November 2017

منظمة الأغذية والزراعة للأمم المتحدة

联合国粮食及农业组织

Food and Agriculture Organization of the United Nations

Organisation des Nations Unies pour l'alimentation et l'agriculture

Organización de las Naciones Unidas para la Agricultura y la Alimentación

Western Central Atlantic Fishery Commission (WECAFC)

Scientific Advisory Group

Eighth Session

Merida, Mexico, 3 – 4 November 2017

Institutionalizing an integrated reporting mechanism on the STATE OF THE MARINE ECOSYSTEMS AND ASSOCIATED ECONOMIES IN THE CARIBBEAN AND NORTH BRAZIL SHELF LARGE MARINE ECOSYSTEMS

Table of Contents

Executive summary

The purpose of this paper is to inform participants at the Eighth Session of the Scientific Advisory Group (SAG) of the Western Central Atlantic Fishery Commission (WECAFC) about the opportunities provided through the UNDP/GEF "CLME+ Project" (2015-2020) to work towards the institutionalization of an integrated, collaborative reporting mechanism on the state of the marine ecosystems in the Caribbean and North Brazil Shelf Large Marine Ecosystems, in support of enhanced policy coordination and ocean monitoring at the regional level. The mandate for this work arises from the politically endorsed CLME+ Strategic Action Programme ("CLME+ SAP", 2015-2025).

Background information

Large Marine Ecosystems (LMEs) - The LME concept was developed by the US National Oceanic and Atmospheric Administration (NOAA) as a meaningful geospatial unit for the implementation of an **ecosystem-based management (EBM)** approach and the **Ecosystem Approach to Fisheries (EAF)**. LMEs are large extensions of ocean encompassing coastal areas from river basins and estuaries to the seaward boundaries of continental shelves and the outer margins of major ocean current systems (such as the North Brazil Current), and/or occupying semi-enclosed seas (such as the Caribbean, and the Gulf of Mexico). Due to the transboundary nature of many of the world's LMEs, their adoption as a management unit will generally require **international coordination and collaboration**.

WECAFC and the CLME+ region - The geographic area of competence of WECAFC fully encloses the **Caribbean LME** ("CLME"), the **North Brazil Shelf LME** ("NBSLME") and the **Gulf of Mexico LME** ("GoMLME"). In what follows, we will refer to the combined area of the Caribbean and North Brazil Shelf LMEs as "**the CLME+ region**" (Map 1).

The GEF-supported TDA/SAP approach for LMEs - Since 1995, the Global Environment Facility (GEF), through its International Waters (IW) Focal Area, has been financially supporting the adoption of the "TDA/SAP approach" for the collaborative, transboundary management of shared marine resources. This approach includes a ***cyclical approach of joint (a) diagnosis and (b) strategic planning*** in order to identify key transboundary problems, their root causes and the priority actions needed to address them. The diagnostic phase of the cycle consists of the collaborative development of **Transboundary Diagnostic Analyses (TDAs)**, which then form the basis for a negotiated and politically endorsed **Strategic Action Programme (SAP)**.

The UNDP/GEF "CLME" SAP development project (2009-14) - The "CLME Project" was a GEF-supported LME project covering both the Caribbean and North Brazil Shelf LMEs. Transboundary Diagnostic Analyses (TDAs) undertaken during this project identified three key transboundary issues:

(i) ***unsustainable exploitation*** *of fish and other living resources;*
(ii) ***habitat degradation*** *and ecosystem community modification; and*
(iii) ***pollution***

Root causes behind these issues were also identified, with the overarching root cause being **weak governance** (encompassing inadequate legal and institutional frameworks, lack of inter-sectoral coordination, etc.). It was recognized that ***climate and societal change*** could exacerbate the impacts of these key issues.

