

**Regional Workshop on Development of the
Report on the “State of Marine Ecosystems
and shared Living Marine Resource in the
Wider Caribbean (CLME+ and Gulf of
Mexico)”**

and

**Regional Strategy and Action Plan for the
Valuation, Protection and/or Restoration of
Key Marine Habitats in the CLME+ Crowne
Plaza Panama | Panama City, Panama
3 – 4 December 2018**

Workshop Report



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1. Background

The Caribbean Natural Resources Institute (CANARI) is collaborating with UN Environment, through the Caribbean Regional Coordinating Unit (CAR/RCU), to develop a *Regional Strategy and Action Plan for the Valuation, Protection and Restoration of Key Marine Habitats in the CLME+*. As part of this initiative, a report on the *State of Marine Ecosystems and shared Living Marine Resource in the Wider Caribbean and (CLME+ and Gulf of Mexico)* is being prepared to set the context and establish a baseline for the regional strategy and action plan. These documents are being developed in support of the implementation of the 10-year Strategic Action Programme (SAP) for the sustainable management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ region).

On 3 and 4 December 2018, CANARI convened a regional stakeholder workshop to review a draft of the *State of Marine Ecosystems* report and map out the scope of the *Regional Strategy and Action Plan (RSAP)*. This meeting was the first of two stakeholder meetings to be convened under this initiative. It took place in Panama City, Panama immediately preceding the Eighth Meeting of the Scientific and Technical Advisory Committee (STAC 8) to the Protocol Concerning Specially Protected Areas and Wildlife (SPA). The workshop brought together 32 participants from government, civil society, regional agencies and international organisations. The meeting agenda is provided in Annex 1 and the list of participants in Annex 2.



Participants the workshop to develop a Regional Strategy and Action Plan for the Valuation, Protection and Restoration of Key Marine Habitats in the CLME+. Panama City, Panama. 3 – 4 December 2018
Photo: CANARI

2. Scope of regional report and strategy

The *State of the Marine Ecosystems and shared Living Marine Resource in the CLME+* report and the *Regional Strategy and Action Plan* will cover the management and protection of coral reefs and associated sub-ecosystems, namely, mangroves and sea grass beds. The report and the strategy will consider impacts of climate change and adaptation, as well as socio-economic issues such as gender and poverty.

Both outputs will also ensure synergetic action for the marine component of CLME+ countries' National Biodiversity Strategies and Action Plans (NBSAPs), considering synergies with Multilateral Environmental Agreements (MEAs), Sustainable Development Goals (SDGs), the Paris Agreement, SAMOA Pathway and other relevant agreements.

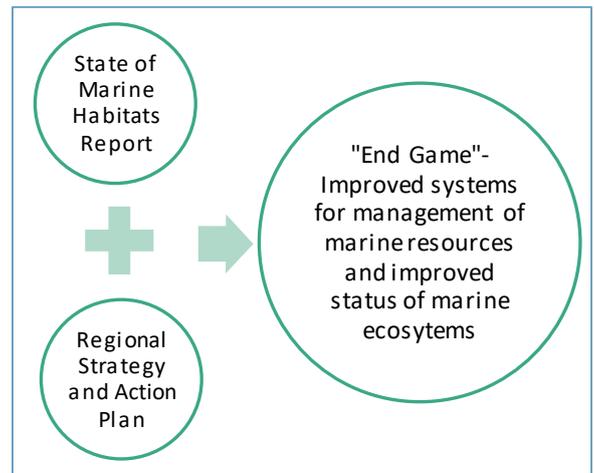


Figure 1: Two outputs of project and the desired outcome for region

The project area covers the following three large marine ecosystems (LMEs):

- Caribbean Sea Large Marine Ecosystem (CSLME)
 - North Brazil Shelf Large Marine Ecosystem (NBSLME)
 - Gulf of Mexico Large Marine Ecosystem (GoMLME)
- (see Figure 2)

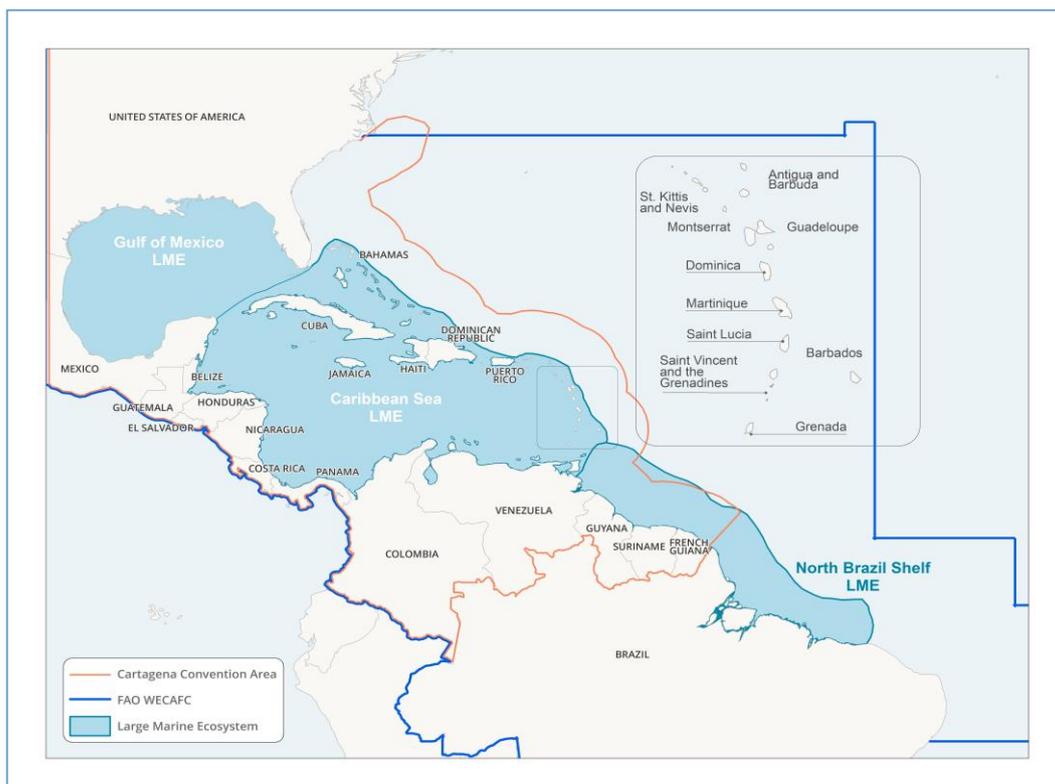


Figure 2: Geographic area covered by regional report and strategy, and involved countries

3. Objectives of regional workshop and approach

The objectives of the regional workshop were to:

- Review and provide inputs to the draft report on “State of Marine Ecosystems and shared Living Marine Resource in the Wider Caribbean (CLME+ and Gulf of Mexico)”;
- Define priority issues and themes of the Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the CLME+; and
- Identify and agree on key monitoring indicators.

