxx	xxxx	

No.	*Ecosystem*	*Single / group species*	*Partnership*	*Greater Antilles*	*Southern Caribbean (West, south, east)*	*Eastern Caribbean (East, Bahamian)*	*Gulf & Florida North, south)*	*Guianan*
5	Coral reefs unconsolidated sediments	Queen Conch (1 SPAW listed species)	OSPESCA	xxxx	xxxx			
			AGRRA	xxxx	xxxx	xxxx	xxxx	
			CRFM			xxxx		
			Regional Joint Working Group on Queen Conch	xxxx	xxxx	xxxx	xxxx	
			Healthy Reefs		xxxx			
			NCRMP	xxxx		xxxx	xxxx	
			CITES	xxxx	xxxx	xxxx	xxxx	xxxx
6	Coral reefs unconsolidated sediments	Spiny lobster (1 SPAW listed species)	OSPESCA	xxxx	xxxx			
			CRFM			xxxx		
			Regional Joint Working Group on Spiny Lobster	xxxx	xxxx	xxxx	xxxx	xxxx
			AGRRA	xxxx	xxxx	xxxx	xxxx	
			NCRMP	xxxx		xxxx	xxxx	
			SI Marine Conservation		xxxx			
7	Coral reefs Pelagic	Nassau grouper (1 SPAW listed species)	AGRRA	xxxx	xxxx	xxxx	xxxx	
			NCRMP	xxxx		xxxx	xxxx	
			MarFish		xxxx			
			Regional Joint Working Group on Spawning Aggregations	xxxx	xxxx	xxxx	xxxx	xxxx
8	Coral reefs Pelagic	Marine mammals / (32 SPAW listed species)	CARI'MAM			xxxx		xxxx
			Flukebook	xxxx	xxxx	xxxx	xxxx	xxxx
			NAHWC	xxxx	xxxx	xxxx	xxxx	xxxx
			RCV		xxxx	xxxx		
			Regional Manatee Working Group		xxxx			

No.	*Ecosystem*	*Single / group species*	*Partnership*	*Greater Antilles*	*Southern Caribbean (West, south, east)*	*Eastern Caribbean (East, Bahamian)*	*Gulf & Florida North, south)*	*Guianan*
9	Pelagic and coastal	Sargasso	SAMTool	xxxx	xxxx	xxxx	xxxx	xxxx
			Floating algae index Sargasso	xxxx		xxxx		
			AOML/NOAA Sargassum tracker	xxxx	xxxx	xxxx	xxxx	xxxx
			Sargasso monitoring	xxxx	xxxx	xxxx	xxxx	xxxx
			Sargadapt			xxxx		
10	Coastal, pelagic, deep environments	Invasive species	Invasive Lionfish Web Portal	xxxx	xxxx	xxxx	xxxx	xxxx
			Non-indigenous aquatic species (US Geological Survey)				xxxx	
			AGRRA	xxxx	xxxx	xxxx	xxxx	
			NCRMP	xxxx		xxxx	xxxx	
11	Coastal communities	Coastal communities	SocMon / ICRI	xxxx	xxxx	xxxx	xxxx	xxxx
			Healthy Reefs		xxxx			
			OECS-Community Resilience			xxxx		
12	MPA management	MPA management	Protected Planet	xxxx	xxxx	xxxx	xxxx	xxxx
			Marine Protection Atlas	xxxx	xxxx	xxxx	xxxx	xxxx
			UN Biodiversity Lab	xxxx	xxxx	xxxx	xxxx	xxxx
			CMA	xxxx	xxxx	xxxx	xxxx	xxxx
			CaMPAM MPAs in the Caribbean	xxxx	xxxx	xxxx	xxxx	xxxx
			DCNA		xxxx	xxxx		
			MPA Connect		xxxx	xxxx	xxxx	
			Corredor Biologico del Caribe	xxxx				

			CANARI			xxxx		
			RedGolfo	xxxx			xxxx	
			NAMPAM	xxxx			xxxx	
			IUCN - Biopama - Caribbean	xxxx		xxxx		
			Connectivity Network Working Group		xxxx			
			OLACEFS		xxxx	xxxx		xxxx

ANNEX 3. Options to consider for implementing recommendations at low-level decisions.

The following Tables (1- 4) present succinct descriptions of proposed options aimed to advance implementation of the three recommendations for expanding / reactivating CaMPAM effectiveness. These detailed alternatives provide continuity to the high-level decisions described above, while also call to follow a bottom-up approach. To maximise opportunities for developing a participative and adaptive planning approach, these tables emphasise short-term (2 years) options, while also identifying mid-term (5 years) and long-term (10-years) in more general terms.