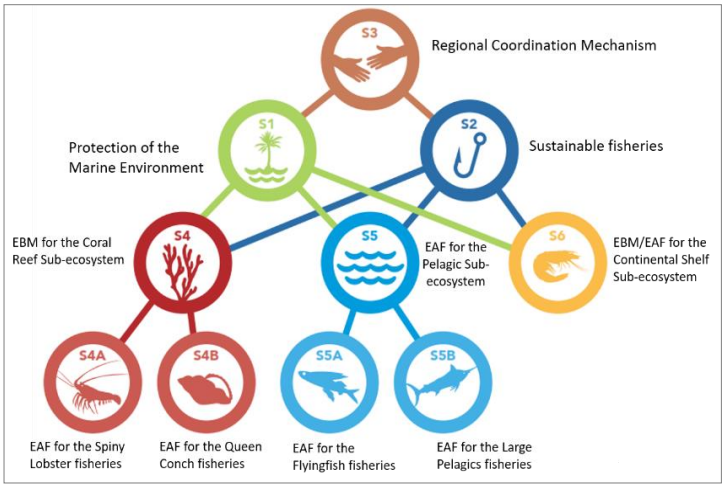


Figure 1. The 6 Strategies and 4 Sub-strategies of the CLME+ SAP CLME+ SAP **at the Ministerial level**[1].

[1] More information on the SAP, including the endorsed document, is available at http://www.clmeplus.org/

The findings from the TDAs were used to inform the development of a comprehensive roadmap towards sustainable living marine resources management: the **10-year "CLME+ Strategic Action Programme" (CLME+ SAP, 2015-2025)**. The SAP consists of 6 Strategies, 4 Sub-Strategies and 76 Actions (Figure 1), combining actions for structural change with capacity building and high-priority management interventions and investments. It is an "umbrella" Programme, meant to enhance cooperation among the region's many stakeholders, and to establish enabling conditions for synergies between the many ongoing and planned projects and initiatives. To date, 35 Ministers representing 25 countries and 6 overseas territories have formally **endorsed** the SAP.