The workshop approach combined presentations, plenary discussions and small group activities. Workshop sessions were highly interactive, with several group exercises designed to give participants an opportunity to contribute to the report and strategy.

4. Process and methodology

The general steps in carrying out the project and developing the RSAP are outlined in Figure 3 below.



Figure 3: Process outline for the development of the State of Marine Habitats Reports and the Regional Strategy and action plan

The two main tasks of the workshop were:

- To provide inputs on desk research done to date, ensuring accuracy, completeness of information and usefulness.
- To define what the focus, scope and time frame of the regional strategy and action plan.

In order to meet the objectives of the workshop, participants collaborated on activities in each of the steps listed in Figure 4 below. Group activities included discussions and brainstorming sessions to answer questions posed at the start of sessions and generate lists of threats, gaps,

recommendations, outputs, outcomes, actions, and case studies throughout the two-day workshop. Small group working sessions were followed by plenary sessions for presentation of integrated ideas and open discussion.

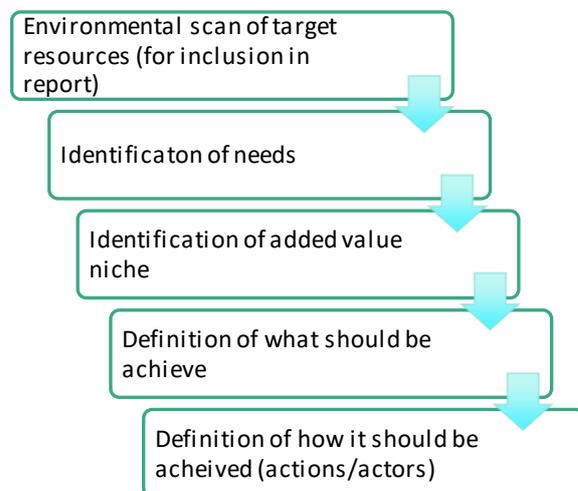


Figure 4: Session tasks around which group activities were based

5. Summary of feedback on report

On the first day of the workshop, participants were presented with the task of reviewing the draft report on the “State of Marine Ecosystems and shared Living Marine Resource in the Wider Caribbean (CLME+ and Gulf of Mexico)”. Through group activities, participants were asked to review the draft report and provide feedback on missing data or studies, and supplement, as necessary existing information on threats to the resource, and gaps in approaches and current initiatives. Before the group work, however, an overview of findings of the report for each of the selected habitats was presented for initial comment and discussion. Table 1 below provides a summary of feedback provided.

Table 1: Collated comments and feedback on regional report presented on the first day of the workshop

| Chapter/Section | Revision Comment |
|--|---|
| General Comments | |
| Title of report | The report focuses on three target habitats, not the marine ecosystem as a whole. The title of the report should be changed from "State of Marine Ecosystems" to "State of Marine Habitats". |
| Organization of the chapters | Summaries should be included at the start of each chapter. |
| Presentation of information | Tabulating some of the information, particularly the key indicators, would help the reader by providing an overview of the "state of" with respect to these "indicators". Make sections consistent in the text – drivers, threats. Indicating how the threats are prioritized and by what management unit (e.g. marine eco-region) may be more useful than a complete list of threats. Rank /prioritise threats using: severity, scope and irreversibility. |
| New appendix | Insert an appendix to show marine species that are listed in SPAW Protocol annexes. |
| Threats to be included in the chapters for the three habitats | <ul style="list-style-type: none"> • Climate change • Sargassum • Construction impact • Plastics |

| Chapter/Section | Revision Comment |
|---|---|
| | <ul style="list-style-type: none"> • Agricultural impacts (grazing, waste) • Storms (specifically the impact of the 2017 hurricanes) |
| Footnoting other relevant assessments | <p>The CLME+ project conducted a number of resource assessments (e.g. fisheries, transboundary resources), which may contain relevant background information and data. Such reports should not only be mentioned; relevant analyses from such reports should also be included in this SoMH report as footnotes. Other studies that may have captured some socio-economic indicators are:</p> <ul style="list-style-type: none"> • OECS OPAAL project, and • |
| Gaps to be included in the report | <ul style="list-style-type: none"> • Resources • Education |
| Purpose of the report | <p>This report gives a good overview of what has been done. There should be more focus on "state of" habitats discussed.</p> <p>Since drivers, pressures and threats are similar for the 3 habitats, these can be placed under each habitat, and highlight those that are most relevant to the habitat.</p> |
| Information sources on invasive species | <ul style="list-style-type: none"> • Caribbean Invasive Alien Species Network • CABI Invasive Species Compendium |
| Chapter 1: Introduction | |
| Geographic scope of the report. Section 1.2, p.5 | <p>The geographic scope of report is the combined CLME+ area and Cartagena Convention area but should also cover the WECAFC area.</p> <p>Note: Inclusion of WECAFC area is noted in the Discussion Draft of Nov.2018</p> <p>The language should be reviewed.</p> |
| Inclusion of keystone species | <p>Keystone species should be included, such as turtles (associated with seagrass beds and coral reefs).</p> |
| Include ocean health index | <p>Include the ocean health index.</p> |
| Ecosystem connectivity | <p>Include examples of where destruction of one ecosystem has impacted the other. This is important for the concept of connectivity between these ecosystems.</p> |
| Include Cumulative Human Impacts | <p>Include the Cumulative Human Impacts (CHI) – Halperin et al (Drivers and Pressures).</p> |
| Include threat index | <p>Refer to TWAP LME report (IOC-UNESCO / UNEP 2016) for threat index (contemporary).</p> |
| Chapter 2: Importance of Coral Reefs and Associated Ecosystems | |
| Treatment of other coastal sub-ecosystems | <p>The report emphasizes coral reefs and associated systems, although other ecosystems that are not included are important to SPAW Protocol parties. This includes mudflats, sandy beaches (for turtles, tourism, etc.), and open ocean (for migratory species and fisheries). Additionally, the coral reefs are absent from the North Brazil Shelf, but mudflats and sandy beaches are important ecosystems.</p> <p>The information could be incorporated as boxes within the report, perhaps directing persons to places where more information is provided, and not necessarily as chapters.</p> <p>Response: The report will maintain the focus on the three habitats but will note the connections between the various marine and coastal sub-ecosystems.</p> |
| Introduction | <p>Include text on importance of mudflats in the LME, and references for studies on mudflats in Suriname.</p> |