Table 1. Options for implementing Recommendation 1 about expanding network relationships among MPAs in the Wider Caribbean Region

Recommendation 1**:** Improve regional marine conservation efficiency by **developing /expanding network** relationships among MPAs.			
Desired target 1.a. Improved **coordination and increased linkages** with existing **subregional partnerships** working at subregional level.			
Options	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC / CEP Secretariat is responsible for enabling conditions towards active cooperation among existing subregional partnerships[4] aimed to improve MPA management within SPAW listed sites. That could include the development of a common communication platform, a participative partnership planning, and agreements for short term collaborative initiatives, among others.	SPAW-RAC / CEP Secretariat have developed a 5-years collaborative action plan identifying priorities and implementation strategies with the participation of subregional partnerships aimed to secure collaboration among MPA managers from SPAW listed sites. It has initiated linkages with MPA managers form other marine managed areas across the WCR. The need for a more formal governance architecture and processes have been decided.	SPAW-RAC / CEP Secretariat have developed and adopted a 10-years strategic and collaborative work programme with partnerships aimed to improve WCR marine conservation efforts. It has secured coordination with additional Marine Managed Areas partnerships working beyond the WCR.
2	CaMPAM Transitional Coordination Unit is responsible for enabling conditions towards active cooperation among existing subregional partnerships[4] aimed to improve MPA management within SPAW listed sites. That	CaMPAM Coordination Unit has developed a 5-years collaborative action plan identifying priorities and implementation strategies with the participation of subregional partnerships aimed to secure collaboration among MPA	CaMPAM Coordination Unit has developed and adopted a 10-years strategic and collaborative work programme with partnerships aimed to improve WCR marine conservation efforts. It has secured coordination with

[4] Examples of subregional partnerships working in MPA management in the Wider Caribbean Region include The Dutch Caribbean Nature Alliance, Healthy Reefs Initiative, Caribbean Biological Corridor Initiative, RedGolfo, MPA Connect, IUCN - Biopama - Caribbean.

	could include the restructuring / development of a common communication platform, a participative partnership planning, and agreements for short term collaborative initiatives, among others.	managers from SPAW listed sites. It has initiated linkages with MPA managers form other marine managed areas across the WCR. The need for a more formal governance architecture and processes have been decided.	additional Marine Managed Areas partnerships working beyond the WCR.
3	CEP Secretariat / CETA is responsible for enabling conditions towards active cooperation among existing subregional partnerships[4] aimed to improve MPA management within SPAW listed sites. That could include the development of a common communication platform, a participative partnership planning, and agreements for short term collaborative initiatives, among others.	CEP Secretariat / CETA has developed a 5-years collaborative action plan identifying priorities and implementation strategies with the participation of subregional partnerships aimed to secure collaboration among MPA managers from SPAW listed sites. It has initiated linkages with MPA managers form other marine managed areas across the WCR. The need for a more formal governance architecture and processes have been decided.	CEP Secretariat / CETA) has developed and adopted a 10-years strategic and collaborative work programme with partnerships aimed to improve WCR marine conservation efforts. It has secured coordination with additional Marine Managed Areas partnerships working beyond the WCR.
4	An agreement with an external organization[5] has been established. This organization is now responsible for enabling conditions towards active cooperation among existing subregional partnerships[4] aimed to improve MPA management within SPAW listed sites. That could include the development of a common communication platform, a participative partnership planning, and agreements for short term collaborative initiatives, among others.	The selected external organization has developed a 5-years collaborative action plan identifying priorities and implementation strategies with the participation of subregional partnerships aimed to secure collaboration among MPA managers from SPAW listed sites. It has initiated linkages with MPA managers form other marine managed areas across the WCR. The need for a more formal governance architecture and processes have been decided.	The selected external organization has developed and adopted a 10-years strategic and collaborative work programme with partnerships aimed to improve WCR marine conservation efforts. It has secured coordination with additional Marine Managed Areas partnerships working beyond the WCR.
Desired target 1.b**.** Strengthen MPA management by **expanding coordination** across WCR **Sustainable Resource Use partnerships** in response to complex ecosystem connectivity and across management strategies.			
Options	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC / CEP Secretariat reached [formal] / [informal] agreements between MPA and	SPAW-RAC / CEP Secretariat identified and secured agreements with sustainable resource us	SPAW-RAC / CEP Secretariat secured additional support from Sustainable Resource Use

[5] An external organization is a partnership outside of the SPAW Protocol Bodies, including existing subregional or regional partnerships, non-for-Profit Organizations, or regional institutes with similar objectives.