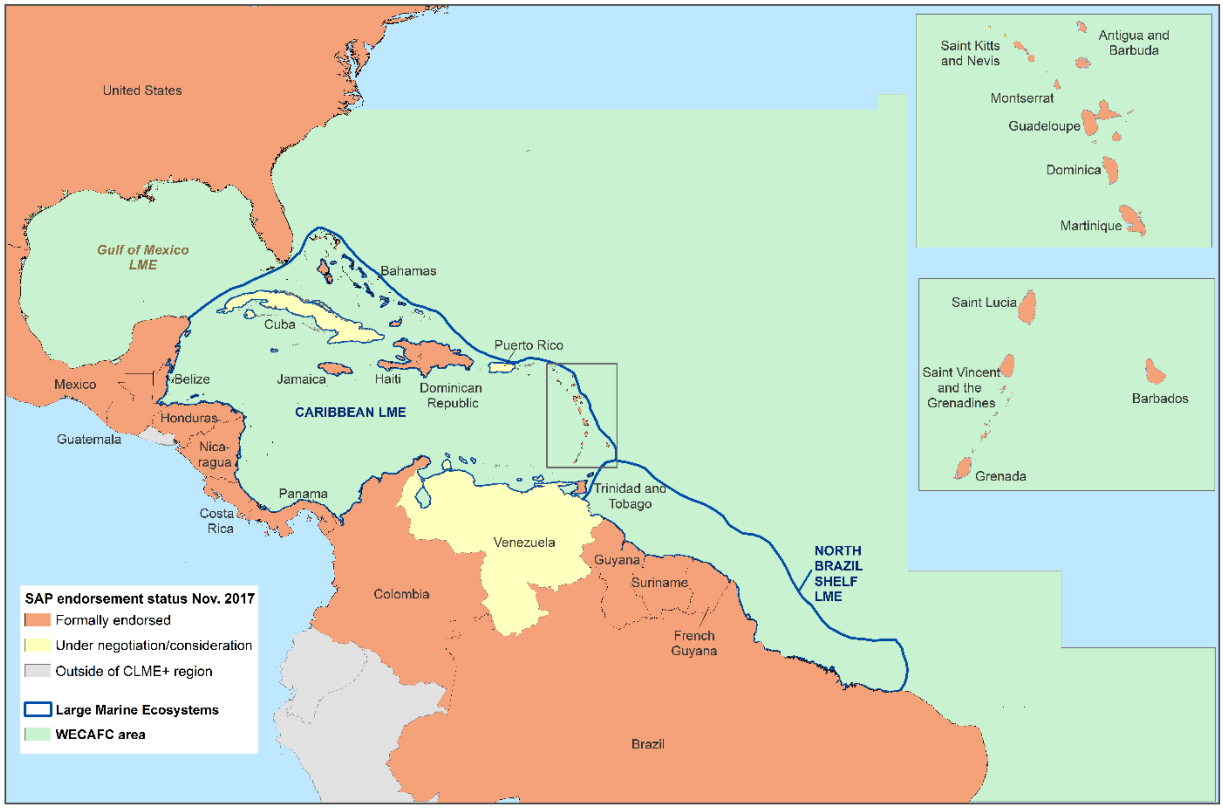


Figure 2. The CLME+ region (which is defined within the WECAFC area of competence) and SAP signatories.

SAP Strategy 2 focuses on enhanced regional governance arrangements for sustainable fisheries. Among other topics, it highlights the need for "enhanced capacity to manage knowledge and to mainstream findings from monitoring, science and research in regional, sub-regional and national decision making and policy development". Given WECAFC's functions to contribute to improved governance, disseminate fisheries data, strengthen institutional capacity and facilitate harmonization of policies, the Commission plays an important role in the implementation of the SAP. WECAFC is supported in this role by FAO and its Member States (including ministries and decentralized institutions), as well as by other regional inter-governmental organisations such as UN Environment, CRFM and OSPESCA.

Reporting on the state of the Large Marine Ecosystems

The new UNDP/GEF "CLME+" Project (2015-20) - "Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the

Caribbean and North Brazil Shelf Large Marine Ecosystems" seeks to catalyse region-wide adoption of the ecosystem-based management/ecosystem approach to fisheries (EBM/EAF). The USD 12,5 million GEF contribution includes funds to **strengthen and consolidate a Regional Governance Framework (RGF)** for marine resources management in the CLME+ region, and for the institutionalization –through this RGF- of a comprehensive, **integrated reporting mechanism**.

An integrated "State of the Marine Ecosystems and Associated Economies" (SOMEE) reporting mechanism

Despite the existence of multiple IGOs, and the fact that many programmes, projects and initiatives are currently under execution or being planned by these IGOs in the CLME+ region, to date no region-wide comprehensive and collaborative mechanism has been put in place that would allow the region to acquire a clear, integrated overview of the progress towards global or regional commitments and targets relative to the marine environment, set either at the global (Sustainable Development Goals-SDG), regional (e.g. CLME+ SAP, RPOA's) or sub-regional level (Samoa Pathway for SIDS).

However, some progress is being made: fisheries data submitted by Governments to FAO contribute to the global State of Fisheries and Aquaculture report. In the context of WECAFC, 11 Joint Working Groups on key species and topics develop common methodologies for monitoring and assessment. Likewise, FIRMS (Fisheries and Resources Monitoring System) provides access to high-quality information on marine fisheries and fish stocks in the CLME+ region.

Building upon these existing efforts, and in full recognition of the need to expand, combine and integrate them among the intergovernmental organisations that constitute the CLME+ Regional Governance Framework, **SAP Action 1.11** explicitly calls for the **enhancement of the capacity to monitor, assess and report on the state of the marine ecosystems** in the CLME+ region**.**

The ***"State of the Marine Ecosystems and associated Economies in the Caribbean and North Brazil Shelf Large Marine Ecosystems"*** (CLME+ SOMEE) is envisaged as a key regional mechanism to inform about progress in the implementation of the Strategies and Sub-strategies of the 10-year, politically-endorsed CLME+ SAP, the advances in the regional programmes and initiatives such as FAO work on the Ecosystem Approach to Fisheries, the Cartagena Convention and its Protocols[2], and progress towards the Sustainable Development Goals (especially SDG14).

SOMEE contemplates both the ***periodic production*** of a printed/pdf "static" version of the report as well as the production of an online version dynamically linked to a **network of data portals**. By linking the state of the environment to the economic activities, the SOMEE will aim at highlighting the role of environmental management and protection in the development of sustainable blue economies.

The CLME+ SOMEE will use the Governance Effectiveness Assessment Framework (GEAF) and the Drivers-Pressures-State-Impacts-Responses (DPSIR) methodology to report on the State of the Marine Environment and associated Economies, with special attention for the three transboundary problems identified under the CLME TDA's (unsustainable fisheries; habitat

[2] Cartagena Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (http://www.cep.unep.org/cartagena-convention)

degradation and pollution) and their associated root causes (weaknesses in governance, awareness, etc.). The information booklet provided together with this meeting document provides more insights into how SOMEE will be structured and developed.