| Chapter/Section | Revision Comment |
|---|---|
| New information / case study | Include research on connectivity and diversity in the Lesser Antilles – PACOTILLES. |
| Chapter 3: Socio-Economic Context | |
| Socio-economic assessment | There is no indicator is provided for community engagement (attitudes, perceptions, etc.). |
| 3.2 | Other associated coastal sub-ecosystems are important (e.g. beaches are important for tourism), and their ecological and economic importance should be discussed. |
| Chapter 4: Coral Reefs | |
| Recent data / information that is missing that can make the chapter more complete | <ul style="list-style-type: none"> • Consolidate reef monitoring data from local diver monitoring projects (e.g., Reefcheck); • Colombia's 20-year coral reef monitoring program – have data, which can be used to establish links with Mesoamerican countries to unify methodologies; • Venezuela conducting monitoring and research on ocean acidification; • The GCRMN protocol and program is missing; • US National Academy of Sciences intervention methods for coral restoration for climate change; • Include Critical Ecosystem Partnership Fund (CEPF); • Include Global Ocean Acidification Observing Network; • Update information on location of coral nurseries; research in the Dutch and Netherlands Antilles; • Can contact the Coral restoration consortium information; • Caribbean Community Climate Change Centre is compiling report on coral restoration work in Caribbean; • There is research on coral nurseries serving as genetic repositories; • Belize conducting coral restoration with ~89% success; • Refer to work done in Meso-American coral reef restoration; • MAR reef rescue initiative has done work on hurricane restoration and it is also exploring insurance for coral reefs; • Erosion by free-roaming animals increasing sedimentation on coral reefs; • Artificial reef initiatives. Saba and St. Eustatius projects using reef balls, monitoring settlement rates, etc.; and • Coral nurseries – Bonaire, St. Eustatius, Saba, and St. Maarten, SECORE project in Curacao (sexual reproduction of corals) • Impact of Sahara Dust on coral reefs – diseases, etc. |
| Additional threats to be included in chapter, and inclusion of relevant information on responses | <ul style="list-style-type: none"> • Invasive lionfish • Invasive tiger shrimp • Invasive sun corals • White band disease • Coastal development • Mining • Offshore oil exploration/drilling • Climate change • Nutrient overload in pollution • Chemical pollution (e.g. sunscreen lotions, oxybenzones) • Coral harvesting for lime production and construction • Collection for aquaria • Construction, dredging, and fill • Updated stony coral disease map |

| Chapter/Section | Revision Comment |
|--|--|
| | <ul style="list-style-type: none"> • Thomas Goreau study: coral reef degradation caused by coastal dolphin facilities in Cozumel (Coral Reef Alliance study) and nutrient pollution • Plastics, microplastics • Agricultural impacts (more detailed) |
| Gaps in initiatives at national level to address the threats identified | <ul style="list-style-type: none"> • Refer to pH monitoring project in Aruba • Guatemala and Belize banned parrotfish fishing; refer to Healthy Reef Index report 2018 –which indicates that the population has increased in Belize (Mesoamerican Reef Card 2018- www.healthyreefs.org/cms/report-cards). • Mention in report of the 2010 ban on fishing of parrotfish and other grazers • Colombia has 20 years of monitoring • Dominican Republic has a resolution prohibiting fishing of parrotfish to protect reefs - 0023-2017 Ministerio del Medioambiente • Panama -has two protected marine areas (Banco Volcán in the Caribbean Sea and Cordillera de Coiba in the Pacific) <p>Venezuela:</p> <ul style="list-style-type: none"> • Execution of a GEF project "Strengthening of the marine coastal protected areas system". Results: <ul style="list-style-type: none"> (i) Updating of the regulatory framework (ii) Preparation of a master plan proposal for the development and management of coastal marine protected areas • Expansion of the area of four coastal marine protected areas • Proposal for the creation of five new coastal marine areas • Identification of 12 coastal marine ecological corridors |
| Section 4.1 | <ul style="list-style-type: none"> • Should include species listed in the SPAW annexes [Note: see general comment above] • Stony Coral Tissue Loss Disease has spread and needs an updated map |
| Section 4.4 | Reference to anchor damage/mechanical damage should also be included in Section 4.4. |
| Section 4.7 | GCRMN Caribbean protocol should be included in terms of both bio-physical and socio-economic monitoring. The GCRMN Caribbean initiative should be included as there are various reports from islands. |
| Resilient Areas | <p>Report should include:</p> <ul style="list-style-type: none"> • MPAs/MMAs • Recovery of certain species • Coral restoration (Belize – Fragments of Hope Ltd. – coral restoration from 2006) |
| Chapter 5: Mangroves | |
| General | Use structure similar to coral reef chapter |
| Recent data / information missing that can make the chapter more complete | <ul style="list-style-type: none"> • Eastern Caribbean Marine Managed Areas Network (ECMMAN) project • Carbon sequestration • CARICOMP project • USGS SOFIA data portal on mangroves has publications on restoration efforts, especially after storms • Global mangrove atlas and global mangrove watch • Source- wetlands restoration for carbon sequestration in Trinidad, not specifically on mangroves • Information on mangrove areas need to be updated after the 2017 hurricane season • Check national reports |

| Chapter/Section | Revision Comment |
|--|--|
| | <ul style="list-style-type: none"> • REDD+ |
| Additional threats to be included in chapter | <p>Discuss each of the following as numbered sub-section similar to coral reef chapter:</p> <ul style="list-style-type: none"> • Land use change • Pollution, including agricultural pollution • Climate change • Extraction of wood • Sargassum • Dredge and fill • Oil • Plastics • Coastal development |
| Gaps in initiatives at national level to address the threats identified | <ul style="list-style-type: none"> • Panama has national policy for wetlands • Panama has the National Wetlands Coalition, which manages the present resources in these important ecosystems • Panama - the Project for the Protection of Reserves and Carbon Sinks in Mangroves and Protected Areas is implemented with the help of the UNDP, which provides ecosystem services to support adaptation to CC • Bonaire mangrove ecological restoration project – active management to stop die off mangrove inland • Mention carbon sequestration efforts (UWI - Jamaica, Trinidad) |
| Additional data source | <p>US Geological Survey:</p> <ul style="list-style-type: none"> • Modeling effects of hurricanes on mangrove ecosystems • Multiple papers • Pre and post hurricane damage |
| Gap | <ul style="list-style-type: none"> • Standardized data collection and monitoring protocols |
| Chapter 6: Seagrasses | |
| General | Use structure similar to coral reef chapter. |
| Recent data / information missing that can make the chapter more complete | <ul style="list-style-type: none"> • Update information and map showing spread of the invasive seagrass (<i>H. stipulacea</i>). • Seagrass Watch • National reports • Include the impacts of 2017 hurricanes on coral reefs and associated ecosystems |
| Additional threats to be included in chapter | <p>Discuss in numbered sub-sections similar to coral reef chapter:</p> <ul style="list-style-type: none"> • Land use / coastal development • Water use • Shading • Aruba – removal of seagrass to create sandy area for swimming • Provide more information on climate impacts • Clarify and explain "poor upland management" – e.g. sediment, deforestation • Sargassum • Pollution (runoff, discharge, agriculture, plastics) |
| Gaps in initiatives at national level to address the threats identified | <ul style="list-style-type: none"> • Resources, education, policy, funding, capacity • Colombia – monitoring • Policy • Legislation • Funding |
| Chapter 7: Governance Architecture and Processes | |
| Chapter | Chapter to be strengthened; it requires more discussion of key issues. |

| Chapter/Section | Revision Comment |
|---|--|
| Figure 7.2, p. 59 | In the data management diagram, the text saying "lack" of data, institutional support, etc. should be changed to reflect inadequacy rather than absence of the attribute. The general text should also reflect this change, explaining as necessary that the "absence" of data noted in the NBSAPs reflects several states of data adequacy, not actual absence of data. |
| Use of indicators | Need indicators for outreach |
| Chapter 8: Tools and Initiatives | |
| Section 8.5 | Need to include GCRMN Caribbean initiative which contains various reports from island. |
| Gaps | Inclusion of the Caribbean Protected Areas Gateway / Biodiversity and Protected Areas Management (BIOPAMA) programme. |