	Sustainable Resource Use[6] Working Groups to establish the degree of collaboration and information sharing focused on coordination protocols for mutually accepted alliances.	partnerships to improve collaboration in at least three main topics regarding ecosystems/ species or group of species[7] in the medium term. Communication and sharing resources and information protocols have been mutually accepted.	Networks in accomplishing the objectives and goals stated in the 10-years strategic work programme mentioned above. At least five main topics regarding ecosystems/ species or group of species[7], communication and sharing resources and information protocols have been mutually accepted.
2	CaMPAM Transitional Coordination Unit reached [formal] / [informal] agreements between MPA and Sustainable Resource use[6] Working Groups to establish the degree of collaboration and information sharing focused on coordination protocols for mutually accepted alliances.	CaMPAM Coordination Unit has identified and secured agreements with Sustainable Resource Use Networks to improve collaboration in at least three main topics regarding ecosystems/ species or group of species[7] in the medium term. Communication and sharing resources and information protocols have been mutually accepted.	CaMPAM Coordination Unit has secured additional support from Sustainable Resource Use Networks in accomplishing the objectives and goals stated in the 10-years strategic work programme mentioned above. At least five main topics regarding ecosystems/ species or group of species[7], communication and sharing resources and information protocols have been mutually accepted.
3	CEP Secretariat / CETA reached [formal] / [informal] agreements between MPA and Sustainable Resource Use[6] Working Groups to establish the degree of collaboration and information sharing focused on coordination protocols for mutually accepted alliances.	CEP Secretariat / CETA identified and secured agreements with sustainable resource us partnerships to improve collaboration in at least three main topics regarding ecosystems/ species or group of species[7] in the medium term. Communication and sharing resources and information protocols have been mutually accepted.	CEP Secretariat / CETA secured additional support from Sustainable Resource Use Networks in accomplishing the objectives and goals stated in the 10-years strategic work programme mentioned above. At least five main topics regarding ecosystems/ species or group of species[7], communication and sharing resources and information protocols have been mutually accepted.
Desired target 1c**. Increased funding towards more effective regional MPA coordination and networking.**			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC / /CEP Secretariat / CETA provided matching funds to strengthen coordination and the	SPAW-RAC / CEP Secretariat / CETA provided matching funds to strengthen mid-term collaboration	SPAW-RAC/ CEP Secretariat / CETA provided matching funds to continue strengthening

[6] A sustainable resource use network refers to a variety of networks working on a variety of topics including fisheries management, Tourism, or pollution control among other topics aimed to apply Ecosystem Based Management concepts and tools.

[7] Annex 2 describe the partnerships collecting information on ecosystems / key species at subregional / regional level that could be considered when choosing those more effective to be assessed.

	development of agreed short-term initiatives (determined in target 1a).	among marine managed areas networks for the agreed three main topics as mentioned above.	collaboration and to develop the 10-year strategic work programme mentioned above. The plan includes a multiyear budget and strategies looking at funding diversification. The degree of plan implementation is biannually evaluated.
2	Supported by SPAW formal bodies, CaMPAM Transitional Coordination Unit secured matching funds (through short-term proposals/donations) aimed at facilitating the participation of managers from SPAW-listed MPAs in existing alliances, initiatives and activities that are relevant to connectivity.	CaMPAM Coordination Unit has written at least three new proposals in compliance with its work plan, from which at least one has been accepted, expected to develop a 10-year action plan needed to increase MPA connectivity. The plan should estimate a multiyear budget and potential ways for funding diversification including access to trust funds.	CaMPAM Coordination Unit has written at least five new proposals in compliance with its work plan, from which at least two has been accepted, thus able to provide matching funds to continue strengthening collaboration and to develop the 10-year strategic work programme mentioned above. The plan includes a multiyear budget and strategies looking at funding diversification including access to trust funds. The degree of plan implementation is biannually evaluated.
3	An agreement with an external organization has identified in-kind resources that can be utilized to improve coordination and the agreed short-term initiatives (determined in target 1a).	An agreement with an external organization continues to foment MPA managers participation on agreed initiatives only through identified in-kind sources from MPA or Sustainable Resource Use partnerships.	An agreement with an external organization has increased the level of matching funds allocated to MPA managers to participate on agreed initiatives from MPA or Sustainable Resource Use partnerships in at least 15% compared to the previous two years.