Given the relevance of their mandates for SOMEE development, WECAFC-FAO is expected to become a ***key contributor to the development and institutionalization*** *of this regional reporting* mechanism – in alignment with their anticipated long-term role under the CLME+ Regional Governance Framework.

From TDA to SAP to SOMEE - from a project-driven initiative to an institutionalized, long-term decision-support mechanism

Around the globe, the GEF-supported TDA/SAP approach has proven useful to plan and agree upon strategic action and on ***attracting and upscaling investment*** for reversing environmental degradation in the world's Large Marine Ecosystems. However, it is to be noted that GEF-supported adoption and implementation of the TDA-SAP approach has typically been project-based. In full consideration of the **cyclical nature of the TDA-SAP process** and of the need to ensure continuity of TDA/SAP efforts beyond the project lifespan, it is critically important that current GEF support for the CLME+ region is used to progressively institutionalize the TDA/SAP approach, so that the positive impacts from SAP implementation are not lost. It is therefore proposed to **foster continuity of this process by having the integrated SOMEE reporting mechanism rooted within the organisations that form the foundations for CLME+ RGF.** For example, the Conference of the Parties of the Cartagena Convention, which met in March 2017, has requested its Secretariat to "continue its efforts to integrate its work under the AMEP and SPAW[3] sub-programmes […] and the completion of the SOCAR and State of Habitats reports and their integration into the CLME+ SOMEE" (Decision IX of the COP). Similarly, WECAFC, through its activities on information management and sharing at the regional level, provides a means to achieve long-term success on the periodic reporting of the State of Fisheries at WECAFC.

Conclusion

The marine environment of the Caribbean and North Brazil Continental Shelf Large Marine Ecosystems is very important to the region's economies. Fisheries are an important source of livelihoods and income. Improved ocean governance, through the adoption of an ecosystem-based management (EBM) approach and the Ecosystem Approach to Fisheries (EAF), will provide the foundations for sustainable blue growth, and will hence result in enhanced livelihoods and well-being for the people of the region.

This paper seeks to highlight the links between the efforts of WECAFC-FAO and the activities of the CLME+ Project to develop an integrated "State of the Marine Ecosystems and associated Economies" (SOMEE) reporting mechanism. Such holistic, integrated reporting mechanism is called for under Action 1.11 of the politically-endorsed CLME+ SAP. It departs from the work that is already being undertaken by the different regional IGO's, such as e.g. the periodic reporting on the state of fisheries. Formal adoption of this mechanism by organisations with a

[3] AMEP: Assessment and Management of Environmental Pollution
SPAW: Specially Protected Areas and Wildlife

marine-related mandate such as FAO-WECAFC, will provide a means to give continuity to the cyclical TDA/SAP approach, initialized in the region with the support of the GEF.

Formal adoption of a CLME+ SOMEE process can be considered a key contributing element to the consolidation of a Regional Governance Framework for integrated ocean governance, leading to blue growth and the achievement of the Sustainable Development Goals.

Actions requested from the SAG

The Eighth Session of the Scientific Advisory Group (SAG) of WECAFC may wish to give a formal recommendation to the WECAFC Commission regarding the following:

1. Acknowledge the importance and role of the CLME+ SOMEE towards improved management of the region's shared living marine resources.
2. Recommend the institutionalization of the TDA/SAP approach, through the incorporation of the SOMEE development process and subsequent revisions into WECAFC work programme.
3. Approve the concept and preliminary outline (see annex 1) of the SOMEE report and of WECAFC-FAO's role in its development and institutionalization.
4. Call upon the Secretariat and the WECAFC Member States to submit in timely and regular manner to FAO (or through the sub-regional Fisheries Bodies) national data in support of the development of the global State of Fisheries and Aquaculture (SOFIA) Report.
5. Recommend the Secretariat and the WECAFC Member States to support the development of CLME+ SOMEE content related to the WECAFC's area of competence through their joint working groups and other mechanisms.