Participants were also asked to answer questions in group activities and provide relevant examples and references which may be used to as case studies for best practices for the region.

Current Situation

- CLMEplus.org can provide information on programmes, projects, and initiatives taking place in the region
- More research should be done on "Ridge to Reef" and "Coast to Source"

What is working and why?

- Monitoreos sistemáticos; Fortalecimiento inversión institucional; Fortalecimiento políticos = Systemic monitoring; Strengthening institutional investing; Political strengthening
- Involvement of stakeholders from start
- Participatory mapping modelling
- Local knowledge
- Coral restoration- survival rates high in countries such as Belize, Mexico, Honduras (MAR region); in Belize this is due to the initial coral nurseries existing within protected areas/areas of low impact
- Marine protected areas: recovery of fish populations (grouper and parrotfish) and implementation of no-take zones
- Public awareness and education: films (e.g. chasing corals), video clips, music videos/songs, and art have positive behavioural changes on issues such as sunscreen use, ban on parrotfish, ban on single-use plastics, ban on traps/pots/gear
- Co-management efforts for resources such as mangroves (ACAPG), coral reefs (MMAs/MPAs):
 - MCS/enforcement
 - Research & monitoring
 - Advocacy/lobbying
- Trust: OPAAL and RRPAC did a KAP study
- Reef restoration:
 - Reef restoration projects in Bonaire successful due to support from stakeholders and good environmental management circumstances.
 - In Dutch territories there is co-management of resources in protected area management
- Integrated Coastal Zone Management: Integrating Watershed and Coastal Areas Management (IWCAM); Integrating Water, Land and Ecosystems Management in Caribbean

Small Island Developing States (IWECO); Southeast Pacific data and Information Network in support to Integrated Coastal Area Management (SPINCAM)– don't know where it is working best in the region

What is not working and why?

- Challenges in co-management (community)
- Inadequate regional cooperation
- Inadequate and insufficient awareness in general – insufficient perception of value of resources
- Mangrove planting/restoration has low survival rate- unsure of reasons
- Lack of linkages between activities, initiatives, threats, etc.; there is no cumulative overview
- La educación e información al público sobre situaciones – estado de los ecosistemas y especies y su impacto real = (The education and information to the public on situations - status of the ecosystems and species and their real impact)
- No holistic approach
- Sustainability of some stewardship programmes – succession planning, especially for leadership where capacity for some members are limited
- Limited resources and persons are weaning too early
- Decision making process
- Implementation at national level and regional action plan
- Funding
- Absence of national resources
- Will (policy, political, public)
- Project mentality (vs programme focus)
- *Algunas países los monitorean ONG*- NGO monitoring in some countries
- *Fortalecimiento institucional*- Strengthening institutions
- *Metodologías estandarizadas* Standardized methodologies

Suggested references

- KAP studies of OECS, RRACC, and OPAAL projects
- www.crfm.int > documents > special publications > 2017 thematic papers
- 71st GCFI 2018 report – coral reefs, MPAs, fisheries
- 5Cs MACREAS project
- Coral Reef Consortium
- OECS 2015 invasive species consultation report
- Regional POA (2013-2018) for Caribbean coral reefs –5Cs/CRFM
- Regional strategy for control of lionfish (ICRI)
- Artificial reefs: AROSSTA (Artificial Reefs on Saba and St. Eustatius)
- SECORE and other coral restoration reports/publications

Proposed case studies

- Artificial reefs in Saba and St. Eustatius – ARCOSSTA
- Coral nurseries in Curacao – SECORE project
- Coral reef degradation caused by coastal dolphin facilities in Cozumel (Reef Alliance) – nutrient pollution, Thomas Goreau study
- Fragments of Hope Ltd. Belize
- Coral nursery work in Grenada and biorock artificial reef work.

- Protected area management – Dutch Caribbean
- MPA establishment by Gouyave Fishers Association, Grenada – co-management by fisher-folk.
- pH monitoring project – Aruba
- Mangroves – Bonaire mangroves ecological restoration project
- Invasives – Belize lionfish management plan
- Reef fish – Guatemala and Belize banned fishing of parrotfish
- Public Awareness – examples where song, videos, etc. used successfully
- Beach protection – Aruba
- Mudflat studies / protection - Suriname
- Restoring mangroves with "Building with Nature" along dynamic coastlines (Suriname)
- Developing local managed mangrove ecotourism to enhance their protection (Suriname).

6. Summary of feedback on Regional Strategy and Action Plan

On the second day of the workshop, participants were engaged in a participatory approach to develop a regional strategy to address the threats, gaps and issues identified in accompanying report. The following sub-sections provide summaries of the group presentations on the recommended general outline of the RSAP.

Context

- The strategy is an opportunity to zero-in on the three habitats
- It cannot create new obligations
- Strategy should not be burdensome (improve what is already being done)
- Break down silos
- Strategy should consider that not every methodology/ project will work in every country
- Strategy should consider a timeframe that allows for impact of actions, not project outputs; It should be designed as a programme

Goal

- RSAP should be for strategic positioning of SPAW Programme in context of other regional programmes.
- All the regional projects have finite timeframes but will generate many products for which there is no defined uptake mechanism at the regional level. SPAW should therefore be considered as the long-term framework for the RSAP.
- The RSAP should be focused at the nexus of the SPAW protocol and the CLME+ SAP, given that the CLME+ SAP is supposed to address socio-economic concerns.
- What is the decision path forward for RSAP within SPAW?
- The RSAP should be for a general purpose and function rather than be very specific, so it can be considered in the SPAW COP in 2019.

Objectives

- To maintain, enhance and restore the health of the three key habitats to increase their resilience to ensure their sustainability.
- To enhance/strengthen coastal and marine ecosystem services.
- To engage in effective habitat conservation planning/Ecosystem-based Management.
- To improve / increase use of economic valuation of ecosystems.

- To improve awareness of the importance of habitats and the ecosystem services they provide.