Table 2. Options for implementing Recommendation 2 about facilitating the process of filling gaps on habitats / species inventories

Recommendation 2: Facilitate the process of **filling gaps** for improved habitats and species inventories to determine key ecosystems / key species status and trends.			
Desired target 2a**. Building on existing** ecosystems / species Marine Managed Areas **inventories / monitoring at national/ subregional level and generate protocols for sharing information**.			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW Focal Points are leading the process of revision / creation of national databases on ecosystem / key species inventories[7] from SPAW MPA listed sites. Databases are up-to-date and protocols for sharing inventories have been established.	SPAW Focal points have expanded the process of revise / creation of national databases on ecosystem / key species inventories[7] from other Caribbean MPAs. Build on existing ecosystems / species Marine Managed Areas inventories / monitoring at least at national level.	SPAW Focal points have been able to establish / strength working relationships with additional Sustainable Resource Use Networks at national level to generate comprehensive MMAs ecosystem / key species inventories[7] needed for application of EBM concepts and tools.
2	SPAW-RAC / CEP Secretariat are coordinating with SPAW Focal Points aimed to improve quality of ecosystem / species inventories[7] from SPAW MPA listed sites. Protocols for sharing inventories have been established.	SPAW-RAC /CEP Secretariat are coordinating with SPAW Focal Points to improve quality of ecosystem / species inventories[7] from other WCR MPAs. Established sharing protocols are functional at least at national level.	SPAW-RAC /CEP Secretariat are coordinating with SPAW Focal Points to establish / strength working relationships with additional Sustainable Resource Use Networks at national level to generate comprehensive MMAs ecosystem / key species inventories[7] needed for application of EBM concepts and tools.
3	SPAW Focal Points have reach agreements to collaborate with CaMPAM or an external organization[5] to improve the quality of ecosystem / species inventories[7] from SPAW MPA listed sites. Protocols for sharing inventories have been established.	SPAW Focal Points have reach agreements to collaborate with CaMPAM or an external organization[5] to improve the quality of ecosystem / species inventories[7] from WCR MPAs. Protocols for sharing inventories have been established.	SPAW Focal have reach agreements to collaborate with CaMPAM or an external organization[5] to improve the quality of ecosystem / species inventories[7] from additional Sustainable Resource Use Networks to generate comprehensive MMAs ecosystem / key species inventories needed for application of EBM concepts and tools.
Desired target 2b. Beginning subregional / regional **evaluation** of key ecosystems / species to determine **status and trends** using data from monitoring in place and following a participative approach.			

Options	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC / CEP Secretariat are supporting efforts towards improving / initiating subregional / regional evaluation of at least three ecosystem / key species[7] to determine their status and thresholds using data from monitoring in place and following a participative approach. Training workshops to MPA managers from SPAW listed sites are being conducted depending on identified subregional / regional needs. Existing technical Working Groups are providing technical recommendations.	SPAW-RAC / CEP Secretariat have coordinated expansion of subregional / regional evaluation of at least three ecosystem / key species[7] to determine their status and threshold to WCR MPAs following a participative approach. Training workshops to Marine practitioners in general are being conducted depending on identified subregional / regional needs. Existing technical Working Groups are providing technical recommendations. Special efforts to better understand subregional / regional connectivity patterns are taking place.	SPAW-RAC / CEP Secretariat have coordinated expansion evaluation of monitoring protocols and its need for adjustments (if required) for at least another three ecosystem / key species[7] from subregional / WCR MMAs. Exchange of information with other regional / global monitoring networks have been established. Training and technical recommendations have been maintained. Special efforts to better understand subregional / regional connectivity patterns are taking place continues.
2	CaMPAM transitional Coordination Unit is coordinating efforts towards improving / initiating subregional / regional evaluation of at least three ecosystem / key species[7] to determine their status and thresholds using data from monitoring in place and following a participative approach. Training workshops to MPA managers from SPAW listed sites are being conducted depending on identified subregional / regional needs.	CaMPAM Coordination Unit / CaMPAM Expert Group are expanding the subregional / regional coordination towards evaluation of at least three ecosystem / key species[7] to determine their status and threshold to WCR MPAs using data from monitoring in place and following a participative approach. Training workshops to Marine practitioners in general are being conducted depending on identified subregional / regional needs.	CaMPAM Coordination Unit /CaMPAM Expert Group are evaluating at least another three ecosystem / key species[7] subregional regional status and thresholds of MMAs. CaMPAM Coordination Unit has expanded its coordination to include evaluation of monitoring protocols and its need for adjustments (if required). Exchange of information with other regional / global monitoring networks have been established. Expansion for evaluation of at least three WCR MMAs ecosystem / key species[7] status and trends are being conducted. Training and technical recommendations have been maintained.
3	A selected Partnership is evaluating existing data from at least three ecosystem / key species[7] from SPAW listed sites at subregional / regional level to determine their status and thresholds. Resulting reports with recommendations are shared with MPA managers from SPAW listed sites.	A selected Partnership is evaluating existing data from at least three ecosystem / key species[7] from at least three ecosystem / key species[7] from other MPAs at subregional / regional level to determine their status and thresholds. Resulting reports with recommendations are shared with WCR MPAs managers.	A selected Partnership is evaluating existing data from at least another three ecosystem / key species[7] from WCR MMAs at subregional / regional level to determine their status and thresholds. Resulting reports with recommendations are shared with MMAs managers. They facilitated exchange of information with