Annex 1

State of the Marine Ecosystems and associated Economies in the CLME+ (SOMEE)

Front end

Title Page

Disclaimer

Citation

Table of Contents

Acronyms and abbreviations

Glossary

Foreword

Preface

Acknowledgments

Highlights; Key findings; Key facts & figures

This editor's selection of key facts and findings that should be highlighted at the beginning of the report

Executive Summary

A separate booklet of 15 illustrated pages approximately.

CHAPTER 1

1. Introduction

1.1. Global importance of the oceans

1.1.1. Contributions of the ocean to socio economic development

Why it is important that ocean governance is strengthened at the global level?

1.1.2. An urgent need for an enhanced ocean governance

1.1.2.1 International instruments, agreements and commitments

Broad explanation of what are the key instruments/agreements for ocean governance at the global level.

1.2. Regional approaches to ocean governance

Description of the different approaches to ocean governance at the regional level.

1.3. The CLME+ region

Generic description of the CLME+ region in terms of its oceanography, physical and political geography (including sub-regional integration mechanisms), cultural diversity and socio-economic dynamics.

1.4. Towards a blue economy for the CLME+ region

This section will highlight the current status and future potential of ocean-based economies as drivers for socio-economic development in CLME+ countries and beyond.

1.5. Regional Governance Framework

The governance of the ocean and shared living marine resources demands that a multi-level, nested Regional Governance Framework is consolidated. This section will describe progress to date and major gaps in the process of consolidation of the RGF.

1.6. The 10-year CLME+ Strategic Action Programme (SAP)

How did the SAP came into being? Why was it needed? What does it focus on and how has it been structured? What is the political support for the SAP?

1.7. CLME+ SOMEE: purpose, mandate and approach

How, by whom and for what should SOMEE be used?
What is the added value of SOMEE? What gaps will it fill?
What methodologies have been used for the development of SOMEE?
Who and in what role has participated in the development of SOMEE?

CHAPTER 2

2. General state of the marine environment & associated economies

This chapter will provide a detailed description of current status, trends and probable future conditions of the marine environment, its living resources and the societies and economies associated to it. It will further describe the corresponding drivers, pressures, and the responses undertaken or planned. It will also describe how current conditions compare to the past and how society would want them to be.

Where other chapters can describe certain aspects in more detail, such details should not be provided here in order to avoid excessive repetition

2.1 State of the Large Marine Ecosystems and their associated living resources

Description of the marine environment (habitats, fish stocks, key species, water quality) at the level of the two LMEs and/or existing geopolitical arrangements (OECS, CARICOM, SICA).

2.2 Associated socioeconomics

Description of the socio-economic aspects associated to the marine environment (tourism, shipping, human health, livelihoods, fisheries, etc.) at the level of the two LMEs and existing geopolitical arrangements (OECS, CARICOM, SICA).

If there are aspects that can be described in more detail in other chapters, such details should not be provided here in order to avoid repetition.

2.3 Drivers and pressures

Description of the drivers/root causes influencing the past, current and future state of the marine environment and associated economies, as well as the pressures/direct causes.

2.4 Responses

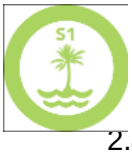
Description of the responses that have been, are being and/or will/should be taken to close the gap between the current and the desired environmental and socio-economic conditions.

The description of responses may highlight how climate change considerations have been taken into account.

The scope and level of detail included under sub-chapters 2.1, 2.2, 2.3 should match the scope and level of detail of the responses described under sub-chapter 2

2.4.1 Region-wide governance arrangements and processes for the protection of the marine environment

This section will focus on habitats, biodiversity and pollution.



2.4.1.1 Governance Architecture – the institutional setting

Description of the institutions with a mandate for the protection of the marine environment, including the geographic and thematic scope of their mandates, and the (inter-)institutional arrangements in place.

2.4.1.2 Governance Processes

How are policies, plans, legislation, capacity enhancement, public participation taking place? Do they support, and how, the institutional arrangements for the protection of the marine environment?

2.4.1.3 Stress Reduction measures: from planning to action

How are stress reduction and improved environmental and socioeconomic conditions being achieved in the field?

2.4.2 Region-wide Governance arrangements and processes for Sustainable Fisheries

Following the same rationale mentioned for 2.4, this section will focus on fisheries. This section is related to SAP Strategy 2.