Actions

Table 2: Suggested outcomes, actions, targets and strategies for Objective 1 presented by group 1

| Suggested objectives | Suggested Outcomes | Suggested Actions | Suggested Targets | Suggested strategies for implementation |
|--|--|--|--|---|
| <p>Resilience of the three habitats to ensure/enhance the ecosystem goods and services considering regional/global initiatives/agreements/commitments</p> | <ul style="list-style-type: none"> • Habitat degradation slowed down (reduce threats) • Enhance habitat and ecosystem services enhanced • Local stakeholder involvement and buy-in ensured • Increase and sustain financial flow to meet objectives increased and sustained • Effective (co)-management of the habitats | <ul style="list-style-type: none"> • Access to data • Support the working groups (e.g. GCRMN) • Select priority action areas • Determine factors of success, then share it | <ul style="list-style-type: none"> • National, regional, global targets. • Specific output targets | <ul style="list-style-type: none"> • Habitat restoration |

Table 3: Suggested outcomes, actions and strategies for Objective 2 of strategy by group 2

| Suggested objectives | Suggested Outcomes/Outputs | Suggested Actions | Suggested Targets | Suggested strategies for implementation |
|---|--|--|---|---|
| Reduce threats to the coral reef sub-ecosystem | <i>[Threats to the coral reef ecosystem reduced]</i> | <ul style="list-style-type: none"> • Culling/eradication programme (Aruba) • National management plans – NGO, fishermen – multi-stakeholder (Colombia) • National policies for biodiversity – action plan (Venezuela) | Invasive Species | |
| | | <ul style="list-style-type: none"> • pH, water quality monitoring (multi-stakeholder) • National policies • Monitoring – species/prey distribution modelling • Targeted research – resilience | Climate change | <ul style="list-style-type: none"> • Alignment/engagement with international climate treaties/programs • Increase/enhance protected areas • Invest in coral nurseries/research |
| | | <ul style="list-style-type: none"> • Adopt LBS Action Plan. Bans on harmful sunscreen/plastics • MARPOL annex implementation/compliance • Erosion control programs | Pollution (chemical, plastic/debris, nutrient, sedimentation) | <ul style="list-style-type: none"> • Engage tourism sector and fisheries (net discards/disposal). |
| | | <ul style="list-style-type: none"> • Increase MPAs – no takes, no fishing zones • Increase mooring buoys • Prohibitions on coral removal | Mechanical damage/extraction (anchor, vessel, aquarium trade) | |
| | | | Tourism | <ul style="list-style-type: none"> • Define responsible tourism/education – greening (e.g. diving), sunscreen users, mooring, voluntary/NGO-led programs). |
| | | <ul style="list-style-type: none"> • Regulate gear • Removal/retrieval programme • Monitoring fish stocks/quotas • Closed seasons | Overfishing | |

| Suggested objectives | Suggested Outcomes/Outputs | Suggested Actions | Suggested Targets | Suggested strategies for implementation |
|---|----------------------------|---|--|--|
| | | <ul style="list-style-type: none"> Monitoring programme | Diseases | |
| Challenges <ul style="list-style-type: none"> Inconsistency of data/collection methods Enforcement Lack of stakeholder engagement Public outreach/communication | | | | |
| Reduce threats to the mangrove sub-ecosystem | | <ul style="list-style-type: none"> Planning/zoning Land use regulations EIS Mangrove control programmes - insects | Land use/coastal development (tourism, infrastructure, aquaculture, agriculture) | |
| | | <ul style="list-style-type: none"> Mangrove control (chemical insect control) Control of agrochemicals (rice farming) Plastics/marine debris removal programmes Sewage control/regulations (LBS Action Plan). | Pollution | |
| | | | Climate change (weather events, etc.) | |
| | | <ul style="list-style-type: none"> Prohibitions on all extractions Develop outreach programmes for local communities (NGO partners) Monitoring programs Zoning/use regulations | Extraction (local use, agriculture) | |
| | | <ul style="list-style-type: none"> Eradication programmes | Invasive Species (dries soils, chokes waterways, impacts species) | <i>Threats</i> <i>Coconuts ("silver" displacing native species)</i> <i>Political will – policy</i> |
| Challenges <ul style="list-style-type: none"> Outreach to local communities Consistency in enforcement Recognition of values of mangrove ecosystems Financing mechanisms | | | | |

| Suggested objectives | Suggested Outcomes/Outputs | Suggested Actions | Suggested Targets | Suggested strategies for implementation |
|---|----------------------------|---|--|---|
| Reduce threats to the seagrass sub-ecosystem | | <ul style="list-style-type: none"> • Develop responsible practice/guidelines for tourists • Zoning/regulations (prohibit removal) • Cruise waste (disposal) | Tourism (seagrass removal, jet ski, anchorage) | |
| | | <ul style="list-style-type: none"> • Monitoring • Eradication/control programs • Develop responsible practice/guidelines for tourists (develop networks/volunteers - labour intensive) | Invasives | |
| | | <ul style="list-style-type: none"> • Manage ballast water • Marine debris removal programs • Erosion control programs | Pollution | |
| | | <ul style="list-style-type: none"> • Zoning /land use • Fisheries impact-drag/trawl nets • Enforcement of regulation • Develop regulation • LBS Action Plan | Land use / coastal erosion | |

Table 4: Suggested outcomes and actions for Objectives by group 3

| Suggested objectives | Suggested Outcomes/Outputs | Suggested Actions |
|--|--|---|
| <ul style="list-style-type: none"> • To improve overall habitat management – identify habitats critical for protection • To establish and ensure sustainability of ecosystem services • To improve economic valuation of ecosystem • Improve awareness of the importance of habitats and ecosystem services they provide | <ul style="list-style-type: none"> • Improved linkages/interagency collaboration • Standardized data collection/monitoring activities • Improved data sharing/best management practices • An outreach and communication strategy (use existing examples) | <ul style="list-style-type: none"> • Improve use and awareness of existing hubs/databases (e.g. CLME+) • Assess and review existing regional data collection and monitoring methods and develop a protocol specific to these habitats • Review/assess existing options for a communication platform (in all languages) |

Table 5: Suggested outcomes, actions and strategies for Objective 1 of strategy by group 4

| Suggested objectives | Suggested Outcomes/Outputs | Suggested Action | Suggested Targets | Suggested strategies for implementation |
|---|----------------------------|---|--|--|
| <p>Improve the health of the key ecosystems to increase resilience (and ecosystem services).</p> | | <ul style="list-style-type: none"> • Marine spatial planning from single-sector management to an ecosystem-based approach • Incentives for change and benefits (MPAs, proper management of sewage, MMAs, reforestation, garbage collection/proper disposal, etc.) • Update or revise legislations: (i) international conventions, (ii) management plans, (iii) sustainable financing, (iv) enforcement/compliance, (v) community development, (vi) increase fines/penalties • Fish replenishment zones in collaboration with communities • Incentives for landscape restoration (mangroves, coral, etc.) • Harmonisation of legislation/policies. • Regional efforts in research and monitoring (networking and connectivity) • Education, public awareness and empowerment | <p>Can use stakeholders to support all actions, and actions should generate case studies</p> | <ul style="list-style-type: none"> • Transparent decision-making processes • More stakeholder participatory mechanisms |

7. Workshop Evaluation

At the end of the workshop, 22 out of 32 participants completed evaluation forms (69% response rate). The responses are summarised below.