			other regional / global monitoring networks.
Desired target 2c. **Updated / assembled** subregional / regional **monitoring programmes and data portals on MPAs ecosystem / key species** to facilitate evaluations. Data Portals remain free of access.			
Options	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC / CEP Secretariat are coordinating with existing subregional / regional monitoring programmes and data portals[8] so that they include revised / generated information on ecosystem / key species inventories[7] from SPAW listed Sites mentioned in desired target 2a. Data Portals remain free of access.	SPAW-RAC / CEP Secretariat are coordinating with existing subregional / regional monitoring programmes and data portals so that they include revised / generated information on ecosystem / key species inventories[7] from WCR MPAs mentioned in desired targe 2a. Data Portals remain free of access.	SPAW-RAC / CEP Secretariat are coordinating with additional subregional / regional monitoring programmes and data portals from Sustainable Resource Use Networks[9] so that they include revised / generated information on ecosystem / key species inventories[7] mentioned in desired targe 2a. Data Portals remain free of access.
2	SPAW-RAC /SPAW Focal Points are coordinating with existing subregional / regional monitoring programmes and data portals[8] to develop and host a new data portal for sharing ecosystem / key species inventories[7] from SPAW listed Sites mentioned in desired target 2a. Data Portals remain free of access.	SPAW-RAC / SPAW Focal Points are coordinating with existing subregional / regional monitoring programmes and data portals[8] to develop and host a new data portal for sharing ecosystem / key species inventories[7] from other Marine Managed Areas in the WCR mentioned in desired target 2a. Data portals remain free of access.	SPAW-RAC / SPAW Focal Points are coordinating with additional subregional / regional monitoring programmes and data portals[8] to update the hosted portal with information on ecosystem / key species inventories[7] from Sustainable Resource Use Partnerships mentioned in desired targe 2a. Data Portals remain free of access.
3	CaMPAM Transitional Coordination Unit is responsible for generation of linkages with subregional / regional monitoring programmes and data portals[8] so that they include revised / generated information on ecosystem / key species inventories[7] from SPAW listed Sites mentioned in desired targe 2a. Data Portals remain free of access.	CaMPAM Coordination Unit / CaMPAM Expert Group are responsible for generation linkages with subregional / regional monitoring programmes and data portals[8] so that they include revised / generated information on ecosystem / key species inventories[7] from WCR MPAs mentioned in desired targe	CaMPAM Coordination Unit / CaMPAM Expert Group are responsible for generation of linkages with additional subregional / regional monitoring programmes and data portals on Sustainable Resource Use Networks[5] so that they include revised / generated information on ecosystem / key species inventories[4] mentioned in

[8] *Examples of subregional / regional monitoring programmes and data portals on ecosystem / key species in the WCR are TNC Caribbean Science Atlas, Reef health Database for Mesoamerican Reefs, Allen Coral Atlas, CaMPAM MPA online Database, Agrra Data Explorer, Caribbean Marine Atlas, CRFM Portal, SIAM, Fishery Resources Monitoring System. MAR-RRN, WIDECAST, and IUCN - Biopama - Caribbean among others.*

[9] *Additional examples of subregional / regional monitoring programmes and data portals on Sustainable Resource Use in the WCR are OECS-Community Resilience, Connectivity Network Working Group, Fishery Resources Monitoring System, CRFM, OSPESCA, OLACEFS, Global Marine Litter, and Wider Caribbean Node among others.*

		2a. Data Portals remain free of access.	desired targe 2a. Data Portals remain free of access.
4	A selected Partnership is coordinating with existing subregional / regional monitoring programmes and data portals[8] to develop and host a new data portal for sharing ecosystem / key species inventories[7] mentioned in desired target 2a. Data from SPAW listed sites remain free of access.	A selected Partnership is responsible for generation of linkages with existing subregional / regional monitoring programmes and data portals[8] to develop and host a new data portal for sharing ecosystem / key species inventories[7] from WCR MPAs mentioned in desired target 2a. Data portals remain free of access.	A selected Partnership is responsible for generation of linkages with additional subregional / regional monitoring programmes and data portals[8] to update the hosted portal with information on ecosystem / key species inventories[7] from Sustainable Resource Use Networks mentioned in desired targe 2a. Data Portals remain free of access.

Table 3. Options for implementing Recommendation 3 about effective use of information to counteract threats and building resilience.