2.4.3 Region-wide arrangements and processes for Integrated Ocean Governance

Following the same rationale mentioned for 2.4, this section will focus on how a holistic, integrated approach to governance of the ocean and shared living marine resources can be achieved in the CLME+ region. This section is related to SAP Strategy 3.

CHAPTER 3

3 Sub-ecosystem: coral reefs, mangroves and seagrass beds

This chapter will provide a detailed description of status, trends and probable future conditions of the reef sub-ecosystem and its associated living resources, societies and economies. It will further describe the associated drivers and pressures and the responses undertaken or planned. It will also describe how current conditions compare to the past and how society would want them to be.

3.1 Ecosystem-based Management for the Reefs Sub-Ecosystem

This sub-chapter will provide a description of the past, current and projected environmental and socio-economic conditions of the reef sub-ecosystem. It will also highlight EBM responses that are currently in place and/or planned. This section is related to SAP Strategy 4.

3.1.1 Status and trends of the reef sub-ecosystem

Description of the environmental status in the reef sub-ecosystem under past, current and projected conditions and the socio-economic aspects related to them.

3.1.1.1 Status of habitats and species

Specific information on the status of the different animal and vegetal species that inhabit the reef sub-ecosystem and the threats to their survival.

3.1.1.2 Associated socio-economics

Description of the economic activities directly related to the use of shared living marine resources of the reef sub-ecosystem, and their contribution to human well-being and livelihoods.

3.1.2 Drivers and pressures

Description of the causes of environmental change specifically related to the reef sub-ecosystem. It will provide more detail than chapter 2.

3.1.3 Responses

3.1.3.1 Governance architecture

This section will describe the institutional setting for Ecosystem-based Management in the reef sub-ecosystem and the existing and needed governance arrangements for EBM implementation

3.1.3.2 Governance processes

How do policies, plans, legislation, capacity enhancement, public participation and other processes align and/or support the governance arrangements for the protection of the reef sub-ecosystem?

3.1.3.3 Stress Reduction Measures: from planning to action

How are governance processes implemented in the field in order to achieve visible environmental quality enhancement and improved socioeconomic conditions?

3.2 Ecosystem Approach to Fisheries on the reef sub-ecosystem

3.2.1 EAF for spiny lobster fisheries

Description of the past, current and projected conditions of the spiny lobster fisheries and related socio-economic aspects. EAF responses that are currently in place and/or planned will also be highlighted. This section is related to SAP Strategy 4A.

3.2.1.1 Status and Trends of Spiny Lobster fisheries

Description of the spiny lobster fisheries under past, current and projected conditions and the socio-economic aspects related to those conditions.

3.2.1.1.1 Stock Status

This section will identify trends in stock status, highlighting the most recent stock assessments.

3.2.1.1.2 Associated socio-economics

Description of aspects of human well-being and livelihoods directly related to the exploitation of spiny lobster fisheries

3.2.1.2 Drivers and Pressures

Description of both the root and direct issues influencing the past, current and future state of spiny lobster fisheries and associated economies.

3.2.1.3 Responses

3.2.2 EAF for Queen Conch fisheries

3.2.3 EAF for other reef fisheries

CHAPTER 4

4 Sub-ecosystem: Pelagic

The different sections of this chapter will be developed with the same rationale as Chapter 3.

4.1 Ecosystem Approach to Fisheries for the pelagic Sub-Ecosystem

4.1.1 Flyingfish fisheries

4.1.2 Large Pelagics fisheries

4.1.3 Other pelagic fisheries

CHAPTER 5

5 Sub-ecosystem: Continental Shelf (sandy/muddy flats)

5.1 Ecosystem-based Management for the Continental Shelf Sub-Ecosystem

5.2 Ecosystem Approach to Fisheries for the Continental Shelf

5.2.1 EAF for Shrimp and Groundfish fisheries

Synthesis

Wrap up the analysis done in previous chapters, showing what is the gap between the current state of the marine ecosystems and associated economies and the desired status according to the SAP Vision.

Conclusions

Overall recommendations on the actions needed to accelerate SAP implementation, achieve its Vision and contribute to the achievement of the Sustainable Development Goals.

References
Annexes
List of Contributors