Achievement of workshop objectives

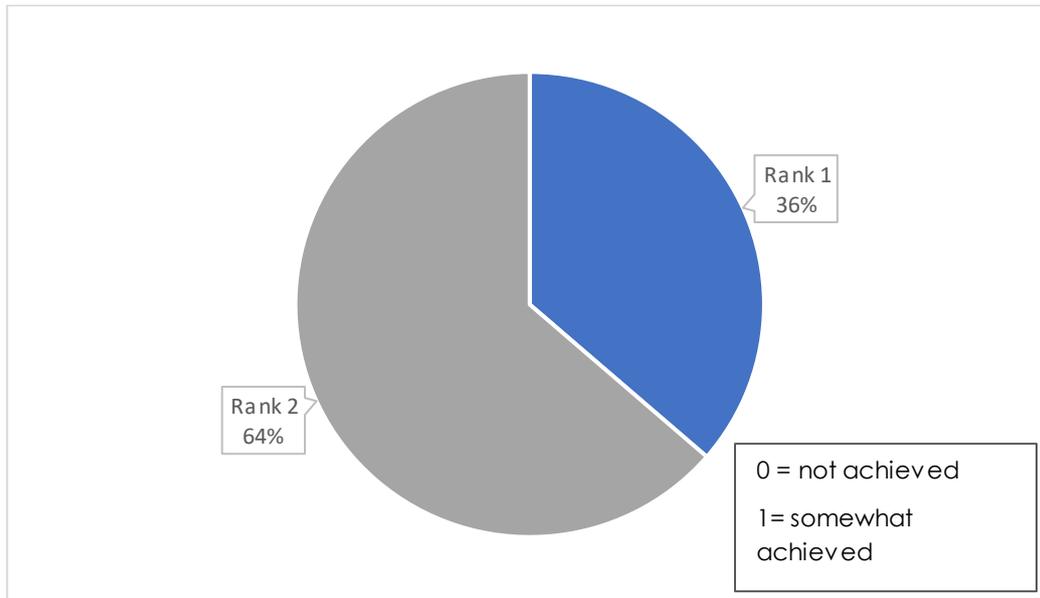


Figure 5: Reviewed and provided inputs to the draft report on “State of Marine Ecosystems and shared Living Marine Resource in the Wider Caribbean (CLME+ and Gulf of Mexico)”

A majority (64%) of participants felt objective 1 was fully met.

Comments:

1. I read the draft, made comments and the comments I made were incorporated into the input I provided during the week the group work of day 1 of the workshop
2. Very informative
3. I think the timeframe was adequate
4. Good activity
5. A pesar de confusiones. Se emitieron aportes. *[Despite confusion, contributions were made.]*
6. Need more time to read the document
7. No efficient methodology in the beginning
8. Need more time
9. I believe the review and inputs focused on the state of habitats reports (and that was achieved) but not the SOMEE

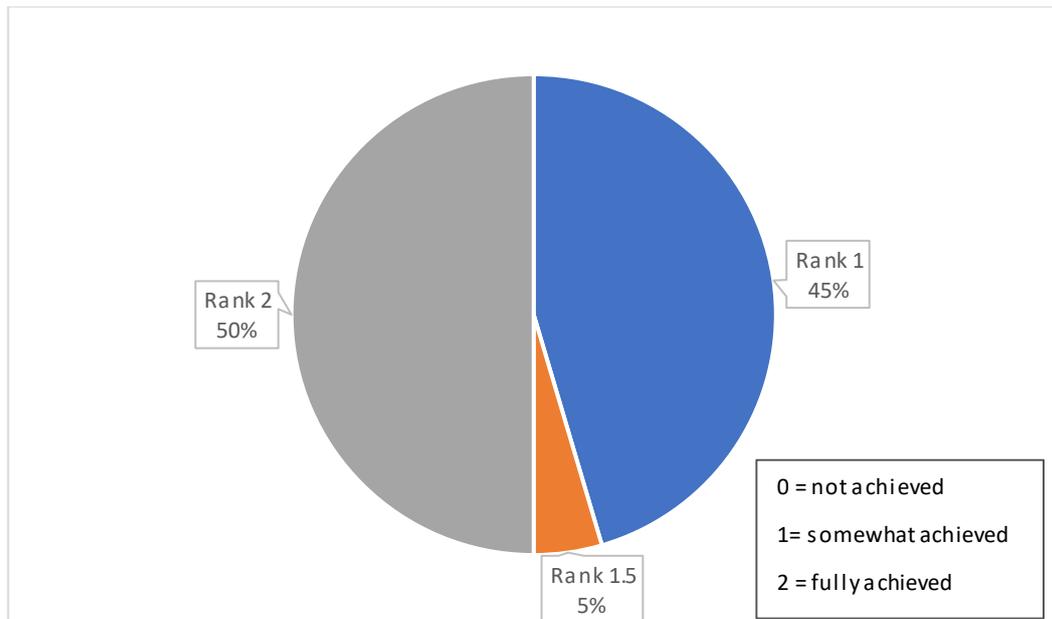


Figure 6: Defined priority issues and themes of the Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the CLME+

While half the respondents felt objective 2 was fully met, almost half felt it was partially met.

Comments:

1. The group listed issues and themes of the RSAP on more than one occasion
2. Without proper opportunity to prepare for this, it is uncertain if things were not forgotten/left out.
3. Great participation
4. Priority issues were well defined
5. Good activity. Not clear objectives
6. Este tema es bastante claro en los participantes. *[This topic is quite clear for participants.]*
7. We discuss[ed] objectives & actions
8. Need more time
9. Not sure that this level was achieved