Recommendation 3: Use scientific & monitoring information to **evaluate ecosystem** / key species condition, trends & **connectivity patterns**.			
Desired target 3a. Progressive implementation of a strategy to assess the **functionality of corridors / barriers** across the WCR **using revised / updated monitoring and scientific information. Technical** recommendations are provided to SPAW Focal Points.			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC and SPAW Working Groups developed and begin the progressive implementation of a strategy to assess the condition, trends, and functionality of corridors / barriers for ecosystems / key species[7] within SPAW listed sites using revised / updated information mentioned in Recommendation 2. Evaluation of condition and trends are based on indicators utilized in existing report cards. At least two ecosystems / key species[7] have been assessed. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical reports with recommendations are available.	SPAW-RAC and SPAW Working Groups have completed the evaluation of condition, trends, and functionality of corridors / barriers of at least another two for ecosystems / key species[7] within SPAW listed sites. Assessments have been expanded to other WCR MPAs for comprehensive analysis of condition, trends, and functionality of corridors/barriers. Assessments are using revised / updated information mentioned in Recommendation 2. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical reports with recommendations are available.	SPAW-RAC and SPAW Working Groups have broaden their analysis to comprehensively evaluate the condition, trends, and functionality of corridors / barriers of ecosystems / key species[7] of other WCR MMAs. Assessments are using revised / updated information mentioned in Recommendation 2. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical reports with recommendations are available.
2	CaMPAM Transitional Coordination Unit supported by SPAW Working Groups developed and began the progressive implementation of a strategy to assess the condition, trends, and functionality of corridors/barriers for ecosystems / key species[7] within SPAW listed sites using revised / updated information mentioned in Recommendation 2. At least two ecosystems / key species[7] have been assessed. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical	CaMPAM Coordination / CaMPAM Expert Group in association with SPAW Working Groups have completed the evaluation of condition, trends, and functionality of corridors/barriers of at least another two for ecosystems / key species[7] within SPAW listed sites. These assessments have been expanded to other WCR MPAs. Assessments are using revised / updated information mentioned in Recommendation 2. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical	CaMPAM Coordination / CaMPAM Expert Group supported by SPAW Working Groups have broaden their analysis to comprehensively evaluate the condition, trends, and functionality of corridors/barriers of at least another two for ecosystems / key species[7] at regional / global level. Assessments are using revised / updated information mentioned in Recommendation 2. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical

	reports with recommendations are available.	reports with recommendations are available.	reports with recommendations are available.
3	CaMPAM Transitional Coordination Unit in association with MPA practitioners developed and began the progressive implementation of a strategy to assess the condition, trends, and functionality of corridors / barriers for ecosystems / key species[7] within SPAW listed sites using revised / updated information mentioned in Recommendation 2. At least two ecosystems / key species[7] have been assessed. SPAW Working Groups and partnerships generating data mentioned in Recommendation 2 are participating if requested. Technical reports with recommendations are available.	CaMPAM Expert Group in association with MPA practitioners have completed the evaluation of condition, trends, and functionality of corridors/barriers of at least another two for ecosystems / key species[7] within SPAW listed sites. These assessments have been expanded to WCR MPAs for comprehensive analysis of condition, trends, and functionality of corridors / barriers of ecosystems / key species[7] at subregional level. Assessments are using revised / updated information mentioned in Recommendation 2. SPAW Working Groups and partnerships generating data mentioned in Recommendation 2 are participating if requested. Technical reports with recommendations are available.	CaMPAM Expert Group in association with MPA practitioners have broaden their analysis to comprehensively evaluate the condition, trends, and functionality of corridors/barriers of at least another two for ecosystems / key species[7] at regional / global level. Assessments are using revised / updated information mentioned in Recommendation 2. They are working closely with partnerships generating data mentioned in Recommendation 2. Technical reports with recommendations are available.
Desired target 3b. Promoted consistent **scientific advice** towards improved **MPA management effectiveness** across the WCR.			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	CEP Secretariat / SPAW-RAC have distributed Technical Reports on SPAW listed sites mentioned in Desired Target 3a among SPAW Focal Points and other policy makers at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.	CEP Secretariat / SPAW-RAC have distributed Technical Reports on SPAW listed sites and on other WCR MPAs mentioned in Desired Target 3a among SPAW Focal Points, policy makers at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.	CEP Secretariat / SPAW-RAC have expanded the sharing of Technical Reports on SPAW listed sites and other WCR MMAs mentioned in Desired Target 3a among the Conservation and Sustainable Resource Use Networks providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.

2	CaMPAM Transitional Coordination Unit (in association with UNEP/CEP and SPAW-RAC) is distributing Technical Reports on SPAW listed sites mentioned in Desired Target 3a and have promoted its access for a broad distribution among SPAW Focal Points and other policy makers at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.	CaMPAM Coordination Unit (in association with UNEP/CEP and SPAW-RAC) is distributing Technical Reports on SPAW listed sites and now include reports from other WCR MPAs mentioned in Desired Target 3a. The network has promoted the access of these reports among SPAW Focal Points, policy makers at national, subregional, and regional levels providing opportunities for providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.	CaMPAM Coordination Unit (in association with UNEP/CEP and SPAW-RAC) is distributing Technical Reports on SPAW listed sites, WCR MPAs and now include other MMAs mentioned in Desired Target 3a. The network has promoted the access of these reports among conservation and Sustainable Resource Use Partnerships at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.
3	A selected Partnership agrees to distribute Technical Reports on SPAW listed sites mentioned in Desired Target 3a and have promoted its access among SPAW Focal Points and other policy makers at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.	A selected Partnership agrees to distribute Technical Reports on WCR MPAs sites mentioned in Desired Target 3a and have promoted its access among SPAW Focal Points and other policy makers at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.	A selected Partnership agrees to distribute Technical Reports on WCR MMAs mentioned in Desired Target 3a and have promoted its access among SPAW Focal Points and other policy makers at national, subregional, and regional levels providing opportunities to improve MPA management effectiveness. Those reports have been posted at their Web sites, promoted at relevant events (meetings, conference, workshops, etc;), and are available in the official languages of the SPAW Protocol.

Desired target 3c. Increased **coordination and functionality** with existing pluricultural and multidisciplinary group of experts in **data analysis/ evaluation** and verifying the use of proper language in technical reports to policy makers.			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC (in association with SPAW Working Groups) has secured the participation of a multidisciplinary and pluricultural group of regional experts and other relevant stakeholders[10] in data analysis and evaluation from SPAW listed Sites, and in verifying the use of proper language in technical reports to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.	SPAW-RAC (in association with SPAW Working Groups) has secured the participation of a multidisciplinary and pluricultural group of regional experts and other relevant stakeholders[10] in data analysis and evaluation of WCR MPAs. They are verifying the use of proper language in technical reports to policy makers. Technical advice provided is consistent through the region and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.	SPAW-RAC (in association with SPAW Working Groups) has secured the participation of a multidisciplinary and pluricultural group of regional experts and other relevant stakeholders[10] in data analysis and evaluation of WCR MMAs. They are verifying the use of proper language in technical reports to policy makers. Technical advice provided is consistent through the region and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.
2	CaMPAM Transitional Coordination Unit has secured the participation of a multidisciplinary and pluricultural group of regional experts and other relevant stakeholders[10] in data analysis and evaluation, and in verifying the use of proper language in technical reports to policy makers to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.	CaMPAM Transitional Coordination Unit has secured the participation of a multidisciplinary and pluricultural group of regional experts and other relevant stakeholders[10] in data analysis and evaluation from SPAW listed Sites and other WCR MPAs. They are verifying the use of proper language in technical reports to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.	CaMPAM Transitional Coordination Unit has secured the participation of a multidisciplinary and pluricultural group of regional experts and other relevant stakeholders[10] in data analysis and evaluation from SPAW listed Sites and other WCR MMAs. They are verifying the use of proper language in technical reports to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.

[10] *A relevant group of stakeholders here is referring to those knowable / experienced group of marine and coastal resource users that possess traditional information not always available or included in the so call scientific advice, but relevant for understanding natural and human dynamics. They are fishers, processors, the tourism and navigational sector, educators, women, and youth, among others.*

3	A selected Partnership agrees to work in a multidisciplinary and pluricultural framework with regional experts and other relevant stakeholders[10] in data analysis and evaluation within SPA sites. They are verifying the use of proper language in technical reports to policy makers to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.	A selected Partnership agrees to work in a multidisciplinary and pluricultural framework with regional experts and other relevant stakeholders[10] in data analysis and evaluation within WCR MPAs. They are verifying the use of proper language in technical reports to policy makers to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.	A selected Partnership agrees to work in a multidisciplinary and pluricultural framework with regional experts and other relevant stakeholders[10] in data analysis and evaluation within WCR MMAs. They are verifying the use of proper language in technical reports to policy makers to policy makers. Technical advice provided is consistent through the regional and integrate the WCR natural and cultural complexities. They provide clear guidelines towards adaptative management responses to counteract increasing threats and to build resilience to climate change.