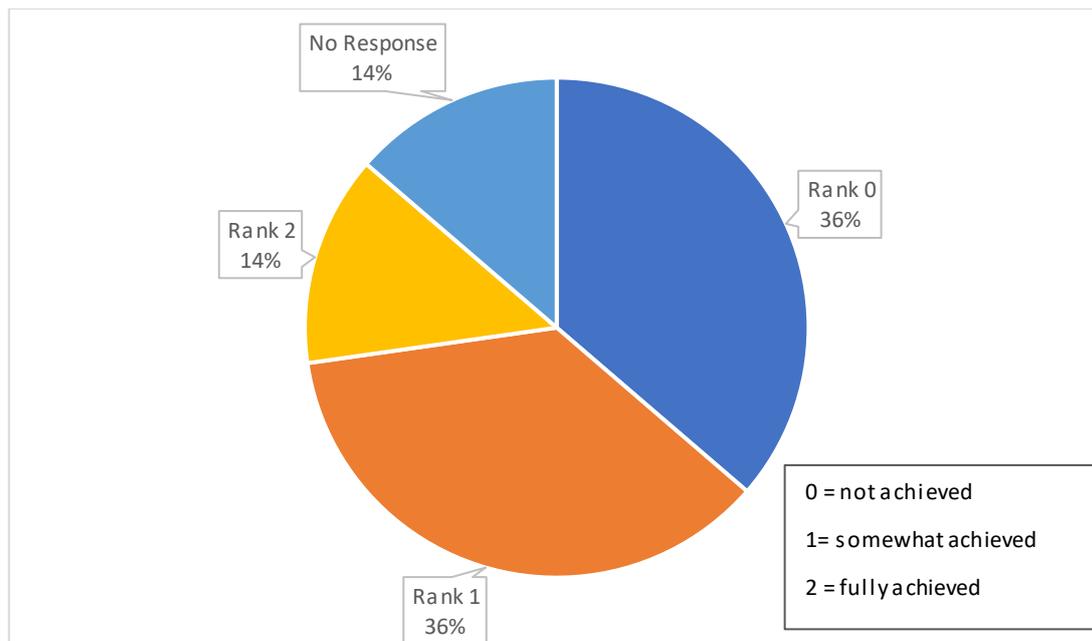


Figure 7: Identified and agreed on key monitoring indicators

Little or no progress was made towards meeting objective three of the workshop.

Comments

- We work[ed] on objective and work frame.
- Not done.
- We did not discuss key monitoring indicators.
- Not achieved
- Time and process did not permit.
- Not discussed.
- Same as above. (I.e. Not sure that this level was achieved.)
- Needs a little more fine-tuning

Most important thing gained from the workshop

- I understood that the process to develop the report and RSAP is still in a very early draft stage and that the report and workshop was a very quick turnaround.
- The objectives of CLME+ and what it involves.
- Better understanding of CLME+ and other regional initiatives.
- More clarity on CLME+.
- I think this and further marine studies need also to work on watershed issues that affect the coast in the Caribbean.
- Challenges associated with providing input to a document where the purpose is not quite understood.
- A better understanding of the scope and process associated with the state of the habitats report.
- Development of the action plan for the STAC.
- Highlighted the issues that affect marine resources and developed some actions to address them.
- It is important to have all objectives clear before every meeting. Among the participants I mean.

Liked about the workshop

Participants and participation

- Skills of participants and experience
- It was extremely participatory and inclusive.
- Friend[li]ness]. Meeting in small groups
- Great people and the objective of the workshop was good = SOME report.
- The collaborative nature of the group discussions Interactive/lively group discussions & plenary
- Participation was very good.
- Participación de sociedad civil. [Civil society participation.]
- Grupo conocedor de los temas a tratar. [Group knowledgeable about the themes being addressed.]

Facilitation

- The facilitation and the variety of the audience.
- Facilitation
- Creativity and humour of the facilitators. Energy and collaboration.
- Documents & facilitation. Venue. Logistical arrangements

Information covered

- I liked that the topic of the workshop was on environmental issues.
- The information and explanations

Length of workshop

- I liked that the workshop was 2 days.

Opportunity afforded by the workshop

- Provided an opportunity to review & give feedback on the draft.
- I liked that there was an opportunity to provide feedback on the draft report and discuss certain issues.
- Good initiative for regional use.

Other

- Most things.
- CLME+ presentation

Disliked about the workshop

Delivery

- I really disliked day 2 of the workshop. I felt that: 1) the instructions on what to do were very unclear 2) the facilitators were not prepared or did not understand what the end goal should be 3) developing a strategy with 20 something people in one room is very ineffective and excluded a lot of people and wasted a lot of people's time. 5) having the small groups perform exercises to produce outputs that could have been prepared beforehand is a waste of resources.
- Little disorganized on group sessions
- A little unstructured. So confusing.
- There was a lack of clarity regarding the intended outputs of the workshop.
- Unclear outputs and objectives; group confusion. Might be helpful to have come with more structure/framework in advance of workshop to guide structure/input

- Previous information not enough. Clarification of purpose/ and process.
- Las instrucciones poca claras [Instructions not very clear.]

Format

- The small group format is not a good format. It leaves room for forgetting things. It would have been better to prepare potential objectives etc. and discuss those rather than start from scratch.

Other

- La no traducción en los grupos pequeños trabajo
- Food
- The second morning
- Nothing

Useful sessions

Day 1

- Day 1 on the report was most useful
- 1st day
- First day was most useful
- 1st session
- The review of the draft report and discussion
- All of the day 1 and looking at the three habitats in-depth.

Day 2

- Last one.
- Tuesday afternoon – synthesis of brainstorming
- Segunda día [*Day 2*]
- Last day – complete
- The revision of the outcomes

Small group sessions

- The work group sessions

All

- Todas [*All*]
- All were useful

CLME+ presentation

- CLME+
- Connection to other regional activities

Recommendations for improvement

Structure

- More structured. Its objectives more defined.
- Related to day 2, the improvement needed was to come more prepared by thinking through and having discussions beforehand how exactly you can get out of the participants what you need using the most effective and structured activities that are well articulated and understandable and that incorporate work that has come before that will deliver on what you want to get. Using examples and consulting others who have developed similar products might help. Maybe a workshop is not the best option as the structure of the workshop was not the best option.

- Better structures and clear guidance would have helped – now there was quite a bit of confusion.
- Some actions (videos, presentations).
- See 4 (which was: The small group format is not a good format. It leaves room for forgetting things. It would have been better to prepare potential objectives etc. and discuss those rather than start from scratch.)