Table 4. Options for implementing Recommendation 4 about reinforcing regional communication and outreach

Recommendation 4: Reinforce regional **communication & community outreach** to broaden support for better connectivity & accomplishment of conservation targets and goals.			
Desired target 4a. Promoted **community support** in regional conservation initiatives by **diversifying communication and outreach strategies** and disseminating **inclusive, respectful, and clear messages** about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites.			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC / CEP Secretariat / CETA are coordinating with subregional / regional partnerships[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least five experience notes from marine conservation are generated in a participative way.	SPAW-RAC / CEP Secretariat / CETA continue their coordination with subregional / regional partnerships[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites and other WCR MPAs. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least 10 experience notes from marine conservation are generated in a participative way.	SPAW-RAC / CEP Secretariat / CETA expanded their coordination with subregional / regional organizations and partnerships on Sustainable Resource Use[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within WCR MMAs. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least 15 experience notes from marine conservation are generated in a participative way.
2	CaMPAM transitional Coordination Unit has liaised with subregional / regional partnerships[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites. Those	CaMPAM Coordination Unit has liaised with subregional / regional partnerships[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites and WCR	CaMPAM Coordination Unit has expanded their coordination with subregional / regional organizations and partnerships on Sustainable Resource Use[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns

[11] *Examples of subregional / regional Partnerships in the WCR are UNEP-CEP, SPAW-RAC, CAMPAM, MPA Connect, Canary, The Dutch Caribbean Nature Alliance, RedGolfo, NAMPAM, IUCN Biopama, The Healthy Reefs for Healthy People Initiative, and Corredor Biologico en el Caribe among others.*

	messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least five experience notes from marine conservation are generated in a participative way.	MMAs. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least 10 experience notes from marine conservation are generated in a participative way.	and the need for consistent management responses within WCR MMAs. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least 15 experience notes from marine conservation are generated in a participative way.
3	A selected Partnership mentioned in Desired target 1a, option 4 has liaised with other subregional / regional partnerships[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least five experience notes from marine conservation are generated in a participative way.	A selected Partnership mentioned in Desired target 1a, option 4 has liaised with subregional / regional partnerships[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within SPAW listed Sites and other WCR MPAs. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least 10 experience notes from marine conservation are generated in a participative way.	A selected Partnership mentioned in Desired target 1a, option 4 has expanded their coordination with subregional / regional organizations and partnerships on Sustainable Resource Use[11] to update / generate inclusive, respectful, and clear messages about ecosystem / key species condition, connectivity patterns and the need for consistent management responses within WCR MMAs. Those messages are broadly disseminated through multiple communication mechanisms including traditional media (radio, newspaper, television, magazines, etc) and new media (web pages and social media applications). The messages are available at least in the SPAW Protocol official languages. At least 15 experience notes from marine conservation are generated in a participative way.

Desired target 4b. Promoted community groups **subregional / regional capacity building programmes aimed to understand natural dynamics and network connectivity.**			
Option	*Short term (2 years)*	*Medium term (5 years)*	*Long term (10 years)*
1	SPAW-RAC/ CEP Secretariat / CETA are coordinating with subregional / regional partnerships[11] to facilitate the participation of at least two community groups from SPAW listed Sites in subregional / regional capacity building programmes.	SPAW-RAC / CEP Secretariat / CETA are coordinating with subregional / regional partnerships[11] to facilitate the participation of at least four community groups from WCR MPAs in subregional / regional capacity building programmes.	SPAW-RAC / CEP Secretariat / CETA are coordinating with subregional / regional partnerships[11] to facilitate the participation of at least six community groups from WCR MMAs in subregional / regional capacity building programmes.
2	CaMPAM transitional Coordination Unit has liaised with subregional / regional partnerships[11] to facilitate the participation of at least two community groups from SPAW listed Sites in subregional / regional capacity building programmes.	CaMPAM Coordination Unit has liaised with subregional / regional partnerships[11] to facilitate the participation of at least four community groups from WCR MPAs in subregional / regional capacity building programmes.	CaMPAM Coordination Unit has liaised with subregional / regional partnerships[11] to facilitate the participation of at least six community groups from WCR MMAs in subregional / regional capacity building programmes.
3	A selected Partnership mentioned in Desired target 1a, option 4 has liaised with other subregional / regional partnerships[11] to facilitate the participation of at least two community groups from SPAW listed Sites in subregional / regional capacity building programmes.	A selected Partnership mentioned in Desired target 1a, option 4 has liaised with other subregional / regional partnerships[11] to facilitate the participation of at least four community groups from WCR MPAs in subregional / regional capacity building programmes.	A selected Partnership mentioned in Desired target 1a, option 4 has liaised with other subregional / regional partnerships[11] to facilitate the participation of at least six community groups from WCR MMAs in subregional / regional capacity building programmes.