Delivery

- Prepare questions previous to the start of the workshop.
- Mejorar la entrega de documentas y en los idiomas correspondientes [Better/earlier dissemination of documents and availability in corresponding languages]
- Clarification during facilitation
- Maybe allow for all agenda items to be done
- Improved clarity on intended outcomes/outputs/products
- More structure & guidance/clarity from facilitators.
- Sharing of the draft document a little beforehand.
- Agenda include feeding into STAC
- Insumos PAECLME+ [CLME+ outputs]
- Working with the groups as planned. Not so democratic, more direction.
- Other
- N/A

Structure and delivery

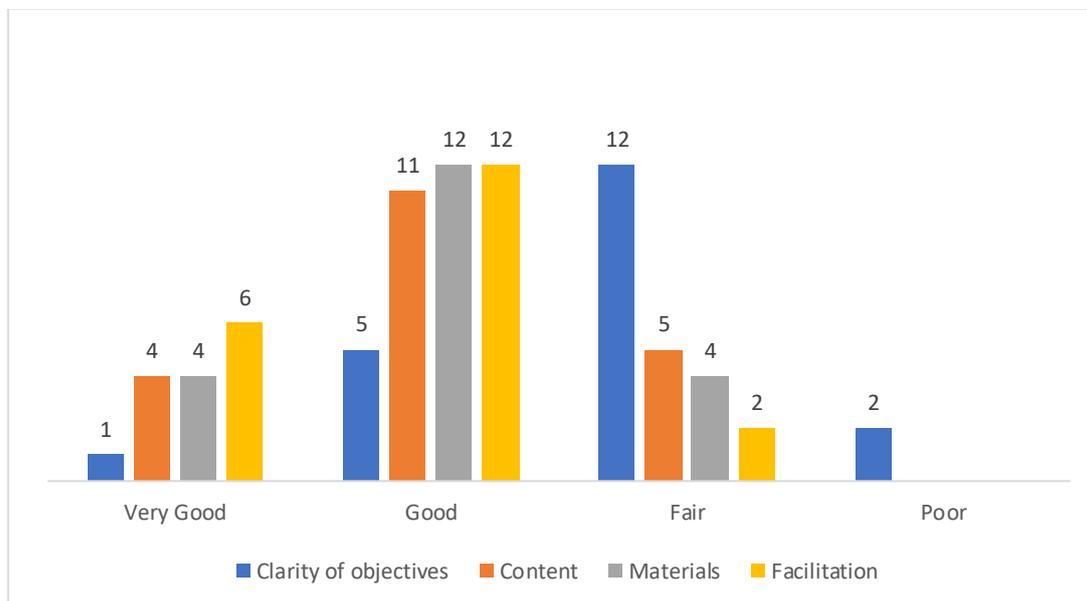


Figure 8: Rating of Structure and Delivery

Additional comments

- Just like we had the draft report to react to on day 1, I think day 2 would have gone much easier if a draft RSAP had been developed as well. I felt [X] was less comfortable in her role a facilitator.
- Thank you
- Thanks for initiative and participatory process

- No!
- The facilitators were very positive, friendly and helpful
- Gathering people with various levels of understanding of the larger context and encouraging outputs is always difficult A challenging task on the best of days.
- Ninguno [None]
- No, thanks!!

8. Summary and next steps

At the two-day workshop, some decisions were agreed upon by participants and will be adjusted going forward for the next workshop. These include:

- The title of the report will be changed to reflect state of marine “habitats” instead of “ecosystems”. The language of the report should be changed accordingly.
- The report covers the WECAFC area, which should be reflected in the report.
- Mention of other important associated habitats, such as mudflats and sandy beaches, will be made, but addressed to a lesser extent than the three main habitats selected for the study.
- Attention must be given to language - directly addressing the description of data, where some countries have an issue with ‘inadequate data’, instead of a ‘lack of data’.
- Will flag gaps in the report’ as the report content is tailored to the scope or work, but ecosystems not included can be highlighted as gaps, such as beaches and open ocean.
- The inclusion of indicator(s) for community engagement, attitudes, perceptions, etc. in the socio-economic analysis.
- The report, though not including resources assessed by other relevant organisations such as fisheries, should include footnotes which point readers/ users to other assessments.
- Although the report does not cover species like “charismatic megafauna”, it should include species listed under the SPAW Protocol.
- Case studies should be included in the report to highlight projects in the region that demonstrate best practice, which can be replicated by other countries.

9. Annex 1- Workshop Agenda

| Monday, 3 December 2018 | | | |
|---------------------------------|----------------|---|---|
| TIME | SESSION | THEME | FORMAT |
| 09:00 – 09:30 | 1 | Welcome and overview of the initiative to develop the “Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the CLME+” <i>Ileana Lopez, Specially Protected Areas and Wildlife Sub-Programme Cartagena Convention Secretariat, UN Environment</i> A regional institutionalized mechanism for assessment and reporting on the state of the marine environment and associated economies in the wider Caribbean (CLME+ SOME)E) <i>Sherry Heileman, CLME+ Project (UNDP/GEF)</i> | Plenary |
| 09:30 – 10:00 | 2 | Overview of the agenda and participant introductions | Plenary |
| 10.00 – 10.30 | 3 | Presentation of draft report “State of Marine Ecosystems and Shared Living Marine Resources in the Wider Caribbean (CLME+ and Gulf of Mexico)” <i>Nicole A. Brown, CANARI</i> | Plenary |
| 10.30 – 10.45 | BREAK | | |
| 11.45 – 12.15 | 4 | Parallel working groups to review draft report and define coral reef, seagrass bed and mangrove “hotspots” | Small group discussion |
| 12.15 – 13.00 | 5 | Presentation of findings by working groups | Plenary |
| 13.00 – 14.00 | LUNCH | | |
| 14.00 – 14.30 | 6 | Agreement on way forward to finalise report | |
| 14.30 – 15.45 | 7 | Designing a regional strategy and action plan for the region to meet stakeholder needs: defining purpose and scope; identifying objectives, target audiences, key messages; agreeing on structure and format | Plenary presentation and discussion |
| 15.45 – 16.00 | BREAK | | |
| 16.00 – 17.30 | 8 | Agreement on priority needs and opportunities for investments for the enhanced protection and restoration of key habitats coral reefs, sea grass beds and mangroves. | Small group activity/plenary debate/consensus building activity |
| 17.30 | End of day 1 | | |
| Tuesday, 4 December 2018 | | | |
| TIME | SESSION | THEME | FORMAT |
| 09:00 – 09:30 | 9 | Recap of day 1 | Plenary presentation and discussion |
| 09:30 – 10:30 | 10 | Deep dive into the priority issues, needs, opportunities: objectives / targets and strategies / approaches / actions | Small group discussions, presentations and plenary synthesis |
| 10.30 – 10.45 | BREAK | | |
| 10.45 -13.00 | 11 | Deep dive into the priority issues, needs, opportunities: objectives / targets and strategies / approaches / actions (cont’d) | Small group discussions, presentations and plenary synthesis |
| 13.00 – 14.00 | LUNCH | | |
| 14.00 – 15.30 | 12 | Indicators for monitoring and evaluation | Small group discussions, |

| | | | |
|---------------|--------------|--------------------------------|---|
| | | Implementation | presentations and plenary synthesis |
| 15.30 – 16.00 | 13 | Wrap-up and evaluation | Evaluation forms and plenary discussion |
| 16.00 – 16.30 | 14 | Next steps and closing remarks | Plenary presentation and discussion |
| 16.30 | End of day 2 | | |

10. Annex 2 – List of Participants

| | Surname | First Name | Organisation Name | Country | Email |
|----|---------------------|--------------------|---|-----------------------|---|
| 1 | Abrego | Marino | Conservation of Coastal and Marine Resources | Panama | meabrego@miambiente.gob.pa meabrego0303@yahoo.es |
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